

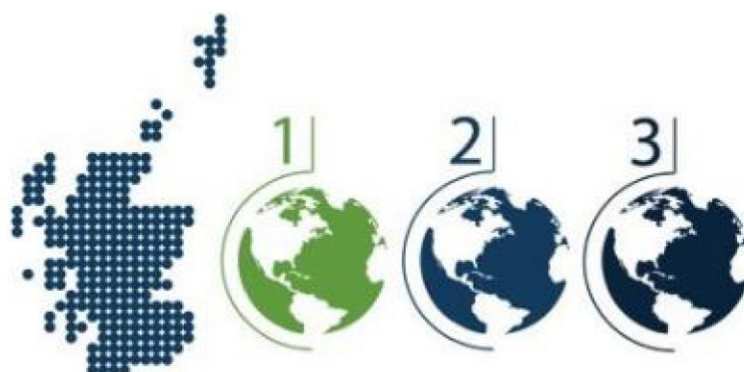


North East Local Plan District (LPD 6)

Draft flood risk management plans 2022-2028

Every day SEPA works to protect and enhance Scotland's environment, helping communities and businesses thrive within the resources of our planet.

We call this **One Planet Prosperity**



For information on accessing this document in an alternative format or language please contact SEPA by email at equalities@sepa.org.uk

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

<http://contactscotland-bsl.org/>

www.sepa.org.uk

07747 627671

If you wish to post your comments, please mark them for the attention of FRM consultation and send them to:

Scottish Environment Protection Agency
Angus Smith Building
6 Parklands Avenue
Eurocentral
Holytown
North Lanarkshire
ML1 4WQ

This document has been produced in collaboration with:



North East Local Plan District (LPD 6)

Draft flood risk management plans 2022-2028

The North East Local Plan District covers an area of around 6,500km² and has a population of approximately 500,000 people. It covers part of the north-east of Scotland from the central and eastern Grampians, north to the Outer Moray Firth and east to the Aberdeenshire coastline.

Within the Cairngorms National Park, heather and montane habitats dominate. Elsewhere, land use is typically arable, horticultural farmland and improved grasslands. The main urban area is around Aberdeen City. The River Dee, River Don, River Deveron and the River Ythan are the main rivers in the area. There are a few large lochs in the area including Loch

Muick, Loch of Strathbeg, Loch of Skene and Loch Kinord. The coastline is approximately 220km in length with variable extents of beach and hard rock.

There is river, surface water and coastal flood risk in the Local Plan District, with the main risk coming from river and surface water flooding. The area has been affected by several large floods, including in December 2015 when Storm Frank caused considerable damage throughout Deeside, most notably in Ballater. Subsequent storms in January 2016 caused significant damage throughout the area including in Inverurie, Port Elphinstone, Kemnay, Kintore and Ellon. Significant flooding from the sea and from smaller watercourses and surface water has also occurred, most notably in Aberdeen and Stonehaven, with many towns and villages also affected by flooding.

Currently it is estimated that there are 51,000 people and 30,000 homes and businesses at risk from flooding. This is estimated to increase to 64,000 people and 38,000 homes and businesses by the 2080s due to climate change. The annual cost of flooding is approximately £26 million. Note however that flooding from wave overtopping is not fully represented in the assessment of flood risk and the impact of coastal flooding may be underestimated.

SEPA lead development of the flood risk management plans for Scotland and delivery of flood warning services. Local flood risk management planning is led by Aberdeenshire Council who is the lead authority. Other responsible authorities include Aberdeen City Council, Moray Council, Cairngorms National Park Authority and Scottish Water. They are supported by Scottish Government agencies including Forestry and Land Scotland, Scottish Forestry and Transport Scotland.

Within this Local Plan District, actions are regularly carried out by SEPA and responsible authorities to help prepare communities for potential flooding and reduce the impact of any flooding that does occur

Actions across the Local Plan District

SEPA and responsible authorities carry out actions in all areas of the Local Plan District which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. The following actions are due to take place over the next six years, and most of these are carried out on an ongoing basis.

	Awareness raising
Action	<p>SEPA the responsible authorities and other organisations such as the Scottish Flood Forum work together to help communities understand the risk of flooding and what actions individuals can take through national and local initiatives. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact of flooding.</p> <p>Local authorities undertake additional awareness raising activities when developing any specific project proposals and will engage with community resilience groups and local communities.</p> <p>Scottish Flood Forum support flood risk communities by raising community awareness, promoting self-help, developing community groups and establish a recovery support programme after a flood.</p>

Emergency response and plans	
Action	<p>Many organisations, including local authorities, the emergency services and SEPA provide an emergency response to flooding. Emergency plans are prepared and maintained under the Civil Contingencies Act 2004 by Category 1 and 2 Responders and are coordinated through regional and local resilience partnerships, often supported by voluntary organisations. They set out the steps to be taken to maximise safety and minimise impacts during flooding. Emergency plans may also be prepared by individuals, businesses, organisations or communities. Scottish Water is a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required.</p>

Flood forecasting	
Action	<p>The Scottish Flood Forecasting Service is a partnership between SEPA and the Met Office. The service continues to produce a daily, national flood guidance statement, issued to emergency responders, local authorities and other organisations with flood risk management duties. As the flood warning authority for Scotland SEPA continues to provide its flood warning service issuing flood alerts and warnings when required, giving people a better chance of reducing the impact of flooding on their home or business.</p>

Flood Warning Development Framework	
Action	<p>SEPA will publish a new Flood Warning Development Framework by March 2022, which will detail its ambitions and strategic actions to maintain and improve our flood warning service across Scotland.</p> <p>SEPA will continue to develop the Scottish Flood Forecast, a 3 day forecast of flood risk across Scotland and bring together all live information such as flood warnings, river levels and rainfall data into a central hub easily accessible for the public.</p> <p>Working in close partnership with the Met Office through the Scottish Flood Forecasting Service, SEPA will develop its capability in surface water flooding forecasting, focusing initially on the transport sector to support climate-ready infrastructure. SEPA will also undertake a prioritised improvement programme of existing river and coastal flood warning schemes to provide more accurate forecast with improved lead time.</p>

Guidance development	
Action	<p>The Scottish Government and SEPA will develop and update guidance to inform flood risk management projects. This guidance will be produced by June 2022 and will look at how best to adapt to the long-term impacts of climate change and the most appropriate methods of assessing the benefits of flood risk management actions.</p> <p>Technical guidance to support flood risk management partners will also be reviewed and updated by SEPA where required.</p>

Hazard mapping updates	
Action	<p>An understanding of flooding is essential to develop a plan led risk-based approach to flood risk management. SEPA will continue to update their national hazard mapping, which shows the likelihood of flooding in Scotland from different flooding sources. (Flood Maps link) SEPA will continue to develop the hazard mapping viewer to make it easier for the public, partners and stakeholders to access data on the likelihood of flooding.</p>

Land use planning	
Action	<p>National planning policies set out the Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. Under this approach, new development in areas with medium to high likelihood of flooding should generally be avoided. Current national planning policies, the Scottish Planning Policy and accompanying Planning Advice notes restrict development within the floodplain and limit exposure of new receptors to flood risk. Local planning policies may place further requirements within their area of operation to restrict inappropriate development and prevent unacceptable risk.</p> <p>Local authorities, SEPA and Scottish Water all have a role to support sustainable development.</p>

Maintenance	
Action	<p>Local authorities have a duty to assess bodies of water and to carry out clearance and repair works where such works would substantially reduce flood risk. Local authorities are also responsible for the drainage of roads. In addition, local authorities may also be responsible for maintenance of any existing flood protection schemes or works.</p> <p>Scottish Water will continue to undertake risk-based inspection, maintenance and repair on the public sewer network.</p> <p>Asset owners and riparian landowners are responsible for the maintenance and management of their own assets including those which help to reduce flood risk.</p>

Natural flood management mapping	
Action	SEPA will review and update the opportunities mapping for natural flood management. This work will focus on the suburban environment and look at linking blue-green infrastructure with the surrounding natural catchment. Natural flood management seeks to store or slow down flood waters through measures such as the planting of woodlands, wetland creation, river restoration, or the creation of intertidal habitats. In addition to flooding benefits, natural flood management measures can also provide many additional benefits to biodiversity, water quality and recreation.

National flood risk assessment	
Action	Understanding the future impacts of climate change remains a central theme of SEPA's flood risk management activity. SEPA will use the latest UK information on climate change to support an improved understanding of the changes in flood risk across the 21 st century. SEPA will use the most suitable data to develop the National Flood Risk Assessment 2024. This assessment will be used to identify future Potentially Vulnerable Areas.

National surface water mapping	
Action	The National Flood Risk Assessment 2018 identified that surface water flooding has the potential to impact more properties in Scotland than any other source of flooding. Over the next six-year cycle SEPA will look to vastly improve its national understanding of surface flood risk by undertaking a wholesale update of the national surface water maps to reflect developments in data and understanding, including the impact of climate change.

Reservoirs	
Action	SEPA will continue to develop its assessment of flood risk from dam failure and use these assessments to direct a proportionate regulatory approach to ensure reservoir safety. Over the next management cycle we will implement further developments of our flood warning capabilities in the unlikely event of reservoir failure.

Scottish Flood Defence Asset Database	
Action	We are in a global climate emergency. The evidence is clear. In Scotland one of the main impacts of climate change will be increased flooding. SEPA will push forward the development of adaptation planning within Scotland. This work will start by reviewing and developing our understand of how and when Scotland's flood defence assets can be adapted to continue to provide vital protection from flooding in the future.

	Self help
Action	<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 flood resilience measures, signing up to Floodline, engaging with their local flood group, and ensuring that properties and businesses are insured against flood damage.</p> <p>Responsible authorities and SEPA will continue to develop the understanding of flood risk to communities and promote measures to help individuals and businesses to reduce their risk.</p>

Potentially Vulnerable Areas

Potentially Vulnerable Areas (PVA) were designated in 2018 based on the potential current or future risk from all sources of flooding. This designation was informed by the National Flood Risk Assessment ([link](#)). As part of continued analysis of flood risk, the National Flood Risk Assessment and Potentially Vulnerable Areas (PVA) will be reviewed every six years to take on board any new information. There are 26 Potentially Vulnerable Areas (PVA) in this Local Plan District. Following sections provide more information on these areas.

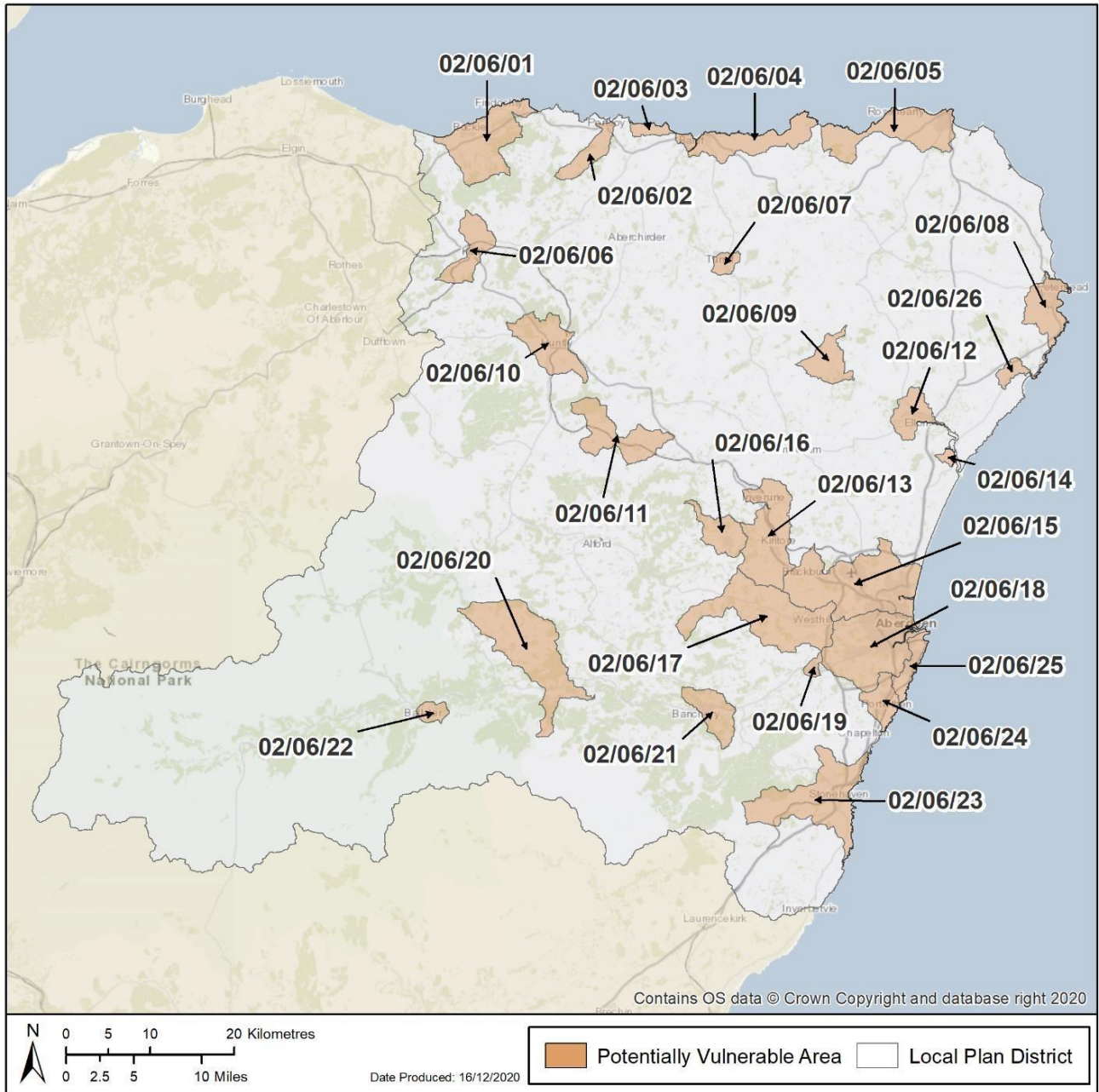


Figure 1. Potentially Vulnerable Areas in North East Local Plan District

LPD 6 North East - table of contents

Click the [blue text](#) to select your area of interest

PVA Ref	PVA NAME	Local authority
02/06/01	Portgordon and Buckie	Moray
02/06/02	Portsoy	Aberdeenshire
02/06/03	Banff and Whitehills	Aberdeenshire
02/06/04	Macduff	Aberdeenshire
02/06/05	Fraserburgh and Rosehearty	Aberdeenshire
02/06/06	Keith and Newmill	Moray
02/06/07	Turriff	Aberdeenshire
02/06/08	Peterhead	Aberdeenshire
02/06/09	Methlick	Aberdeenshire
02/06/10	Huntly	Aberdeenshire
02/06/11	Insch	Aberdeenshire
02/06/12	Ellon	Aberdeenshire
02/06/13	Inverurie and Kintore	Aberdeenshire
02/06/14	Newburgh	Aberdeenshire
02/06/15	Aberdeen City - North	Aberdeen City
02/06/16	Kemnay	Aberdeenshire
02/06/17	Westhill	Aberdeenshire
02/06/18	Aberdeen City - South	Aberdeen City

PVA Ref	PVA NAME	Local authority
02/06/19	Peterculter	Aberdeen City
02/06/20	Aboyne	Aberdeenshire
02/06/21	Banchory	Aberdeenshire
02/06/22	Ballater	Aberdeenshire
02/06/23	Stonehaven	Aberdeenshire
02/06/24	Portlethen	Aberdeenshire
02/06/25	Cove and Nigg Bay	Aberdeen City
02/06/26	Cruden Bay	Aberdeenshire

02/06/01 (Portgordon and Buckie)

This area is designated as a Potentially Vulnerable Area due to Buckie and Portgordon being at risk of coastal and surface water flooding. Due to climate change induced sea-level rise, this flood risk is expected to increase. Recent flooding has occurred due to coastal, river and surface water flooding.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

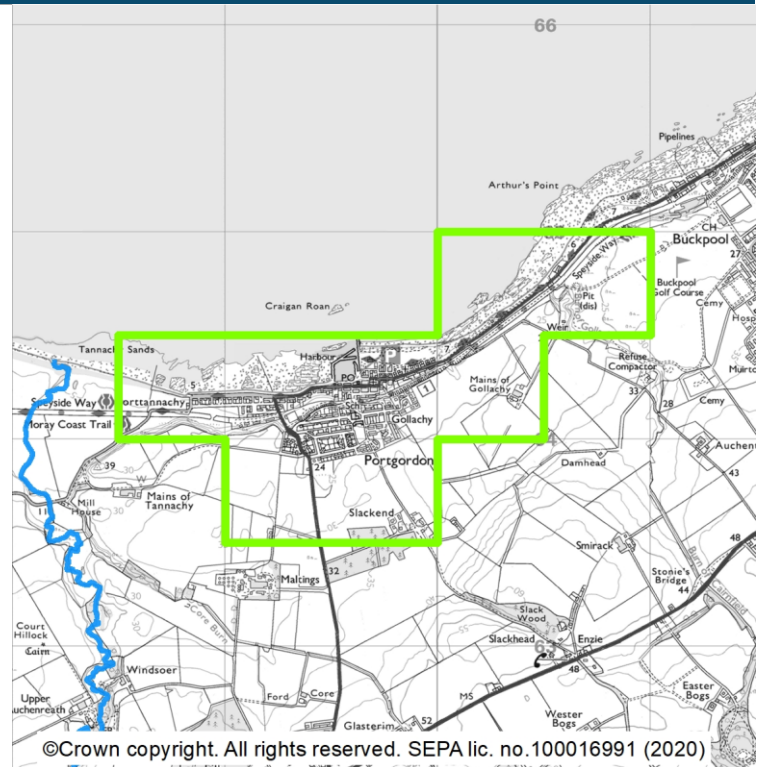
Portgordon	(target area 398)
Buckie and Portessie	(target area 455)

Portgordon (target area 398)

Summary

Portgordon lies 2km south west of Buckie, in the Moray Council area. The main source of flooding in Portgordon is surface water flooding, however there is also risk of coastal flooding. The risk of coastal flooding is underestimated as wave overtopping is not currently accounted for in the SEPA strategic mapping. There are approximately 100 people and 50 homes and businesses currently at risk from flooding. This is likely to increase to 120 people and 70 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for coastal flooding by the Portgordon Flood Study (2019). The understanding of surface water flooding is improved by the Moray Surface Water Management Plan. There is a long history of coastal flooding in the Portgordon target area including notable flooding during the North Sea flood of January 1953. There are also periodic records of surface water flooding.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
3981	Avoid flood risk	Avoid inappropriate development that increases flood risk in Portgordon.
3982	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Portgordon.
3983	Reduce flood risk	Reduce the risk of surface water flooding in Portgordon.
3984	Reduce flood risk	Reduce the risk of coastal flooding in Portgordon.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 39801)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 39802)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Buckie Moray East sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Flood defence maintenance (Ref: 39803)	
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	Maintenance of the existing coastal defences should continue and updates to the maintenance regime be made based on the findings of the flood study. The surface water management plan did not make any recommendations for improvement works in Portgordon.
Coordination	The action delivery lead is The Moray Council and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 39804)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Adaptation plan (Ref: 39805)

Action	Information on climate change is to be used to develop an adaptation plan to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Consider how the improved understanding of long term flood risk can be managed in the area through an adaptation plan.
Coordination	The action delivery lead is The Moray Council and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

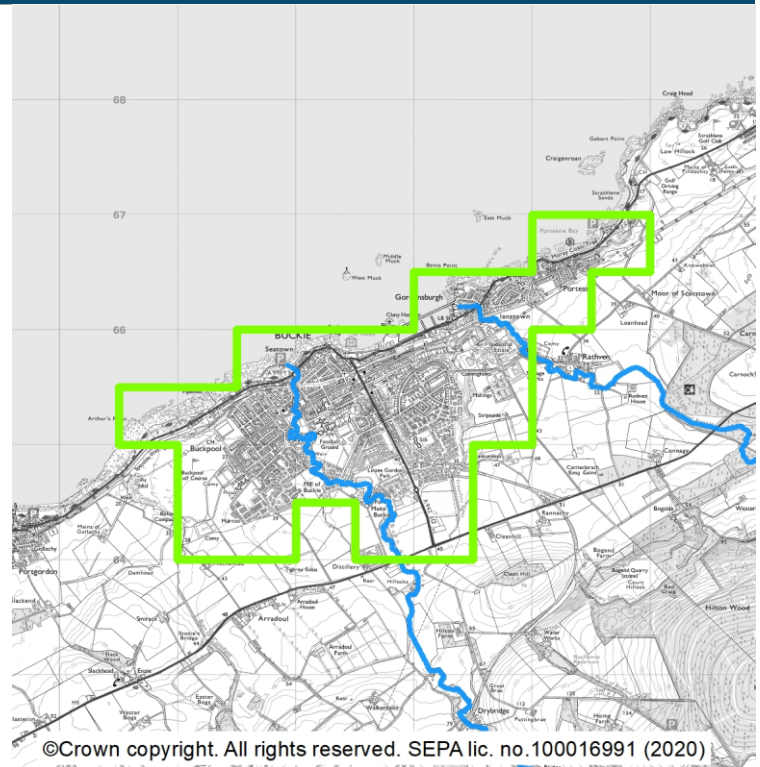
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Buckie and Portessie (target area 455)

Summary

Buckie and Portessie front onto Spey Bay on the south coast of the Moray Firth in the Moray Council area. The main sources of flooding are coastal and surface water flooding. The flood maps currently don't include the impact of waves. As a result, the assessment of coastal flood risk is considered to be an underestimate. There are approximately 520 people and 300 homes and businesses currently at risk from flooding. This is likely to increase to 810 people and 460 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for surface water by the Moray Surface Water Management Plan which includes Buckie as a priority area. The understanding of coastal flooding is improved in Portessie by the coastal flood risk assessment completed in 2016 and is improved across the target area by the development and operation of the Moray Firth flood warning scheme. There is a long history of flooding in the Buckie and Portessie area including notable coastal flooding during the North Sea flood of January 1953. There are also frequent records of surface water flooding in Buckie. The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4551	Avoid flood risk	Avoid inappropriate development that increases flood risk in Buckie and Portessie.
4552	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Buckie and Portessie.
4553	Reduce flood risk	Reduce the risk of coastal flooding in Portessie.
4554	Reduce flood risk	Reduce the risk of surface water flooding in Buckie and Portessie.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood scheme or works design (Ref: 45501)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The detailed design for the coastal flood works identified in the Portessie Options Appraisal Report (2016) should be progressed. It is proposed that the existing setback wall is rebuilt to a greater height. This option would provide a 200yr (0.5% annual exceedance probability) event plus climate change standard of protection. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is The Moray Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 45502)	
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the coastal Portessie Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is The Moray Council and coordination will be determined once the actions have been finalised.

Flood scheme or works design (Ref: 45503)

Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Further work may be required to determine business case prior to progressing to detailed design. The detailed design for the flood works identified in the surface water management plan should be progressed. The preferred options for surface water management in Buckie provides a 30 year (3.33% annual exceedance probability) event standard of protection and consists of drainage improvements, including a new combined sewer overflow, flap valves and an interception trench. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is The Moray Council in coordination with Scottish Water.

Flood scheme or works implementation (Ref: 45504)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the flood works identified in the surface water management plan based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is The Moray Council in coordination with Scottish Water.

Community engagement (Ref: 45505)

Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	The responsible authorities to continue to engage with the community, with particular focus on the detailed design of the Portessie Flood Protection Scheme and the works identified in the surface water management plan for Buckie.
Coordination	The action delivery lead is The Moray Council in coordination with Scottish Water.

Sewer flood risk assessment (Ref: 45506)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Buckie Moray East sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 45507)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system have been identified. Next steps in managing such water ponding or over-whelmed drainage systems have been identified and should be implemented. The plan is to be reviewed and updated as needed.
Action detail	The surface water management plan will be implemented. It should regularly be updated and reviewed.
Coordination	The action delivery lead is The Moray Council in coordination with Scottish Water.

Strategic mapping improvements (Ref: 45508)

Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 45509)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/02 (Portsoy)

This area is designated as a Potentially Vulnerable Area due to a risk of river flooding in Portsoy from the Soy Burn and the Burn of Durn, and surface water flooding. Recent flooding was caused by rivers.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Portsoy

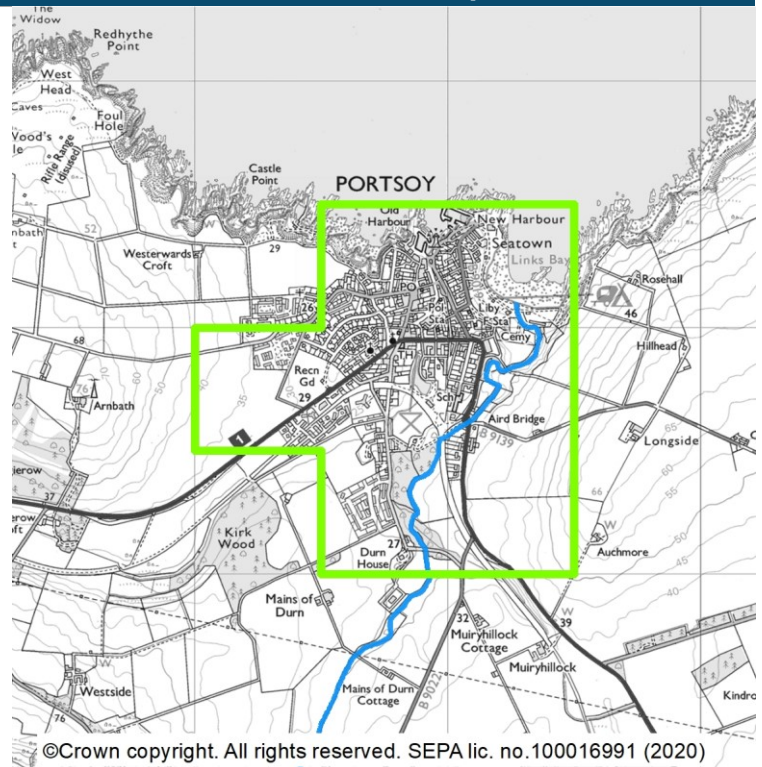
(target area 399)

Portsoy (target area 399)

Summary

Portsoy is located on the Moray Firth coast within the Aberdeenshire Council area. The main source of flooding in Portsoy is from river flooding, however there is also risk of both surface water and coastal flooding. There are approximately 140 people and 70 properties at risk of flooding. This is unlikely to be affected by climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is underpinned for flood risk from the Soy Burn and Loch Soy by a flood study completed in 2010. The understanding of surface water flooding is improved by a sewer flood risk assessment. There are records of frequent flooding from the Soy Burn in Portsoy including notable flooding in September 2010 and June 2017 following persistent rainfall. There are also records of past flooding from the Burn of Durn.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
3991	Avoid flood risk	Avoid inappropriate development that increases flood risk in Portsoy.
3992	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Portsoy.
3993	Reduce flood risk	Reduce the risk of flooding from the Soy Burn, Loch Soy and surface water in Portsoy.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood warning maintenance (Ref: 39901)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Flood study (Ref: 39902)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Carry out a review and update of the 2010 Soy Burn Flood Study. This should include consideration of the impacts of climate change on flood risk, understanding of which has improved since 2010.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Surface water management plan (Ref: 39903)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan for Portsoy. This should incorporate the results of Scottish Waters sewer flood risk assessment.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/03 (Banff and Whitehills)

This area is designated as a Potentially Vulnerable Area due to the risk of flooding to Banff and Whitehills. Banff has been affected by river, coastal and surface water flooding, while Whitehills has been affected by surface water and coastal flooding. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Recent flooding has occurred due to surface water.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

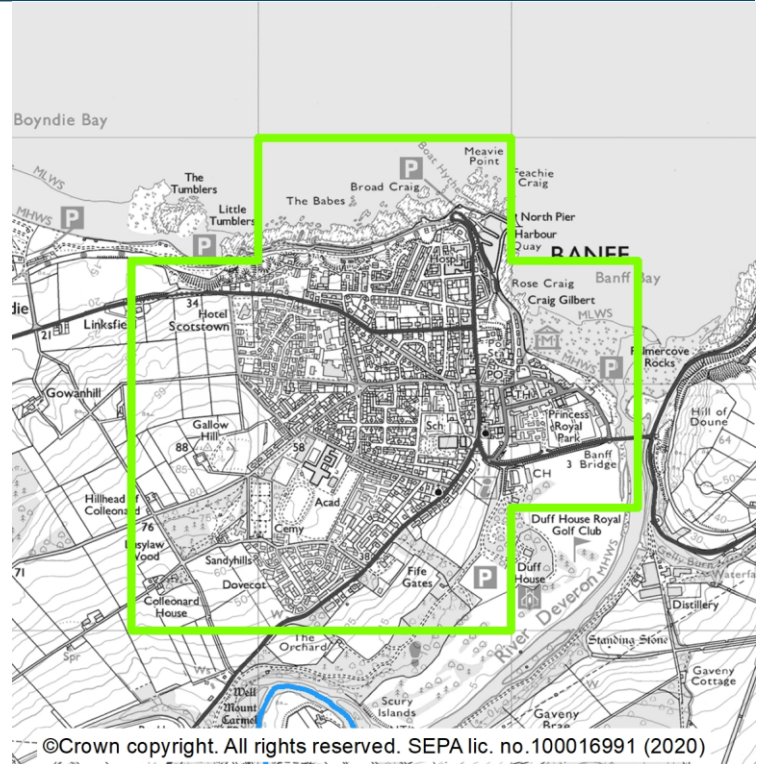
Banff	(target area 400)
Whitehills	(target area 401)

Banff (target area 400)

Summary

The town of Banff is located in the north east of Scotland and faces onto Banff Bay. It is in the Aberdeenshire Council area. The main source of flooding to Banff is coastal flooding which is underestimated in SEPA's flood maps as they do not currently include the impact of waves. There is also a risk from river and surface water flooding. Approximately 230 people and 130 homes and businesses currently are at risk from flooding. This is estimated to increase to 350 people and 210 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river and coastal flood risk by the development and operation of the Moray Firth and River Deveron flood warning schemes. There is a long history of flooding in Banff which includes recent flash flooding in September 2019. The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4001	Avoid flood risk	Avoid inappropriate development that increases flood risk in Banff.
4002	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Banff.
4003	Reduce flood risk	Reduce the risk of coastal flooding and flooding from the River Deveron in Banff.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 40001)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40002)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40003)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 40004)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council and coordinated with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

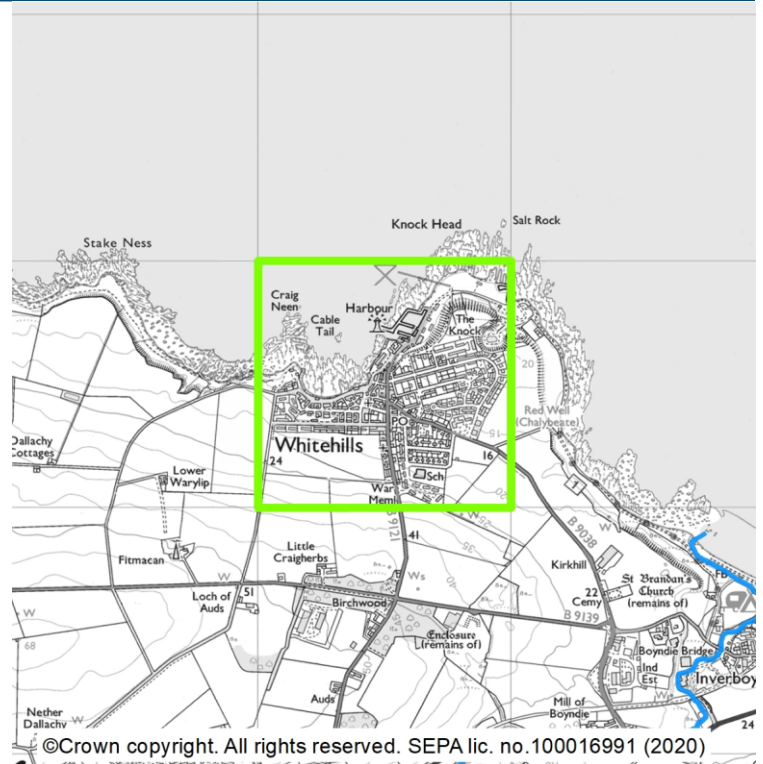
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Whitehills (target area 401)

Summary

Whitehills is located on the Moray Firth coast in the Aberdeenshire Council area. There are known surface water flooding issues. There is also a risk of coastal flooding, which may increase with sea level risk due to climate change. There are approximately 120 people and 70 homes and businesses currently at risk of flooding. This is likely to increase to 140 people and 80 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of surface water and coastal flooding in this target area. Whitehills has therefore been identified as a new target area for the 2021 flood risk management plans. The national level assessment is improved for surface water by the development of works designed to reduce flooding. A sewer flood risk assessment has also been completed. The understanding of coastal flood risk is improved by the development and operation of the Moray Firth flood warning scheme. There are frequent records of surface water flooding in Whitehills including notable flooding in September 2019. The outflow of surface water to the sea can be restricted by single build-up. There are limited records of coastal flooding.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4011	Avoid flood risk	Avoid inappropriate development that increases flood risk in Whitehills.
4012	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Whitehills.
4013	Reduce flood risk	Reduce the risk of coastal and surface water flooding in Whitehills.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 40101)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40102)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Surface water management plan (Ref: 40103)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan for Whitehills. This should incorporate the results of the Scottish Water sewer flood risk assessment. The impacts of climate change on future flood risk should be considered. The impact of sea level rise on drainage of surface water into the sea should be assessed. Opportunities to disconnect surface water from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 40104)	
Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council and coordinated with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/04 (Macduff)

This area is designated as a Potentially Vulnerable Area as Crovie, Gardenstown and Macduff are at coastal flood risk.

There are 3 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

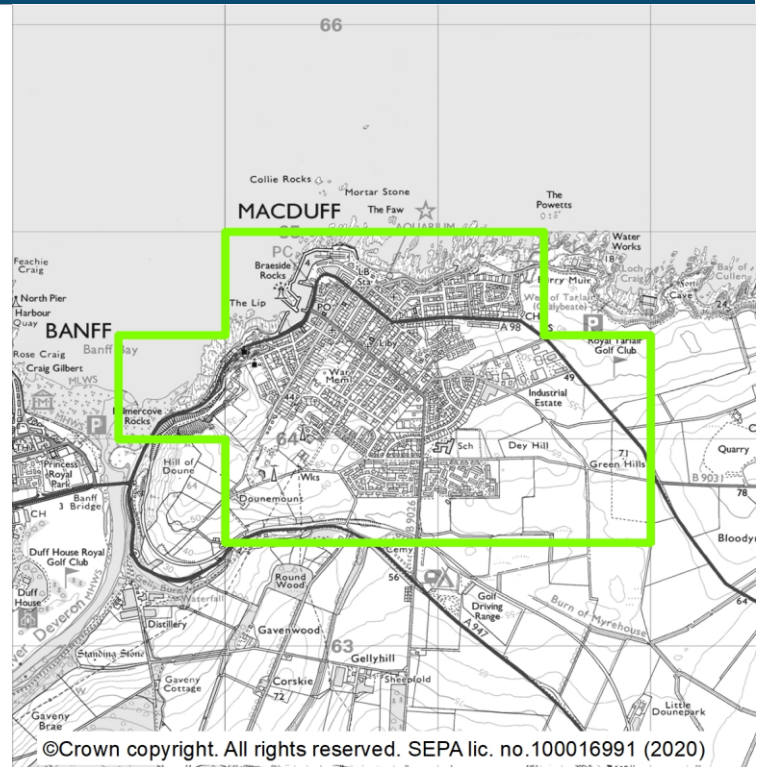
Macduff	(target area 402)
Gardenstown	(target area 458)
Crovie	(target area 459)

Macduff (target area 402)

Summary

Macduff is located in the Moray Firth in the Aberdeenshire Council area. The main sources of flooding in Macduff are coastal and surface water flooding. Coastal flooding is underestimated in our current assessment as the impact of waves is not accounted for. There are approximately 160 people and 80 homes and businesses currently at risk of flooding. This is likely to increase to 170 people and 90 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for coastal flooding by the development and operation of the Moray Firth flood warning scheme. The understanding of surface water flooding is improved by a sewer flood risk assessment. There is a long history of flooding recorded in Macduff which includes recent flooding in September 2019 following persistent rain. Spring tides prevented surface water from draining into the sea.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4021	Avoid flood risk	Avoid inappropriate development that increases flood risk in Macduff.
4022	Improve data and understanding	Improve data and understanding of the risk of coastal flooding in Macduff.
4023	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Macduff.
4024	Reduce flood risk	Reduce the risk of surface water flooding in Macduff.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 40201)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40202)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Surface water management plan (Ref: 40203)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan for Macduff. This should take into account the results of Scottish Waters sewer flood risk assessment. Any interactions between surface water and coastal flooding should be considered. The impacts of climate change on flood risk should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 40204)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council and coordinated with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

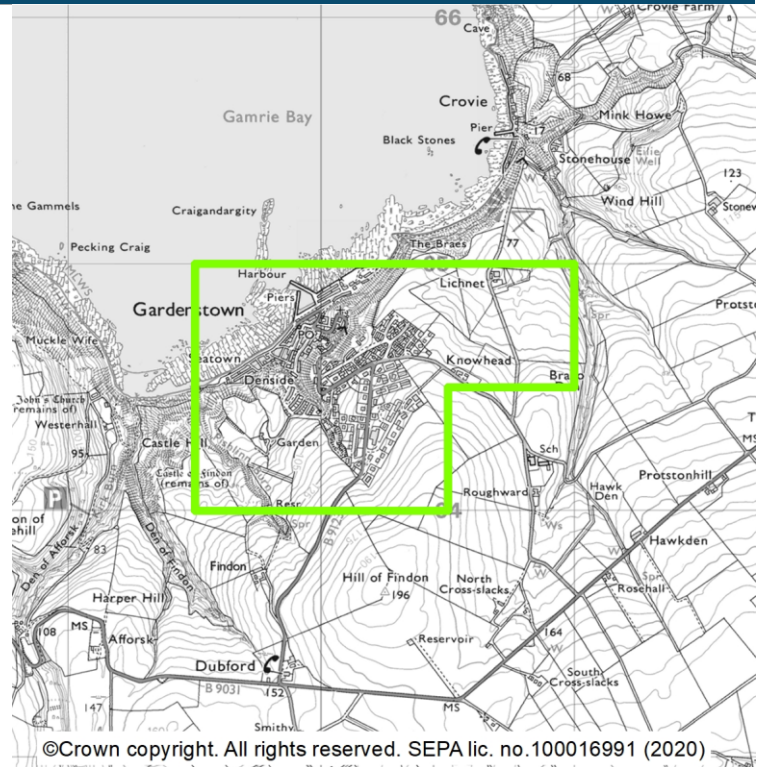
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Gardenstown (target area 458)

Summary

Gardenstown, locally referred to as Gamrie, faces north onto Gamrie Bay and the Moray Firth in the Aberdeenshire Council area. The main source of flooding in Gardenstown is coastal flooding, however this is not reflected currently in our understanding as wave overtopping is not accounted for in the SEPA strategic mapping. The target area is likely to be very sensitive to climate change, in particular sea level rise.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of coastal flooding (particularly associated with climate change) in this target area. Gardenstown has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is improved for coastal flood risk by the development and operation of the Moray Firth flood warning scheme. There is a long history of coastal flooding in Gardenstown.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4581	Avoid flood risk	Avoid inappropriate development that increases flood risk in Gardenstown / Gamrie.
4582	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Gardenstown / Gamrie.
4583	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Gardenstown / Gamrie.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 45801)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 45802)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 45803)	
Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

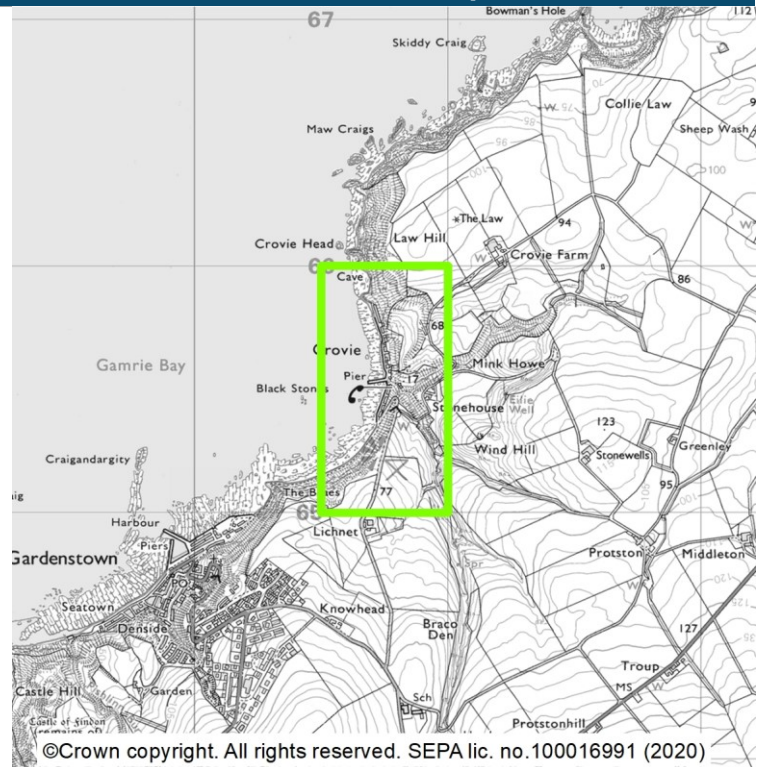
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Crovie (target area 459)

Summary

Crovie faces west onto Gamrie Bay and the Moray Firth, in the Aberdeenshire Council area. The main flooding concern is from coastal flooding, however this is not reflected currently in our understanding as wave overtopping is not accounted for in the SEPA strategic mapping. There are less than 10 people, homes and businesses at risk from flooding.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of coastal flooding in the target area. This risk could increase as a result of climate change. Crovie has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is improved for coastal flood risk by the development and operation of the Moray Firth flood warning scheme. There is a long history of coastal flooding in Crovie including notable flooding in 1953 and 1957.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4591	Avoid flood risk	Avoid inappropriate development that increases flood risk in Crovie.
4592	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Crovie.
4593	Reduce flood risk	Reduce the risk of coastal flooding in Crovie.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 45901)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 45902)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 45903)	
Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/05 (Fraserburgh and Rosehearty)

This area is designated as a Potentially Vulnerable Area due to river, coastal and surface water flood risk. Fraserburgh is at risk from coastal, river and surface water flooding. Pennan and Sandhaven are at coastal flood risk. Rosehearty is at risk of river and surface water flooding. Recent floods occurred in September 2019 as a result of surface water flooding.

There are 4 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

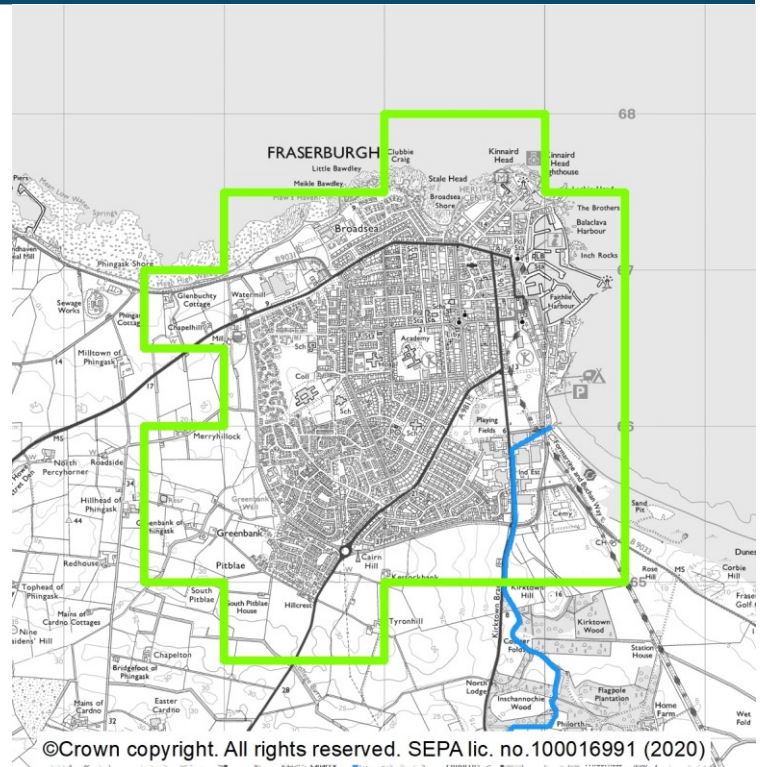
Fraserburgh	(target area 408)
Pennan	(target area 460)
Sandhaven	(target area 461)
Rosehearty	(target area 462)

Fraserburgh (target area 408)

Summary

Fraserburgh is located on the shoreline of the Moray Firth in Aberdeenshire. The main sources of flooding in Fraserburgh are surface water and coastal flooding. Flooding is also reported from the Kessock Burn. There are approximately 680 people and 410 homes and businesses currently at risk from flooding. This is likely to increase to 880 people and 540 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for coastal flood risk by the operation and development of the Moray Firth flood warning scheme. Understanding of surface water flood risk is improving by the development of a surface water management plan. A sewer flood risk assessment has also been completed. There is a long history of coastal flooding in the Fraserburgh target area. There are records of surface water flooding and flooding from the Kessock Burn after heavy rainfall. This can be exacerbated when the burn cannot drain into the sea at high tide as happened in September 2019.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4081	Avoid flood risk	Avoid inappropriate development that increases flood risk in Fraserburgh.
4082	Prepare for flooding	Prepare for current flood risk and future flood risk in Fraserburgh.
4083	Reduce flood risk	Reduce the risk of flooding from the Kessock Burn, surface water and coastal flooding in Fraserburgh.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 40801)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Surface water management plan (Ref: 40802)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. The impacts of climate change on future flood risk should be considered. The surface water management plan should include consideration of the Kessock Burn, which is culverted and any tidal impacts.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water. Further coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40803)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

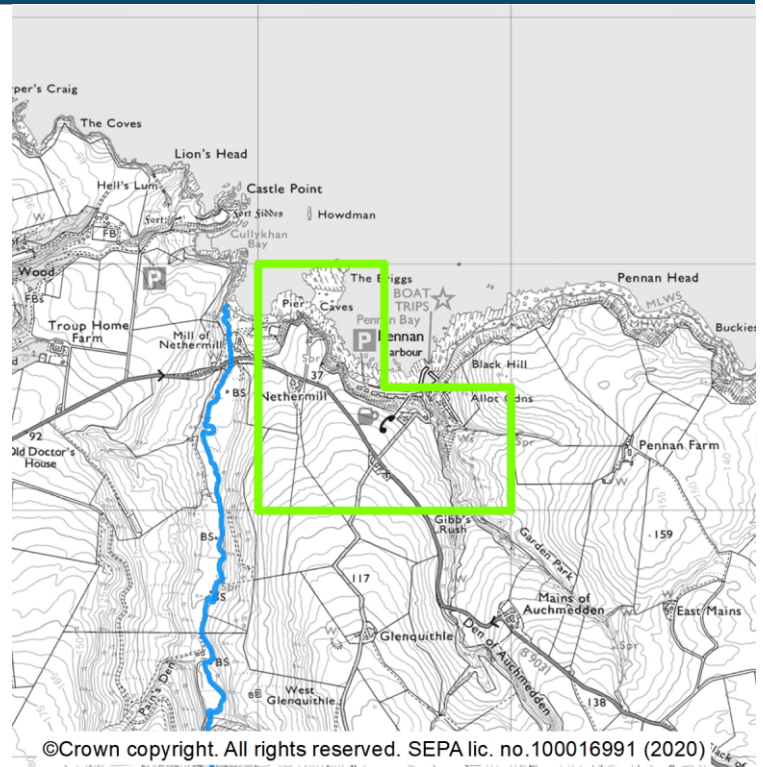
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Pennan (target area 460)

Summary

Pennan faces north onto Pennan Bay and the Moray Firth in the Aberdeenshire Council area. The main source of flooding is from coastal flooding, however this is not reflected currently in our understanding as wave overtopping is not accounted for in the SEPA strategic mapping. The target area is likely to be very sensitive to climate change, in particular sea level rise.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of coastal flooding in the target area. This risk could increase as a result of climate change. Pennan has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is improved for coastal flood risk by the development and operation of the Moray Firth flood warning scheme. There is a long history of coastal flooding in Pennan including notable flooding in January 1953.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4601	Avoid flood risk	Avoid inappropriate development that increases flood risk in Pennan.
4602	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Pennan.
4603	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Pennan.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 46001)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 46002)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 46003)	
Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

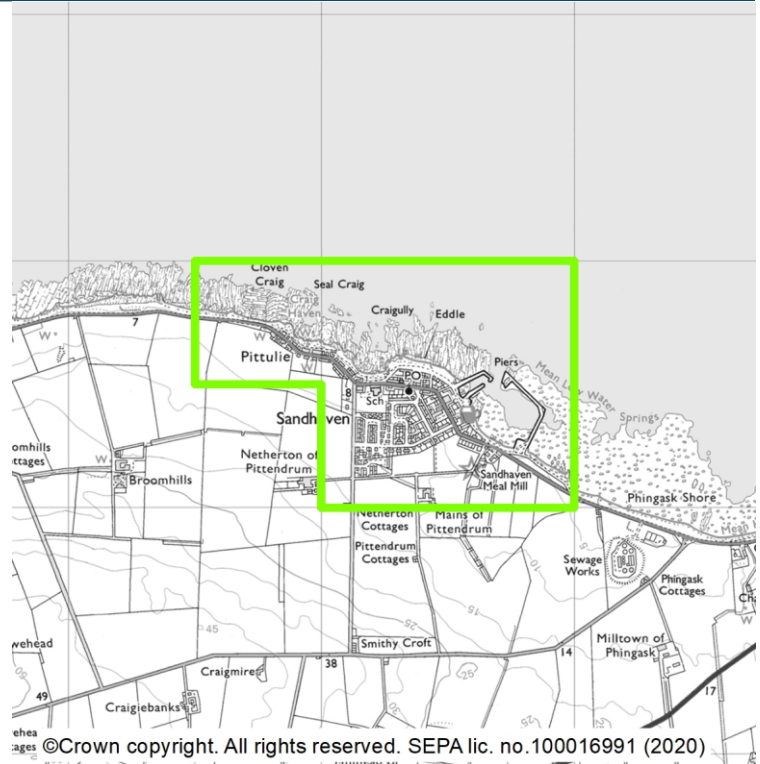
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Sandhaven (target area 461)

Summary

Sandhaven is located on the Moray Firth coast between Fraserburgh and Rosehearty. It is in the Aberdeenshire Council area. The main flooding concern in Sandhaven is coastal flooding. Sea level rise caused by climate change is expected to increase flood risk significantly. However, coastal flood risk is likely to be underestimated due to the impact of waves not being included in current SEPA flood maps. There are approximately 20 people and 20 homes and businesses currently at risk from flooding.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of coastal flooding (particularly associated with climate change) in the target area. Sandhaven has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is improved for coastal flood risk by the development and operation of the Moray Firth flood warning scheme. There are limited records of flooding in the Sandhaven target area.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4611	Avoid flood risk	Avoid inappropriate development that increases flood risk in Sandhaven.
4612	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Sandhaven.
4613	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Sandhaven.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 46101)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 46102)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 46103)	
Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

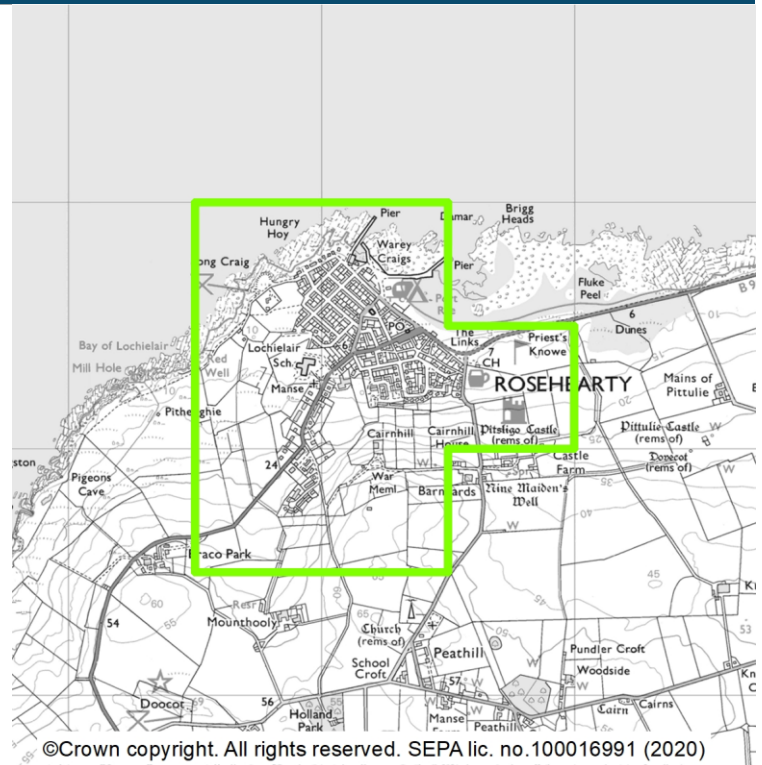
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Rosehearty (target area 462)

Summary

Rosehearty is located on the southern shore of the Moray Firth in the Aberdeenshire Council area. The main source of flood risk in Rosehearty is from surface water flooding. However, there is also a risk from coastal flooding, which is not reflected in SEPA's flood maps. There are approximately 90 people and 50 homes and businesses currently at risk from flooding. This is likely to increase to 60 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for coastal flood risk through the development and operation of the Moray Firth flood warning scheme. Understanding of surface water flooding is improving through the development of a surface water management plan for Rosehearty and Fraserburgh. A sewer flood risk assessment has also been completed. There are periodic records of coastal and surface water flooding in Rosehearty.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4621	Avoid flood risk	Avoid inappropriate development that increases flood risk in Rosehearty.
4622	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Rosehearty.
4623	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Rosehearty.
4624	Reduce flood risk	Reduce the risk of surface water flooding in Rosehearty.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 46201)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Surface water management plan (Ref: 46202)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress the surface water management plan. The results from Scottish Waters sewer flood risk assessment should be incorporated. The impacts of climate change on flood risk should be considered. Interactions with coastal flooding should be noted.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood warning maintenance (Ref: 46203)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Moray Firth coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 46204)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/06 (Keith and Newmill)

This area is designated as a Potentially Vulnerable Area due to surface water flood risk in Keith and Newmill. Newmill benefits from a flood scheme, which reduces the risk of flooding from surface water and the Burn of Kimminitie at Low Road.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

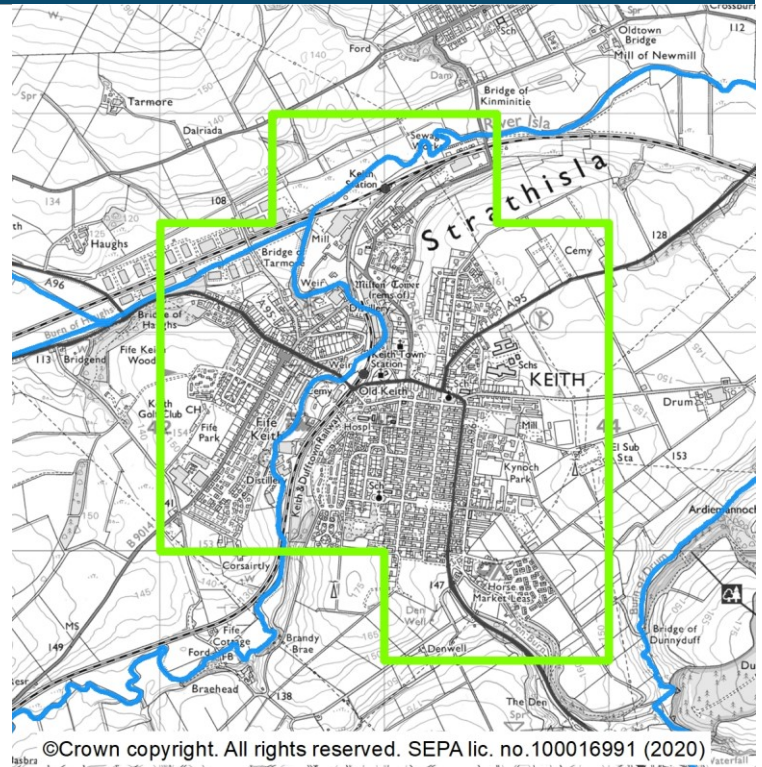
Keith	(target area 404)
Newmill (Keith)	(target area 444)

Keith (target area 404)

Summary

Keith is located in north east Scotland within the Moray Council area. The main source of flooding in Keith is from surface water flooding. There are approximately 60 people and 70 homes and businesses currently at risk from flooding. This is likely to remain the same by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of surface water flooding. Keith has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is improved for surface water by the Moray Surface Water Management Plan. The understanding of river flooding is improved by the operation of the River Deveron flood warning scheme. There are records of surface water flooding in the Keith target area.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4041	Avoid flood risk	Avoid inappropriate development that increases flood risk in Keith.
4042	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Keith.
4043	Reduce flood risk	Reduce the risk of surface water flooding in Keith.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood warning maintenance (Ref: 40401)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Surface water management plan (Ref: 40402)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system have been identified. Next steps in managing such water ponding or over-whelmed drainage systems have been identified and should be implemented. The plan is to be reviewed and updated as needed.
Action detail	Implement the surface water management plan, working with Scottish Water as appropriate. This may include further assessments of surface water flood risk.
Coordination	The action delivery lead is The Moray Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Newmill (Keith) (target area 444)

Summary

Newmill lies just north of the town of Keith and is within the Moray Council area. The main source of flooding in Newmill is from surface water flooding. There are approximately 40 people and 20 homes and businesses at risk of flooding. This is expected to remain the same by the 2080s, despite the impact of climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for surface water by the studies to develop the Newmill Flood Protection Scheme (2016) and the development of the Moray Surface Water Management Plan. Prior to the construction of the flood protection scheme there are records of periodic flooding from surface water including notable flooding in September 2009 and September 2013. Flooding was also recorded in June 2017 when surface water flooding damaged flood defences.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4441	Avoid flood risk	Avoid inappropriate development that increases flood risk in Newmill.
4442	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Newmill flood protection scheme.
4443	Improve data and understanding	Improve data and understanding of the performance of the Newmill flood protection scheme.
4444	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Newmill.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood defence maintenance (Ref: 44401)	
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	Continue to maintain the Newmill Flood Protection Scheme.
Coordination	The action delivery lead is The Moray Council and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 44402)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/07 (Turriff)

This area is designated as a Potentially Vulnerable Area due to river and surface water flood risk in Turriff. Recently flooding was caused by surface water.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Turriff

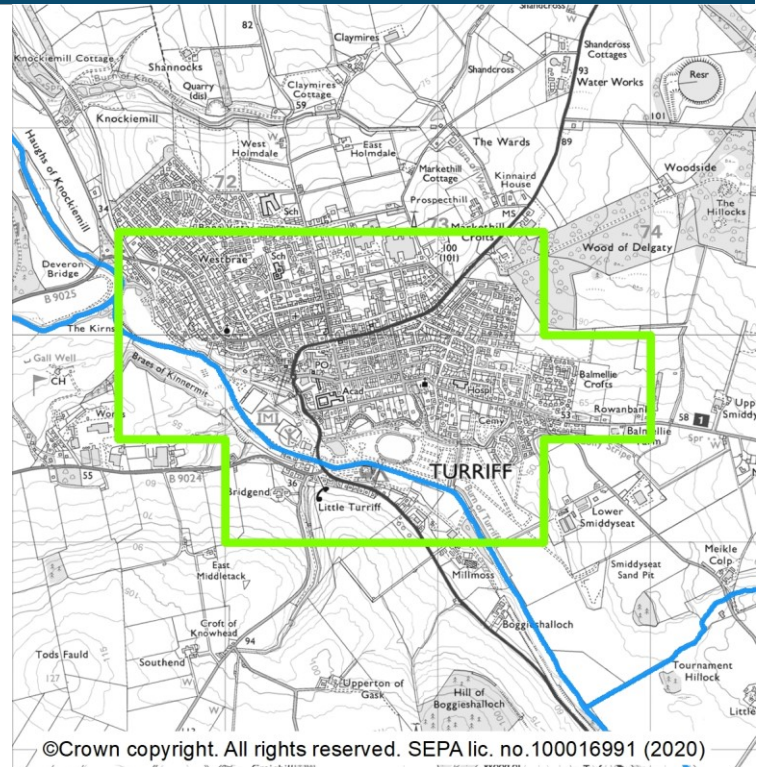
(target area 449)

Turriff (target area 449)

Summary

Turriff is located on the banks of the River Deveron in the Aberdeenshire Council area. The main source of flooding in Turriff is surface water flooding, however there is also risk from river flooding. There are approximately 230 people and 150 homes and businesses currently at risk from flooding. This is estimated to increase to 350 people and 210 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for surface water flooding by the sewer flood risk assessment. There is a long history of flooding in Turriff, including notable flooding in December 2015. There are also periodic records of surface water flooding.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4491	Avoid flood risk	Avoid inappropriate development that increases flood risk in Turriff.
4492	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Turriff.
4493	Reduce flood risk	Reduce the risk of flooding from surface water and small water courses in Turriff.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood warning maintenance (Ref: 44901)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Surface water management plan (Ref: 44902)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan. This should address flood risk from surface water and small water courses. The impacts of climate change on flood risk should be considered. The outputs from Scottish Waters sewer flood risk assessment should be incorporated.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/08 (Peterhead)

This area is designated as a Potentially Vulnerable Area due to the risk of surface water and coastal flooding to Boddam and Peterhead. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Recent flooding was caused by surface water.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

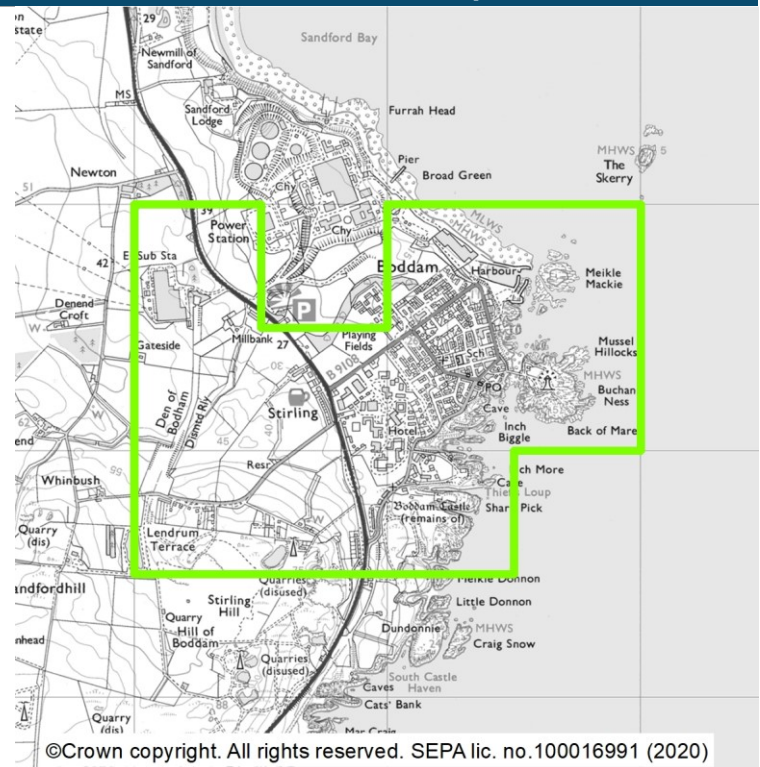
Boddam	(target area 406)
Peterhead	(target area 407)

Boddam (target area 406)

Summary

Boddam is located just south of Peterhead in the Aberdeenshire Council area. The main source of flooding in Boddam is surface water flooding. There are approximately 70 people and 50 homes and businesses currently at risk from flooding. This is likely to increase to 80 people and 60 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of surface water flooding in this target area. Boddam has therefore been identified as a new target area for the 2021 flood risk management plans. The understanding of surface water flood risk is improving through the sewer assessment and the development of a surface water management plan for Peterhead and the surrounding area, including Boddam. There are limited records of flooding in the Boddam target area.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4061	Avoid flood risk	Avoid inappropriate development that increases flood risk in Boddam.
4062	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Boddam.
4063	Reduce flood risk	Reduce the risk of surface water flooding in Boddam.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 40601)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Peterhead sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 40602)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and Transport Scotland.

Flood warning maintenance (Ref: 40603)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

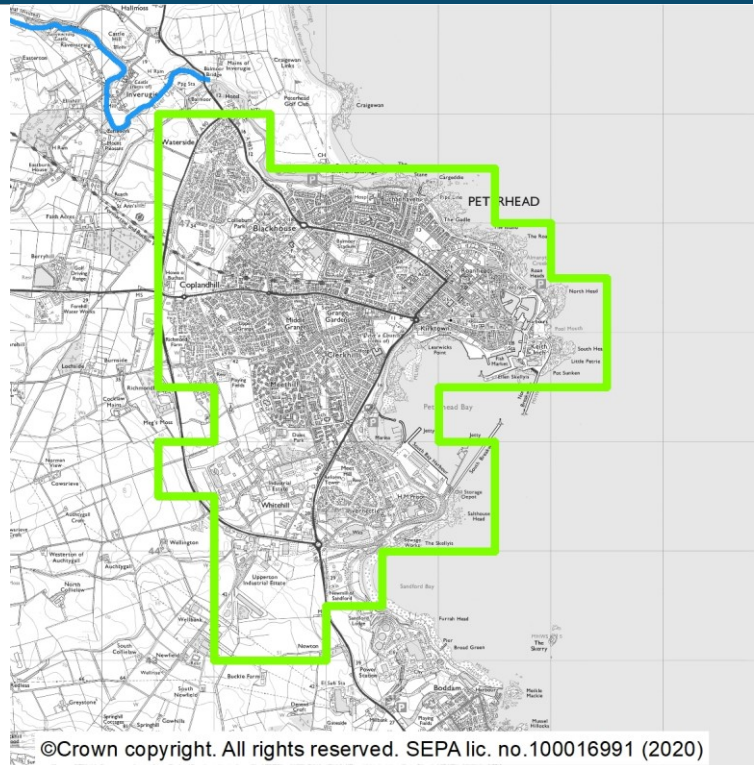
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Peterhead (target area 407)

Summary

Peterhead is located on the north east coast of Scotland in the Aberdeenshire Council area. The main sources of flooding in Peterhead are surface water and coastal however there is also a risk from river flooding. There are approximately 800 people and 520 homes and businesses currently at risk from flooding. This is likely to increase to 1,000 people and 670 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for coastal flooding by the development and operation of the North East flood warning scheme. The understanding of surface water flood risk is improving through the sewer assessment and the development of a surface water management plan for Peterhead. There is a long history of flooding recorded in the Peterhead target area including notable flooding in August 2012 when high tides and a storm surge led to flooding.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4071	Avoid flood risk	Avoid inappropriate development that increases flood risk in Peterhead.
4072	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Peterhead.
4073	Reduce flood risk	Reduce the risk of surface water and coastal flooding in Peterhead.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 40701)

Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40702)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 40703)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Peterhead sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 40704)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water. Potential to coordinate with Transport Scotland will be determined when the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 40705)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Prepare a shoreline management plan. In particular this should identify locations at risk of flooding and coastal erosion. The impacts of climate change on sea level rise, coastal flood risk and erosion should be considered. The need for an adaptation plan should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised, but could include SEPA, Peterhead Port Authority and Network Rail.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/09 (Methlick)

Methlick is designated as a Potentially Vulnerable Area due to river and surface water flood risk to Methlick. Recent flooding was caused by rivers.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Methlick

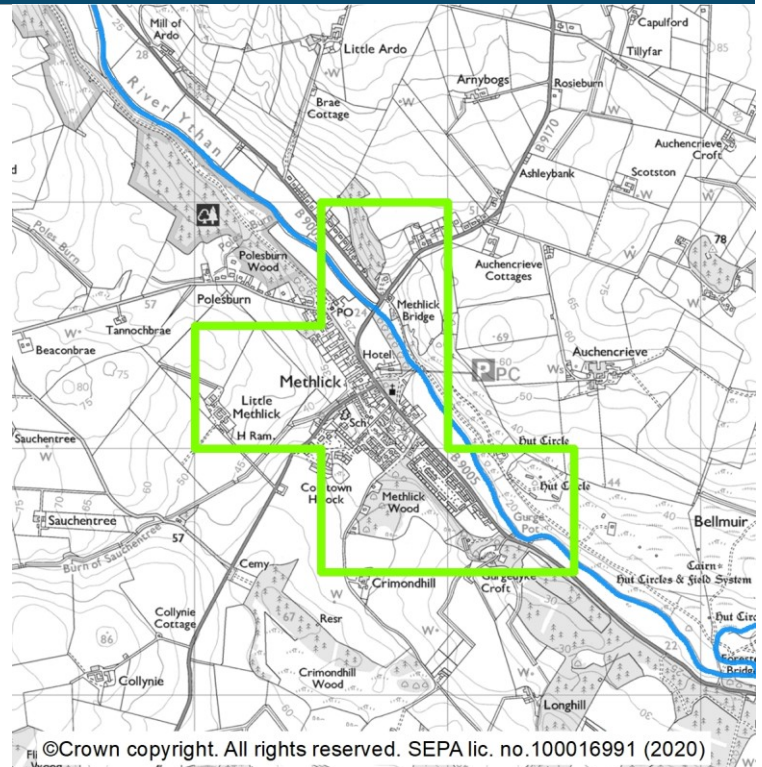
(target area 450)

Methlick (target area 450)

Summary

Methlick is located to the north west of Aberdeen on the River Ythan. It is in the Aberdeenshire Council area. The main sources of flooding in Methlick are from surface water and the River Ythan. There are approximately 100 people and 50 homes and businesses currently at risk from flooding. This is likely to increase to 110 people and 60 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national level assessment has highlighted the risk of flooding in this target area. There are records of periodic flooding in the Methlick target area from the River Ythan, including the notable flooding of January 2016.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4501	Avoid flood risk	Avoid inappropriate development that increases flood risk in Methlick.
4502	Prepare for flooding	Prepare for current flood risk and future flooding in Methlick as a result of climate change

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood risk management review (Ref: 45001)	
Action	During each 6 year planning cycle, we update our understanding of flooding to include all new data and information that has become available. This includes information on any flooding that has happened and the latest predictions on the impacts of climate change. The updated understanding is used to set any appropriate objectives and actions for areas at risk of flooding.
Action detail	No local actions specific to this target area have been identified yet. There are national actions planned that will cover this area, including an update to SEPA's surface water flood maps and an update to the national flood risk assessment. These, along with other actions that are carried out across the whole local plan district covering this area, will help to manage flood risk in the long term. The need for actions for this area will be reviewed again in 2026.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/10 (Huntly)

This area is designated as a Potentially Vulnerable Area due to flood risk from the River Deveron, River Bogie, and the Ittingstone and Meadows burns. River flood risk to the Meadows area of Huntly is managed by the flood protection scheme. There is also a risk of surface water flooding. There is a history of flooding, with recent flooding being caused by river and surface water.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Huntly

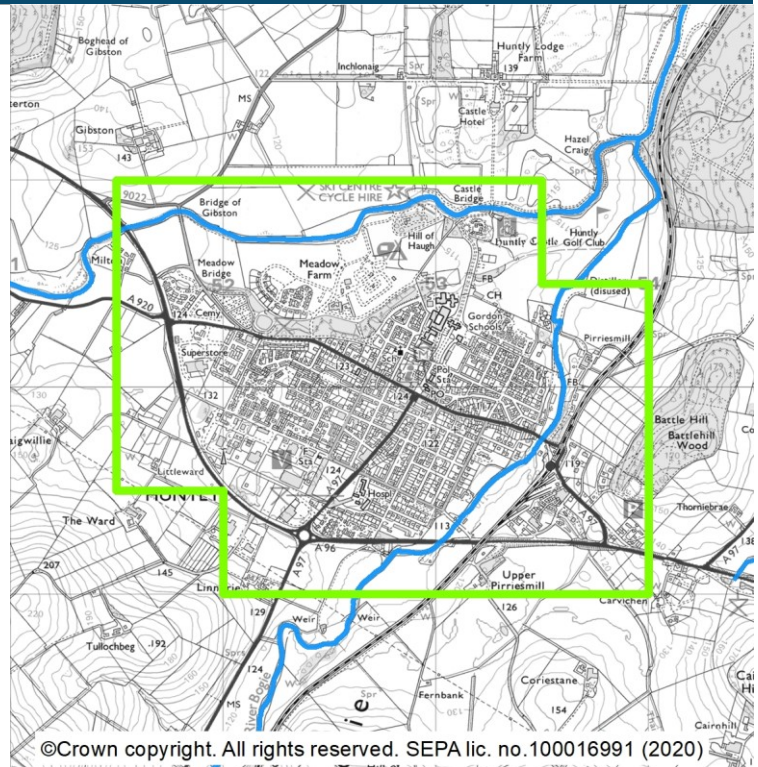
(target area 403)

Huntly (target area 403)

Summary

Huntly is located on the banks of the River Deveron in Aberdeenshire Council area. Huntly is at risk from surface water and river flooding. There are approximately 950 people and 500 homes and businesses at risk from flooding. This is likely to increase to 1,100 people and 560 homes and businesses by the 2080s due to climate change. The values may be overestimated as they do not take account of the Huntly Flood Protection Scheme.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for flooding from the River Deveron and the Meadows Burn by the studies to develop the Huntly Flood Protection Scheme (2017). The understanding of surface water flood risk is improving by the development of a surface water management plan. There were frequent records of river flooding in Huntly prior to the completion of the flood scheme including notable floods in November 2009 when the River Deveron and Meadow Burn flooded the Meadows area of the town. Surface water flooding has been recorded in several areas of Huntly.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4031	Avoid flood risk	Avoid an increase in river flood risk by the appropriate management and maintenance of the Huntly Flood Protection Scheme.
4032	Avoid flood risk	Avoid inappropriate development that increases flood risk in Huntly.
4033	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Huntly.
4034	Reduce flood risk	Reduce the risk of surface water flooding in Huntly.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Surface water management plan (Ref: 40301)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood defence maintenance (Ref: 40302)	
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	The Huntly Flood Protection Scheme should be maintained. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 40303)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Deveron and the Bogie flood warning schemes. The schemes should be investigated for improvement and/or recalibration.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/11 (Insch)

Insch is designated as a Potentially Vulnerable Area due to the risk of flooding from surface water, the Valentine Burn and The Shevock. There is a history of flooding, with floods recorded as a result of river and surface water flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

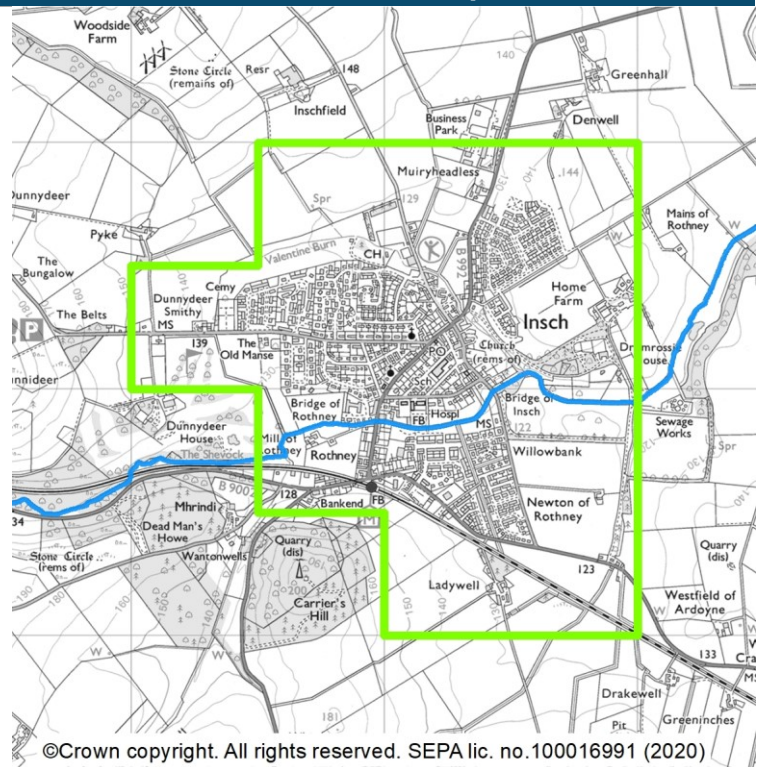
Insch (target area 411)

Insch (target area 411)

Summary

Insch is 45km north west of Aberdeen in Aberdeenshire Council area. The main source of flooding in Insch is river flooding from The Shevock and Valentine Burns, however there is also risk of surface water flooding. There are approximately 290 people and 160 homes and businesses currently at risk from flooding. This is likely to remain the same by the 2080s due to climate change. The recent flood study indicates these figures may be overestimated.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river flooding by the Insch Flood Study (2019). The study focuses on flood risk from The Shevock, Mill of Rothney Burn and Newton of Rothney Burn. The understanding of surface water flooding is improved by a sewer flood risk assessment. There is a long history of river flooding in Insch with frequent records of flooding from The Shevock. Notable flooding was recorded in November 2002 and in January 2016. There are also records of surface water flooding.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4111	Avoid flood risk	Avoid inappropriate development that increases flood risk in Inch.
4112	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Inch.
4113	Reduce flood risk	Reduce the risk of flooding from The Shevock and the Valentine Burn in Inch.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Community engagement (Ref: 41101)	
Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Aberdeenshire Council to continue to engage with the community, with particular focus on improving community resilience to flood risk.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Flood scheme or works design (Ref: 41102)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The preferred option should be progressed to detailed design. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 41103)	
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the Inch Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/12 (Ellon)

This area is designated as a Potentially Vulnerable Area due to river and surface water flood risk to Ellon. Recent flooding has occurred due to river and surface water flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

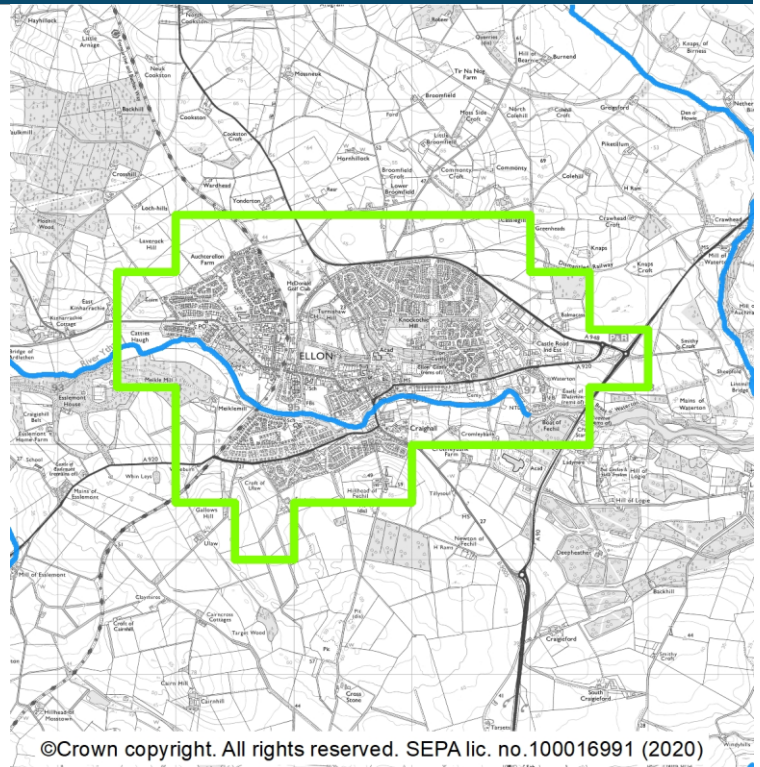
Ellon (target area 405)

Ellon (target area 405)

Summary

Ellon lies on the River Ythan in the Aberdeenshire Council area. The main sources of flooding in Ellon are surface water and river flooding from the Ythan and small water courses. There are approximately 820 people and 440 homes and businesses at risk from flooding. This is likely to increase to 1,000 people and 540 homes and businesses by the 2080s due to climate change. The recent flood study indicates these figures may be overestimated.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river flood risk by the Ellon Flood Study (2019) which focuses on the River Ythan and its tributaries. The understanding of surface water flooding is improved by a sewer flood risk assessment. There is a long history of flooding in the Ellon target area including notable flooding in January 2016 when the River Ythan flooded. There are more frequent records of flooding from the smaller watercourses.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4051	Avoid flood risk	Avoid inappropriate development that increases flood risk in Ellon.
4052	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Ellon.
4053	Reduce flood risk	Reduce the risk of flooding from the River Ythan and small water courses in Ellon.
4054	Reduce flood risk	Reduce the risk of surface water flooding in Ellon.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

New flood warning area (Ref: 40501)	
Action	A new flood warning scheme is to be investigated by SEPA. Flood warnings are only effective where it is possible to send a warning message with sufficient time to allow communities to take appropriate actions before flooding occurs.
Action detail	SEPA will investigate the potential to develop and implement a new flood warning scheme for the River Ythan catchment
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 40502)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Ellon sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 40503)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The Ellon Flood Study recommended further assessment of drainage in Ellon. The drainage study should be progressed as part of this surface water management plan. This should consider risk from surface water and small water courses with a particular focus on the Meadows and Hillhead areas of Ellon. The results of Scottish Waters sewer flood risk assessment should be considered. The impacts of climate change on flood risk should be assessed. Opportunities to disconnect surface water from the sewerage system should be identified. Opportunities for natural flood management should also be identified.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Flood scheme or works design (Ref: 40504)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The detailed design for the Ellon Flood Protection Scheme on the River Ythan should be progressed based on the preferred option from the flood study. The preferred option provides a 200-year (0.5% annual exceedance probability) plus climate change allowance standard of protection. It consists of improvements to the drainage system, widening of the river channel, removal of a foot bridge, as well as raised defences and property flood resilience. Opportunities for natural flood management should be explored. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 40505)	
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the Ellon Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/13 (Inverurie and Kintore)

This area is designated as a Potentially Vulnerable Area due to the recent occurrence of surface and river flooding in Inverurie and Kintore.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

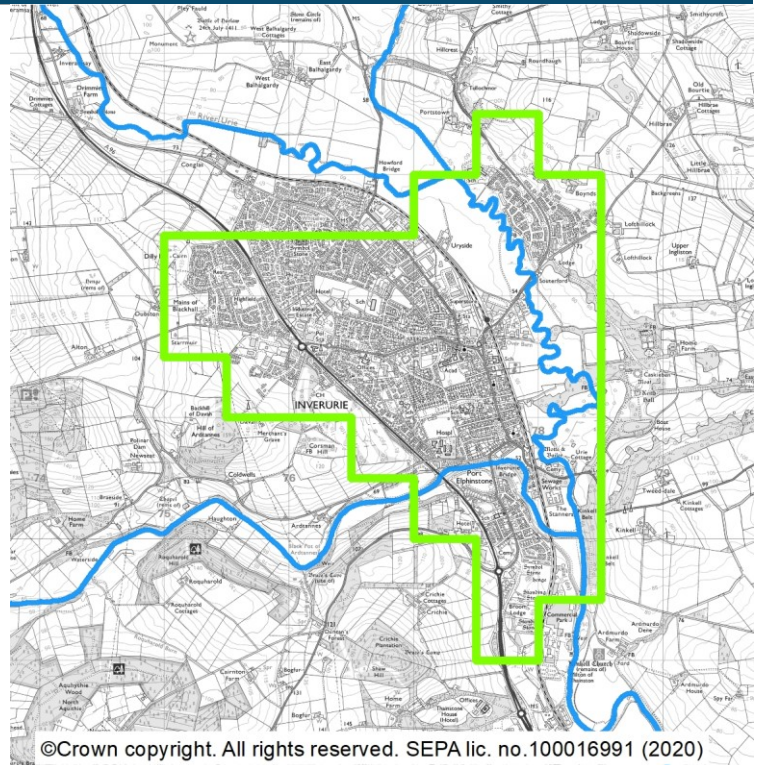
Inverurie	(target area 409)
Kintore	(target area 410)

Inverurie (target area 409)

Summary

Inverurie and Port Elphinstone are at the confluence of the River Urie and River Don in the Aberdeenshire Council area. The main sources of flooding in Inverurie and Port Elphinstone are river and surface water. There are approximately 1,100 people and 700 homes and businesses at risk from flooding. This is likely to increase to 1,300 people and 810 homes and businesses by the 2080s due to climate change. The recent flood study indicates these figures may be overestimated.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river flooding by the Inverurie and Port Elphinstone Flood Study (2019). The understanding of surface water flood risk is improving through the development of a surface water management plan. A sewer flood risk assessment has also been completed. There is a long history of flooding recorded in the target area, including notable flooding from the River Don and the River Urie throughout Inverurie and Port Elphinstone in November 2002 and in January 2016.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4091	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of Strathburn and Overburn Flood Prevention Scheme 1978 and the Overburn culvert 2001.
4092	Avoid flood risk	Avoid inappropriate development that increases flood risk in Inverurie.
4093	Improve data and understanding	Improve data and understanding of the performance of the Strathburn and Overburn Flood Prevention Scheme 1978 and the Overburn Culvert 2001.
4094	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Inverurie.
4095	Reduce flood risk	Reduce the risk of flooding from the River Don and River Urie in Inverurie and Port Elphinstone.
4096	Reduce flood risk	Reduce the risk of surface water flooding in Inverurie.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood scheme or works design (Ref: 40901)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The detailed design for the Inverurie Flood Protection Scheme should be progressed based on the preferred option from the flood study. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Community engagement (Ref: 40902)	
Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Aberdeenshire Council to continue to engage with the community on the detailed design of the Inverurie Flood Scheme.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 40903)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the Inverurie Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood defence maintenance (Ref: 40904)

Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	Continue to maintain the Inverurie (Strathburn and Overburn) Flood Prevention Scheme (1978) and the Overburn Culvert (2001).
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 40905)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes the Inverurie sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 40906)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. This should include consideration of the Overburn and Strathburn Flood Protection Schemes and the impacts of climate change.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood warning maintenance (Ref: 40907)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Don flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

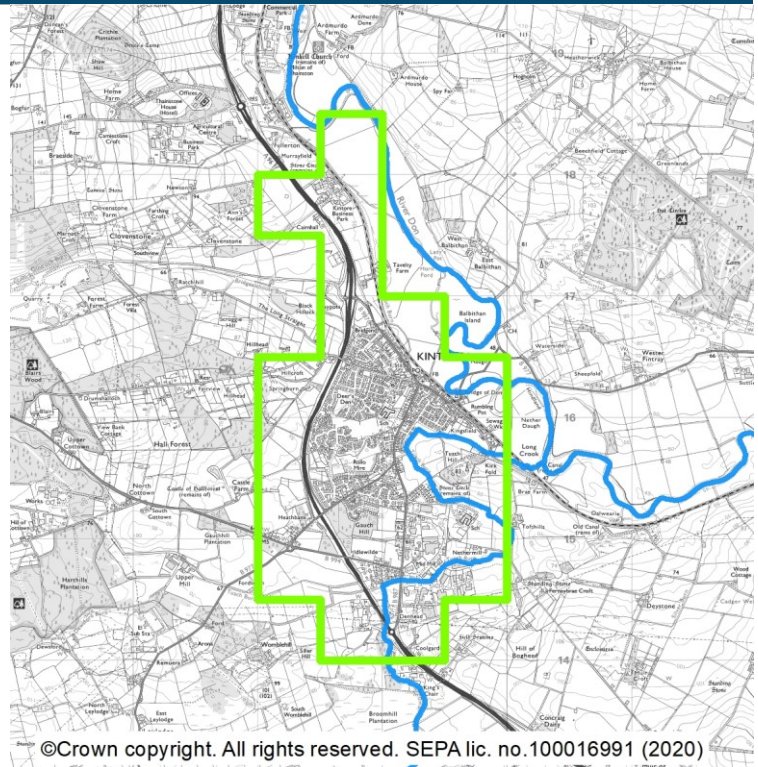
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Kintore (target area 410)

Summary

Kintore is located to the north west of Aberdeen on the River Don. It is within the Aberdeenshire Council area. The main source of flooding in Kintore is river flooding, however there is also risk of surface water flooding. There are approximately 370 people and 200 homes and businesses currently at risk from flooding. This is likely to increase to 440 people and 240 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for flooding from the River Don through the development and operation of the flood warning scheme. The modelling of the River Urie between Pitcaple and Kintore has also been revised, informing an update to SEPA flood maps. The understanding of surface water flooding is improving through the sewer flood risk assessment and development of a surface water management plan. There is a long history of flooding in the Kintore target area, including notable flooding in January 2016.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4101	Avoid flood risk	Avoid inappropriate development that increases flood risk in Kintore.
4102	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Kintore.
4103	Reduce flood risk	Reduce the risk of flooding from the River Don, Torry Burn, Tuach Burn, Loch Burn and surface water flooding in Kintore.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (Ref: 41001)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study is needed to improve our understanding of flooding from the River Don, Torry Burn, Tuach Burn and Loch Burn. Interaction with surface water should be considered. The impacts of climate change on flood risk should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised, but could include SEPA, Transport Scotland and Network Rail.

Sewer flood risk assessment (Ref: 41002)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes the Inverurie sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41003)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood warning maintenance (Ref: 41004)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Don flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/14 (Newburgh)

This area is designated as a Potentially Vulnerable Area due to coastal flood risk to Newburgh. There is potential for a significant increase in flood risk due to the impacts of sea level rise due to climate change.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

[Newburgh \(Aberdeenshire\)](#)

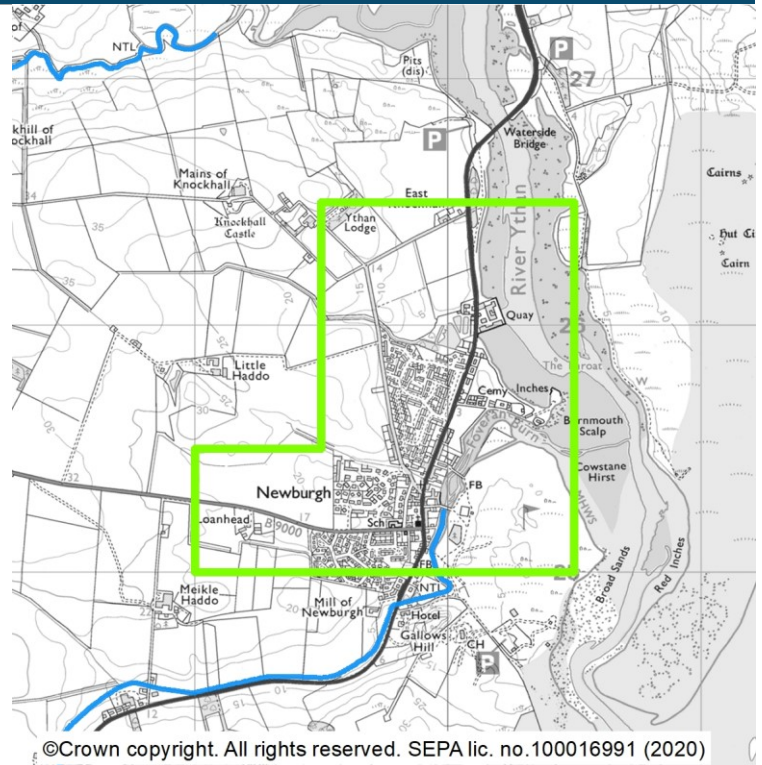
[\(target area 423\)](#)

Newburgh (Aberdeenshire) (target area 423)

Summary

Newburgh is near the mouth of the River Ythan and the Foveran Burn in the Aberdeenshire Council area. The main source of flooding in Newburgh is coastal flooding. There are approximately 140 people and 70 homes and businesses currently at risk of flooding. This is likely to increase to 240 people and 120 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of coastal flooding (particularly associated with climate change) in this target area. Newburgh has therefore been identified as a new target area for the 2021 flood risk management plans. The national assessment is underpinned by a coastal flood study completed in 2008. The understanding is also improved by the development and operation of the North East flood warning scheme. There are limited records of flooding in the Newburgh area. The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4231	Avoid flood risk	Avoid inappropriate development that increases flood risk in Newburgh.
4232	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Newburgh
4233	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Newburgh.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Strategic mapping improvements (Ref: 42301)	
Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 42303)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Flood study (Ref: 42302)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The 2008 coastal flood study should be updated with new climate change data and improved understanding of hydrology and coastal erosion. The need for an adaptation plan should be considered.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/15 (Aberdeen City – North)

This area is designated as a Potentially Vulnerable Area due to the risk of flooding from surface water, small watercourses and the River Don to Bridge of Don, Dyce and Kingswells (north). Flooding has occurred in the past from river and surface water with recent surface water flooding being recorded.

There are 3 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

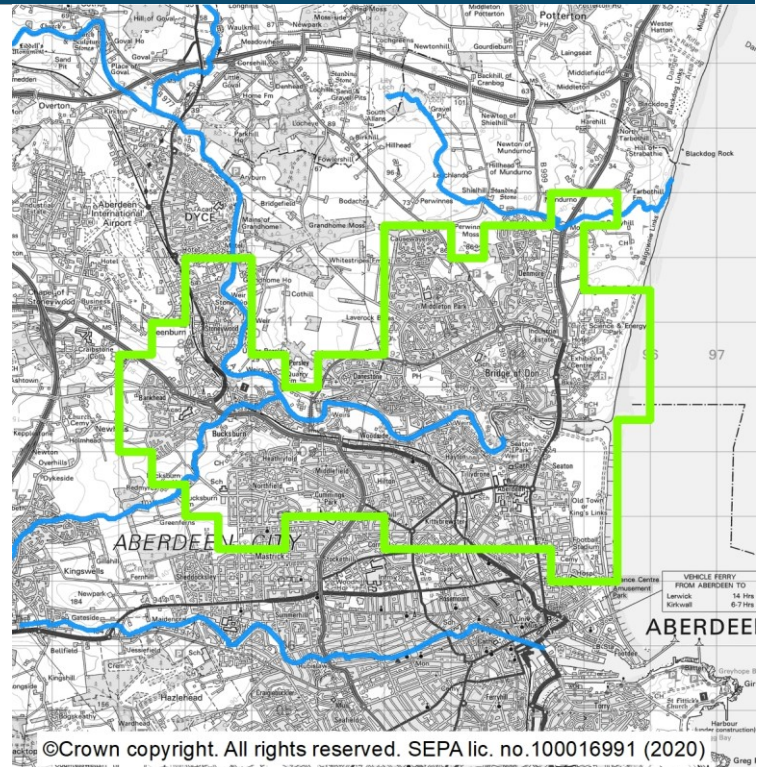
Bridge of Don	(target area 412)
Dyce	(target area 430)
Kingswells (north)	(target area 445)

Bridge of Don (target area 412)

Summary

Bridge of Don covers the northern section of Aberdeen, including Old Aberdeen, Hilton and Bucksburn. It is in the Aberdeen City Council area. The main source of flooding in Bridge of Don is from surface water flooding, however there is also a risk of river flooding from the River Don and small water courses. There are approximately 7,600 people and 4,200 homes and businesses currently at risk from flooding. This is likely to increase to 11,000 people and 6,200 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improving for surface water flood risk by the development of a flood study for Jesmond Drive and a surface water management plan which addresses flood risk from smaller water courses including the Glashie Burn. An integrated catchment study has also improved understanding of surface water flood risk and its interactions with other flood sources. There is a long history of river flooding and surface water in the Bridge of Don target area. Recent flooding from surface water was recorded in August 2020 following persistent rain during thunderstorms.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4121	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Glashieburn Flood Prevention scheme.
4122	Avoid flood risk	Avoid inappropriate development that increases flood risk in Bridge of Don.
4123	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Bridge of Don.
4124	Reduce flood risk	Reduce the risk of flooding from surface water, small water courses and the River Don in Bridge of Don.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (options appraisal) (Ref: 41201)	
Action	In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The joint Jesmond Drive Flood Study to identify potential options to reduce surface water and sewer flooding is ongoing through the integrated catchment study optioneering project. The study includes the Glashieburn and the Silver Burn. Outputs from this study will be received during public consultation and this action will be updated prior to final publication dependent on study outcomes.
Coordination	The action delivery leads are Scottish Water and Aberdeen City Council and coordination will be determined once the actions have been finalised.

Flood scheme or works design (Ref: 41202)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The Jesmond Drive Flood Study in conjunction with Scottish Water is underway. Identified flood risk and actions will advise further investigations for detailed design to be undertaken to address surface water flood risk.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Community engagement (Ref: 41203)	
Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Community engagement should continue during the development of detailed design of works identified in the Jesmond Drive Flood Study.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Flood scheme or works implementation (Ref: 41204)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Following the Jesmond Drive Flood Study and detailed design in conjunction with Scottish Water, an appropriate scheme may be developed to address surface water flood risk. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Sewer flood risk assessment (Ref: 41206)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks and Persley sewer catchments in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41207)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the surface water management plan for the Bridge of Don area. This also includes the Bucksburn and Northfield to Seaton areas. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the results of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

Flood study (Ref: 41208)

Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study should 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 jointly to build an agreed hydrology for the River Don and to review the need to extend the River Don flood warning scheme. Interactions with surface water and coastal flooding should be considered.
Coordination	The action delivery lead is Aberdeen City Council in coordination with SEPA.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 41209)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council 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 should be developed for Aberdeen City. There may be opportunities to 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.
Coordination	The action delivery lead is Aberdeen City Council and any coordination will be determined once the actions have been finalised.

Flood defence maintenance (Ref: 41210)

Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	The Glashieburn Flood Prevention Scheme should be maintained. Consideration should be given to review the performance of the scheme, given that new climate change data and hydraulic data has been developed since the scheme was built in the late 2000s.
Coordination	The action delivery lead is Aberdeen City Council.

Flood warning maintenance (Ref: 41211)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Don and the Aberdeenshire and Angus coastal flood warning schemes.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Scottish Water, SEPA and Aberdeen City Council will work to enhance partnership working. This will explore the current and future understanding of flood risk to support long term sustainable improvements for communities.

SEPA will work to enhance coordinated working in this target area through placemaking partnerships. This will look at land use planning and flooding issues to improve the current and future understanding of flood risk with the aim of identifying long term improvements for communities.

There is potential to work with SEPA's River Basin Management team to improve the physical condition of the water environment.

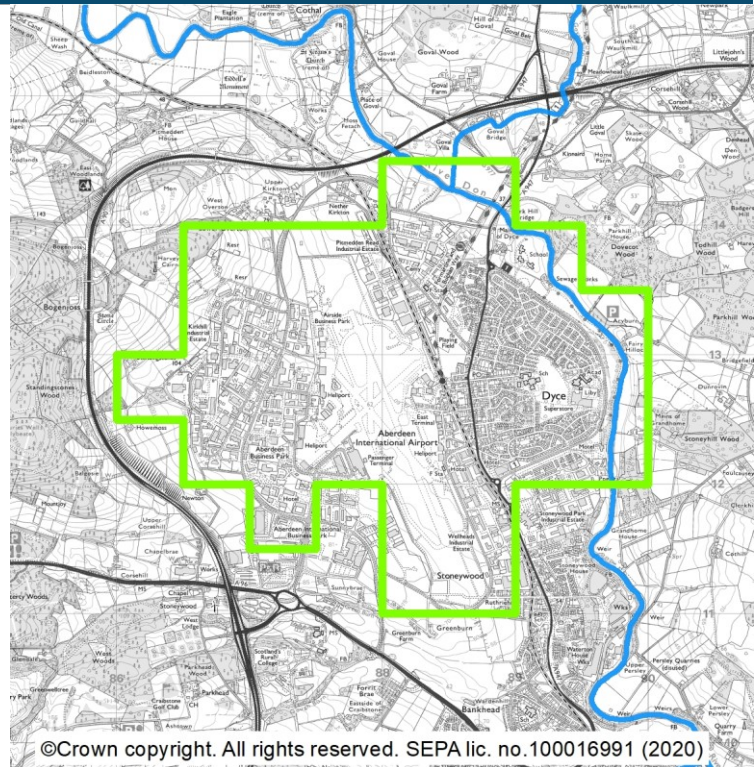
Scottish Water will explore the potential for developing a strategic drainage partnership with local authorities, SEPA and other relevant authorities in support of long term sustainable drainage planning.

Dyce (target area 430)

Summary

Dyce is in the north west of Aberdeen City and includes Dyce Airport. The area is within the Aberdeen City Council area. The main source of flooding in Dyce is from surface water and small water courses, and there is also some risk from the River Don. There are approximately 670 people and 610 homes and businesses currently at risk from flooding. This is likely to increase to 1,100 people and 870 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. For Dyce, the national level assessment is improving for surface water by the development of a surface water management plan. This incorporates the results of the integrated catchment study and sewer flood risk assessment. There is a long history of flooding in Dyce. Notable flooding was recorded in January 2016 and August 2020 when persistent rainfall caused flooding from surface water, the Far Burn and the River Don.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4301	Avoid flood risk	Avoid inappropriate development that increases flood risk in Dyce.
4302	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Dyce.
4303	Reduce flood risk	Reduce the risk of flooding from surface water, small water courses and River Don in Dyce.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (Ref: 43001)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study should be carried out for the Green Burn and Far Burn. The flood studies should look at the flood risk from small watercourses and surface water in this area and define the type of solutions that may be applicable in these areas to prevent or reduce flood risk. The need for further studies may be identified during the preparation of the surface water management plans.
Coordination	The action delivery lead is Aberdeen City Council and any coordination will be determined once the actions have been finalised.

Flood study (Ref: 43002)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study should 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 jointly to build an agreed hydrology for the River Don and to review the need to extend the River Don flood warning scheme. Interactions with surface water and coastal flooding should be considered.
Coordination	The action delivery lead is Aberdeen City Council in coordination with SEPA.

Sewer flood risk assessment (Ref: 43003)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Persley sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 43004)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the Dyce Surface Water Management Plan. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the results of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

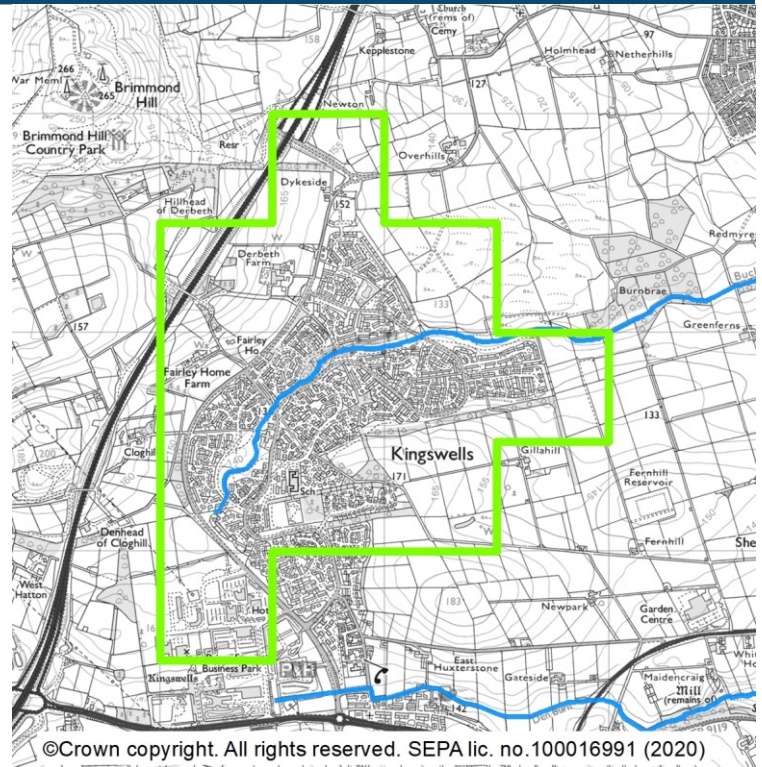
There is potential to work with SEPA's River Basin Management team to improve the physical condition of the water environment.

Kingswells (north) (target area 445)

Summary

Kingswells (north) is a suburb located to the west of Aberdeen City. It is within the Aberdeen City Council area. The only significant source of flooding in Kingswells (north) is surface water. There are approximately 100 people and 50 homes and businesses at risk from flooding. This is estimated to increase to 130 people and 70 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improving for surface water by the development of a surface water management plan. This incorporates the results of the integrated catchment study and sewer flood risk assessment. There are no records of flooding in the Kingswell (north) target area, but this does not confirm that there is no flood risk.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4451	Avoid flood risk	Avoid inappropriate development that increases flood risk in Kingswells.
4452	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Kingswells as a result of climate change
4453	Reduce flood risk	Reduce the risk of surface water flooding in Kingswells.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 44501)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 44502)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the Kingswells Surface Water Management Plan. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the results of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/16 (Kemnay)

Kemnay is designated as a Potentially Vulnerable Area due to river and surface water flooding. Recent flooding occurred due to river flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Kemnay

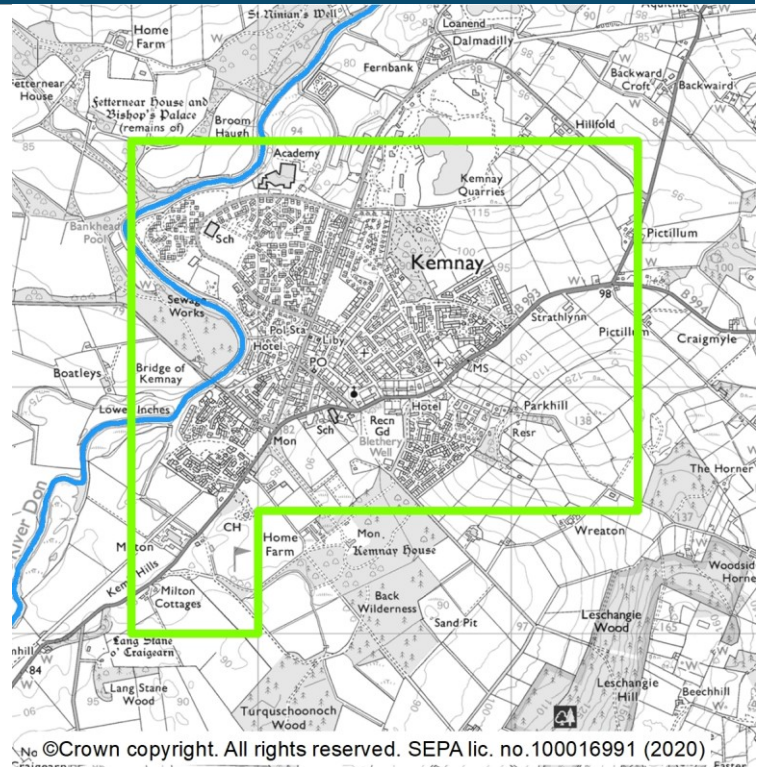
(target area 422)

Kemnay (target area 422)

Summary

Kemnay is located north west of Aberdeen and on the banks of the River Don. It is within the Aberdeenshire Council area. The main sources of flooding in Kemnay are river and surface water flooding. There are approximately 260 people and 130 homes and businesses currently at risk from flooding. This is likely to increase to 340 people and 170 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of river and surface water flooding in this target area. Kemnay has therefore been identified as a new target area for the 2021 flood risk management plans. The national level assessment is improved for river flooding by the development and operation of the River Don flood warning scheme. There are records of periodic flooding in the Kemnay target area including notable flooding in January 2016 when persistent rain caused the River Don to burst its banks.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4221	Avoid flood risk	Avoid inappropriate development that increases flood risk in Kemnay.
4222	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Kemnay.
4223	Reduce flood risk	Reduce the risk of flooding from the River Don and surface water in Kemnay.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (Ref: 42201)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeenshire Council to develop a flood study for Kemnay, addressing flood risk from the River Don. The council should work closely with the SEPA to agree the hydrology, so that improvements to the flood warning and flood maps can be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 42202)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Kemnay sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 42203)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan for Kemnay. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Community flood alert (Ref: 42204)

Action	The community river level alerting system should continue to be operated and maintained to provide information on high water levels which could potentially lead to localised flooding.
Action detail	Milton Meadows has its own community flood warning system on a small unnamed watercourse at Milton Drive.
Coordination	The action delivery lead is the community in coordination with SEPA. Any other coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 42205)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Don flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/17 (Westhill)

This area is designated as a Potentially Vulnerable Area due to the risk of surface water flooding to Westhill. There are some records of surface water and small water courses flooding roads.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Westhill

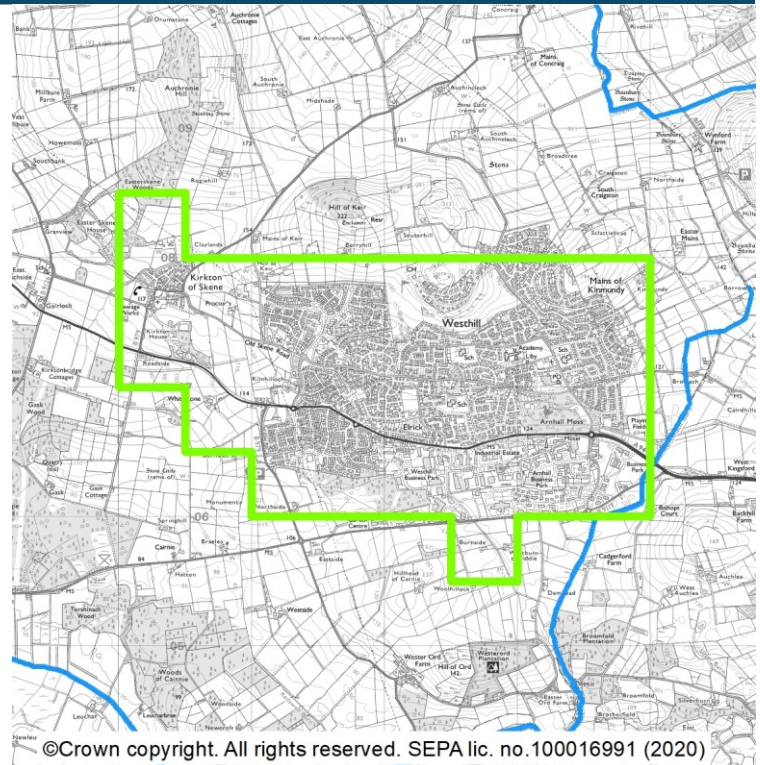
(target area 416)

Westhill (target area 416)

Summary

Westhill lies approximately 10km west of Aberdeen and includes Kirkton of Skene. It is within the Aberdeenshire Council area. The main source of flooding in Westhill is surface water flooding. There are approximately 870 people and 440 homes and businesses currently at risk of flooding. This is likely to increase to 1,200 people and 600 homes and businesses by the 2080s due to climate change. Westhill is sensitive to the effect of climate change, particularly in Elrick, Kirkton on Skene and areas located to the east and west of the Westhill Golf Course.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved through the integrated catchment study and sewer flood risk assessment. Understanding is improving further through the development of a surface water management plan. There are limited records of flooding in the Westhill target area. These records relate to flooding from surface water and smaller water courses and include notable flooding during January 2016.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4161	Avoid flood risk	Avoid inappropriate development that increases flood risk in Westhill.
4162	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Westhill.
4163	Reduce flood risk	Reduce the risk of surface water flooding flooding in Westhill.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 41601)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41602)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/18 (Aberdeen City – South)

This area is designated as a Potentially Vulnerable Area due to the risk of river, coastal and surface water flooding to Aberdeen. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Riverside Drive floods from the River Dee due to high tides. Surface water flooding affected Aberdeen on a number of occasions, causing roads to flood. The Merchant Quarter was particularly affected in the past.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

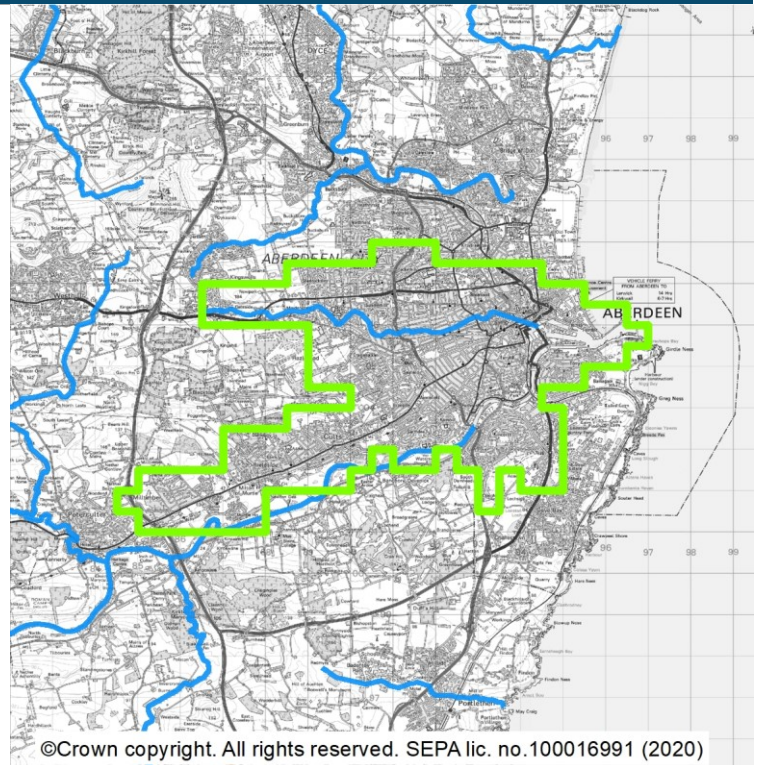
Aberdeen Central (target area 413)

Aberdeen Central (target area 413)

Summary

The Aberdeen Central area is on the River Dee and is mainly within the Aberdeen City Council area. The main sources of flooding to Aberdeen Central are river, surface water and small watercourses, however there is also a risk from coastal flooding, which is likely underestimated. There are approximately 23,000 people and 14,000 homes and businesses at risk from flooding. This is likely to increase to 28,000 people and 16,000 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level understanding of flood risk for surface water flood risk is improving through the development of a surface water management plan which focuses on addressing flood risk in 10 areas across the city considered to be at high risk of surface water flooding. This incorporates the results of the integrated catchment study and the sewer flood risk assessment. The understanding of coastal flood risk is improved by the Footdee Coastal Flood Study (2018) and the Aberdeen Strategic Overview of Coast Protection (2019). The understanding of river flooding is improved by the development and operation of the River Dee flood warning scheme and the development of the existing flood protection. There is a long history of flooding from all sources in the Aberdeen Central target area. Affected areas include known hot spots, such as Merchant Quarter, Duthie Park's car park, Golf Road near Pittodrie, Riverside Drive, Holburn Street, Hutcheon Street and Fraser Road.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, making data, expertise, resources and resources.

- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4131	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Aberdeen coastal flood protection scheme.
4132	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Fraser Road, Maidencraig and Stronsay Park flood protection schemes and the Dee flood gates.
4133	Avoid flood risk	Avoid inappropriate development that increases flood risk in Aberdeen.
4134	Improve data and understanding	Improve data and understanding of the performance of the flood protection assets in Aberdeen.
4135	Improve data and understanding	Improve data and understanding of coastal erosion, flooding and the impacts of climate change related to coastal flooding in Aberdeen.
4136	Prepare for flooding	Prepare for current flood risk and/or future flooding in Aberdeen as a result of climate change
4137	Reduce flood risk	Reduce the risk of surface water flooding in Aberdeen.
4138	Reduce flood risk	Reduce the risk of flooding from the River Dee and small water courses in Aberdeen.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood defence maintenance (Ref: 41301)

Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	Aberdeen City Council should maintain the Fraser Road, Maidencraig and Stronsay Park Flood Protection Schemes and the Dee flood gates. The existing coastal defences should also be maintained.
Coordination	The action delivery lead is Aberdeen City Council.

Flood scheme or works design (Ref: 41302)

Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council and Scottish Water should continue working together towards identifying flood risk mitigation measures for the Merchant Quarter.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Community engagement (Ref: 41303)

Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Community engagement should continue during the development of the detailed design of works for Merchant Quarter.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Flood scheme or works implementation (Ref: 41304)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Aberdeen City Council and Scottish Water should construct flood schemes or works for Merchant Quarter. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Scottish Water in coordination with Aberdeen City Council.

Flood study (Ref: 41305)

Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study has been commissioned to understand flood risk in the valley of Denburn. The study should continue to be progressed.
Coordination	The action delivery lead is Aberdeen City Council and any coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 41306)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Dee flood warning scheme. The performance of the scheme at Riverside Drive should be investigated.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 41307)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Strategic mapping improvements (Ref: 41308)

Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA has undertaken improved coastal modelling in this target area including taking account of the impact of waves on coastal flooding. We will complete and publish the outcomes of this modelling work to inform decision making with respect to flooding at the coast.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Shoreline Management Plan (Coastal Adaptive Plan) (Ref: 41309)

Action	An assessment of coastal flood and erosion risk is to be carried out. The plan should include assessment of climate change and develop adaptive approaches to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council 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 should be developed for Aberdeen City. There may be opportunities to 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.
Coordination	The action delivery lead is Aberdeen City Council and any coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 41310)

Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41311)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the surface water management plans for the Aberdeen Central area. This includes the Denburn Valley, Millside and Cults, Garthdee to Ferryhill, and part of Northfield to Seaton areas. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the results of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Scottish Water, SEPA and Aberdeen City Council will work to enhance partnership working. This will explore the current and future understanding of flood risk to support long term sustainable improvements for communities.

SEPA will work to enhance coordinated working in this target area through placemaking partnerships. This will look at land use planning and flooding issues to improve the current and future understanding of flood risk with the aim of identifying long term improvements for communities.

Scottish Water will explore the potential for developing a strategic drainage partnership with local authorities, SEPA and other relevant authorities to support long term sustainable drainage planning.

02/06/19 (Peterculter)

Peterculter is designated as a Potentially Vulnerable Area due to river flooding from the Culter Burn, and surface water flooding. Recent flooding occurred due to river and surface water flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

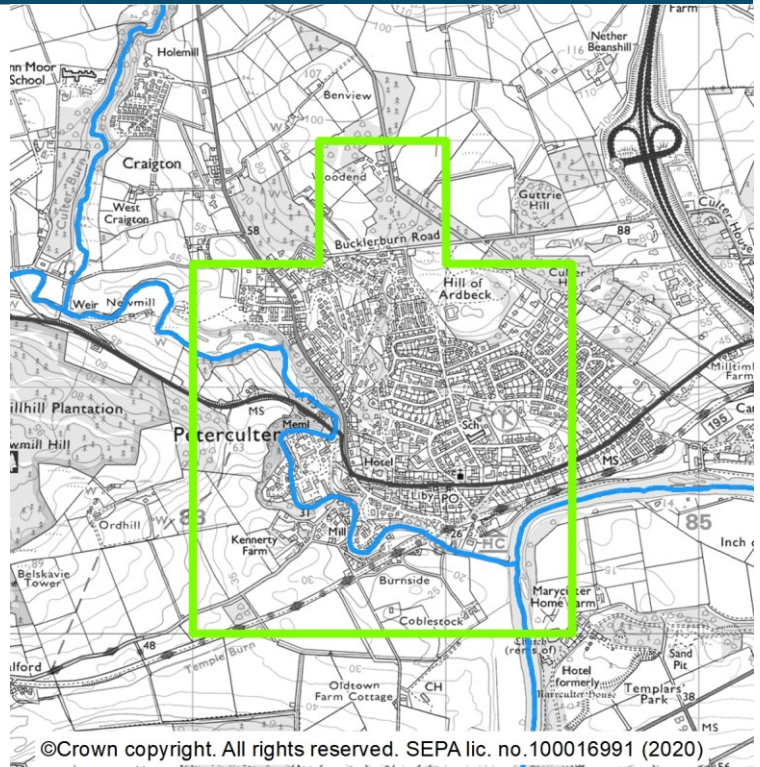
Peterculter (target area 415)

Peterculter (target area 415)

Summary

Peterculter is in Deeside, west of Aberdeen in the Aberdeen City Council area. The main source of flooding in Peterculter is river flooding from the Culter Burn. There is also a risk from surface water flooding. There are approximately 790 people and 430 homes and businesses at risk from flooding. This is likely to increase to 910 people and 510 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level understanding of flood risk for river flooding is improved by a flood study of the Culter Burn which was completed in 2019. The understanding of surface water flood risk is improving through the development of a surface water management plan for Peterculter. This incorporates the results of the integrated catchment study and the sewer flood risk assessment. There is a long history of flooding from the Culter Burn including the notable flood in January 2016.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4151	Avoid flood risk	Avoid inappropriate development that increases flood risk in Peterculter.
4152	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Peterculter.
4153	Reduce flood risk	Reduce the risk of flooding from the Culter Burn in Peterculter.
4154	Reduce flood risk	Reduce the risk of surface water flooding flooding in Peterculter.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Data collection (Ref: 41501)	
Action	Equipment that measures rainfall, river levels, erosion, ground levels or wave height may be installed and maintained to improve our understanding of flood risk. This can be done over short term or to measure longer term impacts.
Action detail	Based on the results of the Peterculter Flood Study, a monitoring scheme is being developed. This includes the installation of river and rain gauges to improve understanding of the catchment dynamics. An app is being developed which will allow local residents to engage with the monitoring.
Coordination	The action delivery lead is Aberdeen City Council and any coordination will be determined once the actions have been finalised.

Community flood alert (Ref: 41502)	
Action	A community river level alerting system is to be installed to provide information on the potential for localised flooding.
Action detail	A community river level alerting system for the Culter Burn should be implemented and maintained based on the monitoring scheme which is being developed.
Coordination	The action delivery lead is Aberdeen City Council in coordination with the Community Council.

Sewer flood risk assessment (Ref: 41503)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41504)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the Peterculter Surface Water Management Plan. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the outputs of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on future flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

Flood warning maintenance (Ref: 41505)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Dee flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/20 (Aboyne)

This area is designated as a Potentially Vulnerable Area due to past flooding in Aboyne and Tarland from the Tarland Burn. Surface water flooding has also occurred in Aboyne. Recent flooding was caused by both river and surface water flooding.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

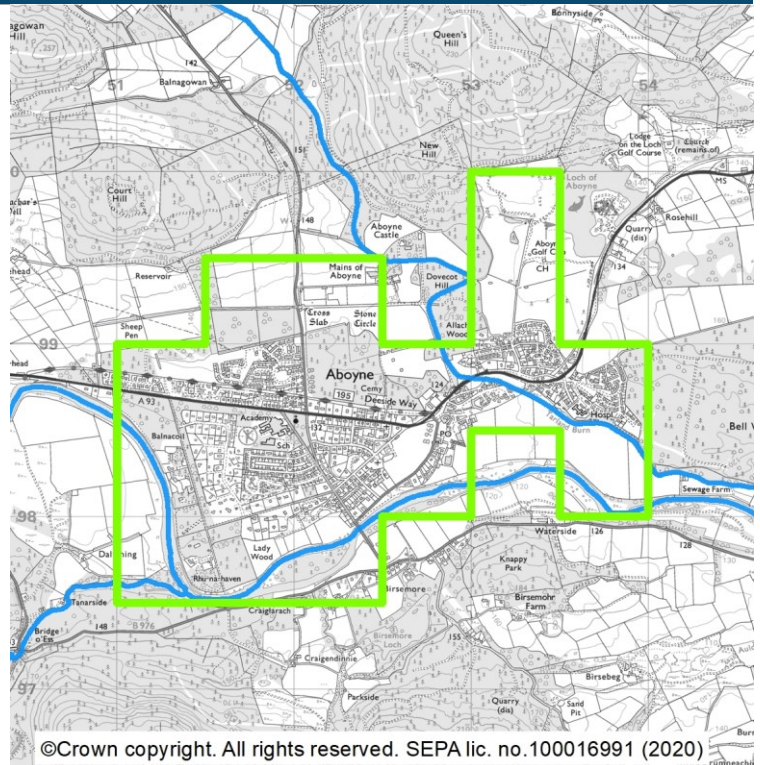
Aboyne	(target area 417)
Tarland	(target area 418)

Aboyne (target area 417)

Summary

Aboyne is located on the eastern edge of the Cairngorms National Park on the River Dee. It is within the Aberdeenshire Council area. The main source of flooding in Aboyne is river flooding from the River Dee and Tarland Burn. However, there is also risk from surface water flooding. There are approximately 240 people and 140 homes and businesses currently at risk from flooding. This is likely to increase to 340 people and 190 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improving for surface water by the development of a surface water management plan for Aboyne. A sewer flood risk assessment has also been completed. The understanding of river flooding is improved through the development and operation of the River Dee flood warning scheme. There is a long history of flooding in Aboyne including notable flooding during Storm Frank in December 2015 and into January 2016 when the River Dee and Tarland Burn burst their banks.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4171	Avoid flood risk	Avoid inappropriate development that increases flood risk in Aboyne.
4172	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Aboyne.
4173	Reduce flood risk	Reduce the risk of flooding from the River Dee, Tarland Burn and surface water in Aboyne.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (Ref: 41701)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study should be undertaken for the River Dee and Tarland Burn at Aboyne. SEPA should be consulted early to agree the hydrology, as it may affect the River Dee flood warning scheme. There may be opportunities for collaboration. The impacts of climate change on flood risk should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with SEPA and other actions in the area.

Surface water management plan (Ref: 41702)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system have been identified. Next steps in managing such water ponding or over-whelmed drainage systems have been identified and should be implemented. The plan is to be reviewed and updated as needed.
Action detail	Aberdeenshire Council to implement the surface water management plan. This should be reviewed and updated regularly. The results of Scottish Waters sewer flood risk assessment should be considered. The impacts of climate change on rainfall patterns and flood risk should be assessed.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood warning maintenance (Ref: 41703)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Dee flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

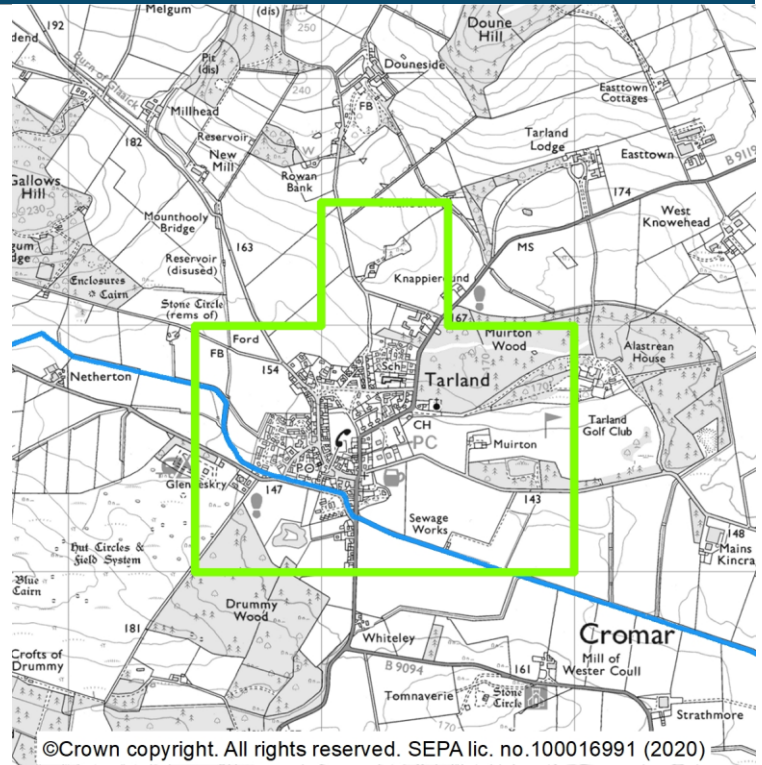
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Tarland (target area 418)

Summary

The village of Tarland is located around 50km west of Aberdeen, on the Tarland Burn, a tributary of the River Dee. The area is within the Aberdeenshire Council area. The main source of flooding is river flooding. There are approximately 190 people and 100 homes and businesses at risk from flooding. This is not estimated to increase significantly by the 2080s, due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of river flooding in this target area. Tarland has therefore been identified as a new target area for the 2021 flood risk management plans. The national level assessment is improved for river flooding due to the previous studies investigating options to reduce flood risk in the target area. There are frequent records of flooding in Tarland.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4181	Avoid flood risk	Avoid inappropriate development that increases flood risk in Tarland.
4182	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Tarland.
4183	Reduce flood risk	Reduce the risk of flooding from the Tarland Burn in Tarland.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood study (Ref: 41801)	
Action	An understanding of flood risk and associated issues in the area is to be developed, which may include surveys and modelling and should consider the impacts of climate change on flood risk. In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	A flood study should be carried out for the Tarland Burn. This should be based on existing flood studies. Any existing models should be reviewed and updated to take account of new climate change data.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/21 (Banchory)

This area is designated as a Potentially Vulnerable Area as Banchory is at risk of surface water flooding. There is a history of flooding, with recent flooding due to surface water.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

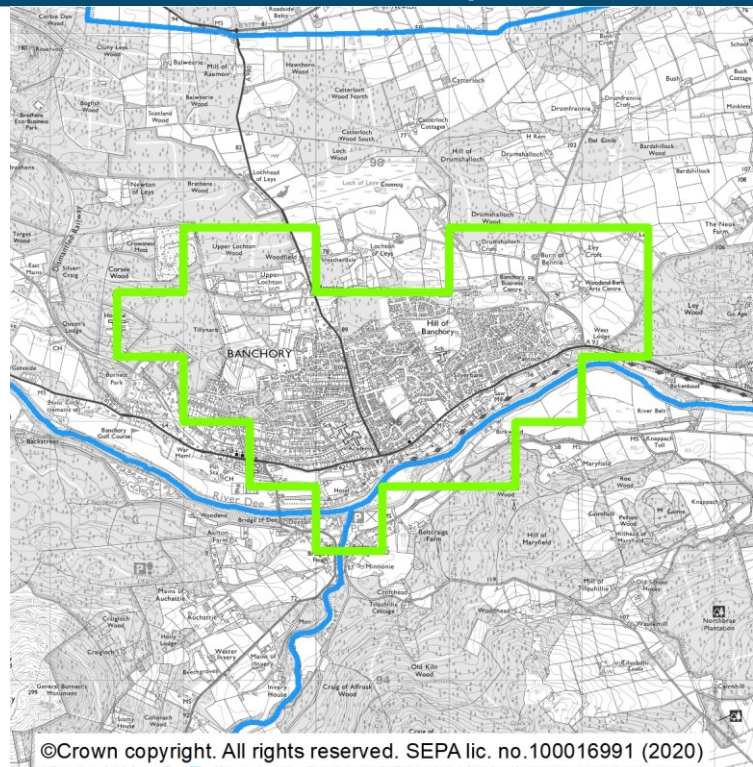
Banchory (target area 433)

Banchory (target area 433)

Summary

Banchory is located approximately 30km west of Aberdeen, on the banks of the River Dee. It is within the Aberdeenshire Council area. The main source of flooding in Banchory is surface water flooding. There are approximately 340 people and 200 homes and businesses currently at risk of flooding. This is likely to increase to 470 people and 260 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for surface water by a sewer flood risk assessment. There are limited records of flooding in Banchory.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4331	Avoid flood risk	Avoid inappropriate development that increases flood risk in Banchory.
4332	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Banchory as a result of climate change
4333	Reduce flood risk	Reduce the risk of surface water flooding in Banchory.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood warning maintenance (Ref: 43301)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Dee flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Actions proposed after June 2028

The following actions are proposed to take place after June 2028. These will be reviewed in 2026, considering added information at that time, to ensure they are still the most appropriate actions for the community.

Surface water management plan (Ref: 43302)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Develop a surface water management plan for Banchory. The results of Scottish Waters sewer flood risk assessment should be considered. The impacts of climate change on rainfall patterns and flood risk should be taken into account.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/22 (Ballater)

This area is designated as a Potentially Vulnerable Area due to flood risk from the River Dee and surface water flooding to Ballater. Recent floods have occurred in the area from both surface water and river flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

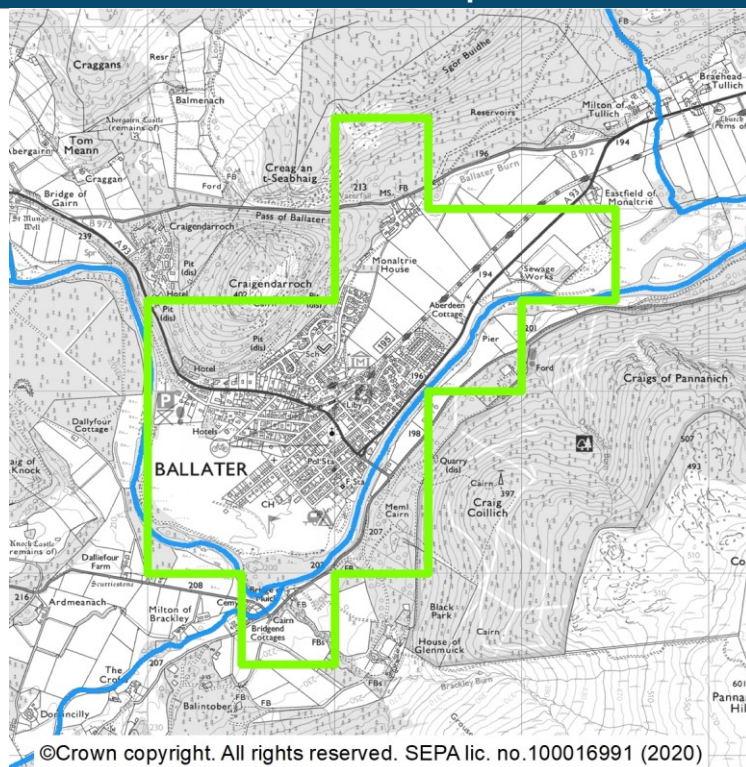
Ballater (target area 414)

Ballater (target area 414)

Summary

Ballater is on the banks of the River Dee within the Cairngorms National Park and the Aberdeenshire Council area. The main source of flooding is the River Dee, however there is also a risk of surface water flooding. There are approximately 670 people and 370 homes and businesses currently at risk from flooding. This is estimated to increase to 1,300 people and 720 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river flooding by the Ballater Flood Study (2019). The study focuses on flood risk from the River Dee and its tributaries the River Gairn and the River Muick. Understanding of surface water flood risk is improved by a sewer flood risk assessment. There is a long history of occasional flooding recorded in the Ballater target area, including severe flooding from the River Dee in December 2015.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4141	Avoid flood risk	Avoid inappropriate development that increases flood risk in Ballater.
4142	Prepare for flooding	Prepare for current flood risk and/or future flooding in Ballater as a result of climate change
4143	Reduce flood risk	Reduce the risk of flooding from the River Dee in Ballater.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood scheme or works design (Ref: 41401)	
Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Further development of the preferred option will be required prior to commencing with the detailed design. Aberdeenshire Council to work closely with Cairngorms National Park Authority to identify any planning constraints and opportunities associated with the proposals. Consideration should also be given as to how best the management of flood risk in Ballater can be taken forward to deal with likely increases in flood risk as a result of climate change and to account for the highly dynamic nature of the River Dee in and around Ballater. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Community engagement (Ref: 41402)	
Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Aberdeenshire Council to continue to engage with the community, with particular focus on the detailed design of the flood scheme in order to balance the requirements for flood management with wider social, economic and environmental considerations. Ballater Flood Group have proposed an alternative alignment, the merits of which should be considered as part of the work to further develop proposals.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 41403)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress a Ballater Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Community resilience group (Ref: 41404)

Action	The group of community volunteers work to prepare and put in practice their Community Resilience Plan and be supported by the local authority.
Action detail	
Coordination	Action delivery will be supported through coordination with responsible authorities.

Flood warning maintenance (Ref: 41405)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the River Dee flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/23 (Stonehaven)

This area is designated as a Potentially Vulnerable Area due to river, coastal and surface water flood risk. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Recent floods have occurred as a result of all flood sources.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

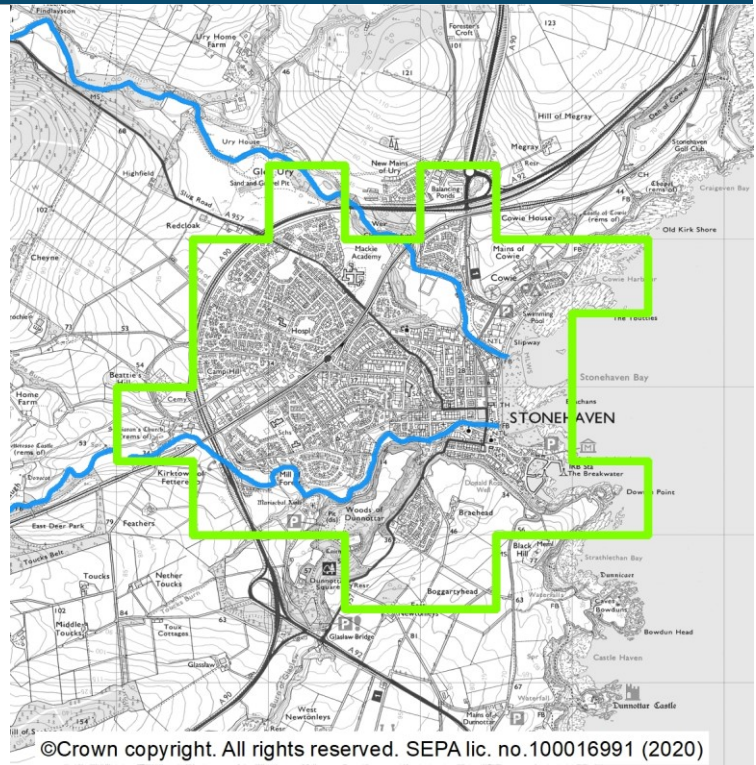
Stonehaven (target area 419)

Stonehaven (target area 419)

Summary

Stonehaven and Cowie are located south of Aberdeen in the Aberdeenshire Council area. Flooding is from river, coastal and surface water sources. The River Carron Flood Protection Scheme is under construction and will help address the river flood risk identified. There are approximately 3,100 people and 1,600 homes and businesses currently at risk from flooding. This is likely to increase to 3,600 people and 1,800 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. The national level assessment is improved for river flood risk by the studies to develop the River Carron Flood Protection Scheme. Understanding of coastal flood risk is improved by a the Stonehaven Bay coastal flood study (2019) which includes wave action. The study confirms there is a significant risk of coastal flooding in the target area. Understanding of surface water flood risk is improving through the Aberdeen Integrated Catchment Study, which also covers Stonehaven. It is also improving through the ongoing development of a surface water management plan for Stonehaven. There is a long history of flooding in Stonehaven. This includes notable river flooding from the River Carron in November 2009 and from the River Carron and its tributary, the Glaslaw Burn in December 2012. There was also notable coastal flooding in December 2012 in Stonehaven and Cowie and wave overtopping occurs several times a year. There are also records of surface water which includes recent flooding during August 2020.

The Dynamic coast project has shown that parts of the shoreline in or adjacent to this target area are subject to erosion at present or are considered likely to erode in the future. Consideration should be given to how erosion might impact flood risk. Any actions taken should aim to support building natural resilience to flooding and not lead to an increase in erosion.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, making data, expertise, resources and resources.

- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4191	Avoid flood risk	Avoid inappropriate development that increases flood risk in Stonehaven.
4192	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the River Carron flood protection scheme.
4193	Reduce flood risk	Reduce the risk of flooding from the River Carron in Stonehaven.
4194	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Stonehaven as a result of climate change
4195	Reduce flood risk	Reduce the risk of coastal flooding in Stonehaven.
4196	Reduce flood risk	Reduce the risk of surface water flooding in Stonehaven.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Flood scheme or works implementation (Ref: 41901)	
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	The River Carron Flood Protection Scheme started in cycle 1 should be completed. As built drawings should be made available to SEPA for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood defence maintenance (Ref: 41902)	
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Action detail	Once completed, the River Carron Flood Protection Scheme should be maintained.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 41903)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 41904)

Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be considered.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood scheme or works design (Ref: 41905)

Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	The detailed design for the Stonehaven Bay Coastal Flood Protection Scheme should be progressed based on the preferred option from the flood study. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works implementation (Ref: 41906)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Progress the Stonehaven Bay Coastal Flood Protection Scheme based on the detailed design. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map updates and flood warning scheme updates. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Community engagement (Ref: 41907)

Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Action detail	Aberdeenshire Council to continue to engage with the community, with particular focus the design of the coastal and Farrochie Burn flood schemes.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Strategic mapping improvements (Ref: 41908)

Action	SEPA will continue to update flood maps based on new information.
Action detail	SEPA will complete and publish outcomes from improved coastal modelling.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood warning maintenance (Ref: 41909)

Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme and the River Carron flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

Flood study (options appraisal) (Ref: 41910)

Action	In areas where flood risk is confirmed, a range of possible options to manage flood risk are to be identified, including natural flood management actions where suitable, and a preferred approach is to be chosen. This should include adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Farrochie Burn Flood Study is a joint study to identify potential options to reduce surface water and sewer flooding. It is part of the integrated catchment modelling optioneering in conjunction with Scottish Water. Outputs from this study will be received during the public consultation and actions will be updated prior to final publication dependent on study outcomes.
Coordination	The action delivery leads are Scottish Water and Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Flood scheme or works design (Ref: 41911)

Action	The selected preferred approach for managing flood risk is to be designed following the completion of the flood study, including consideration of the long-term impacts of climate change. These can include small scale works or works to improve catchment management. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Farrochie Burn Flood Study in conjunction with Scottish Water is underway. Identified flood risk and actions will advise further investigations for detailed design to be undertaken to address surface water flood risk.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

Flood scheme or works implementation (Ref: 41912)

Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Action detail	Following the Farrochie Burn Flood Study and detailed design in conjunction with Scottish Water, an appropriate scheme may be developed to address surface water flood risk. The responsible authority proposes this action as the best viable option for managing flood risk in this community. The delivery of this action is subject to capital funding being made available.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/24 (Portlethen)

Portlethen is designated as a Potentially Vulnerable Area due to the risk of river and surface water flooding. Recent flooding occurred due to surface water flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

Portlethen

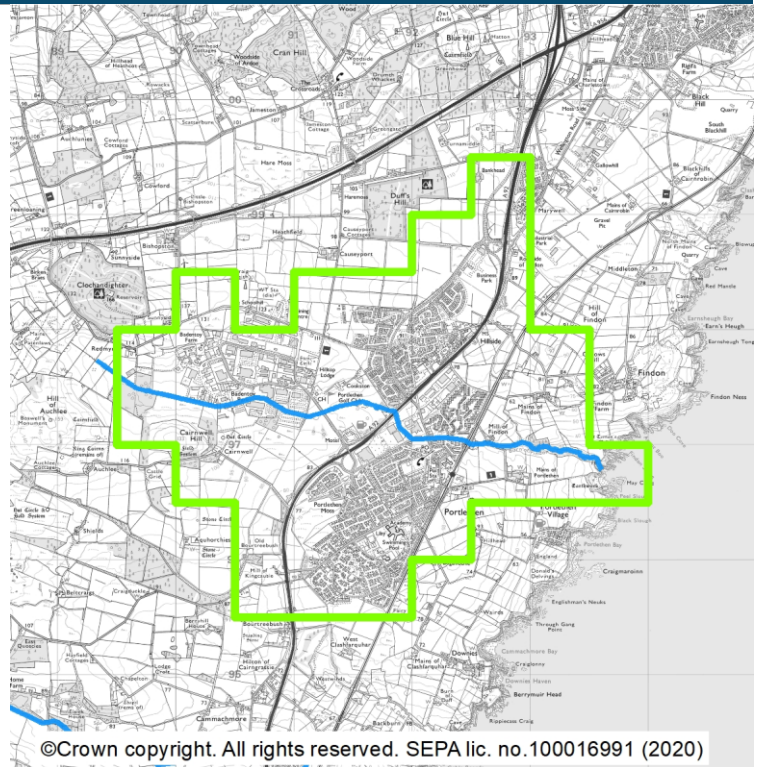
(target area 425)

Portlethen (target area 425)

Summary

Portlethen is located south of Aberdeen in the Aberdeenshire Council area. The main sources of flooding in Portlethen are surface water and river flooding from the Burn of Findon. There are approximately 630 people and 310 homes and businesses currently at risk from flooding. This is likely to increase to 810 people and 400 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of surface water and river flooding in this target area. Portlethen has therefore been identified as a new target area for the 2021 flood risk management plans. The national level understanding of flooding is improved by the Aberdeen Integrated Catchment Study which covers Portlethen. The understanding of surface water flooding is also improving through the development of a surface water management plan. There are records of periodic flooding in Portlethen including recent flooding in August 2020 from the Burn of Findon.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4251	Avoid flood risk	Avoid inappropriate development that increases flood risk in Portlethen.
4252	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Portlethen.
4253	Reduce flood risk	Reduce the risk of flooding from surface water and small water courses in Portlethen.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 42501)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 42502)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Progress and implement the surface water management plan. This includes the Burn of Findon and the Burn of Daff. The impacts of climate change on flood risk should be considered. This should be reviewed and updated regularly. The need for further data collection on the Burn of Findon and the Burn of Daff should be identified. Discussions are ongoing between Aberdeenshire Council and Scottish Water.
Coordination	The action delivery lead is Aberdeenshire Council in coordination with Scottish Water and other actions in the area.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

There is potential to work with SEPA's River Basin Management team to improve the physical condition of the water environment.

02/06/25 (Cove and Nigg Bay)

This area is designated as a Potentially Vulnerable Area due to risk of surface water flooding in the Cove Bay and Nigg Bay areas of Aberdeen.

There are 2 areas in this Potentially Vulnerable Area, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

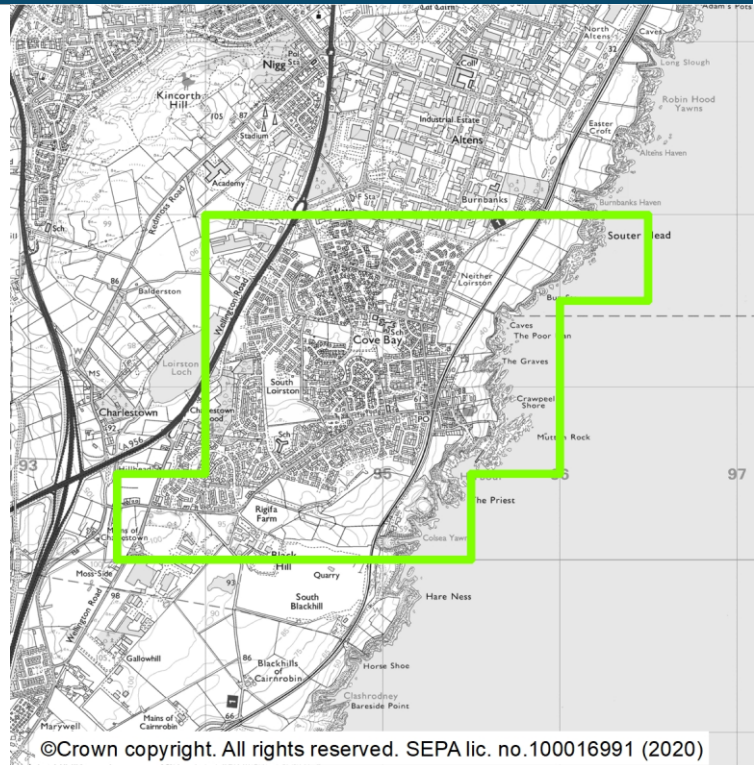
Cove Bay	(target area 424)
Nigg Bay	(target area 426)

Cove Bay (target area 424)

Summary

The area of Cove Bay covers the southern suburb of Aberdeen and is within the Aberdeen City Council area. The main source of flooding is surface water. There are approximately 260 people and 150 homes and businesses currently at risk of flooding. This is likely to increase to 340 people and 190 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources. This national level assessment has highlighted the risk of flooding, (principally associated with surface water) in this target area. The national level assessment is improving for surface water by the development of a surface water management plan for Torry and Cove. This incorporates the results of the integrated catchment study and sewer flood risk assessment. There are limited records of flooding in the Cove Bay target area.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4241	Avoid flood risk	Avoid inappropriate development that increases flood risk in Cove.
4242	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Cove.
4243	Reduce flood risk	Reduce the risk of surface water flooding in Cove.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 42401)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 42402)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the Torry and Cove Surface Water Management Plan. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the results of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

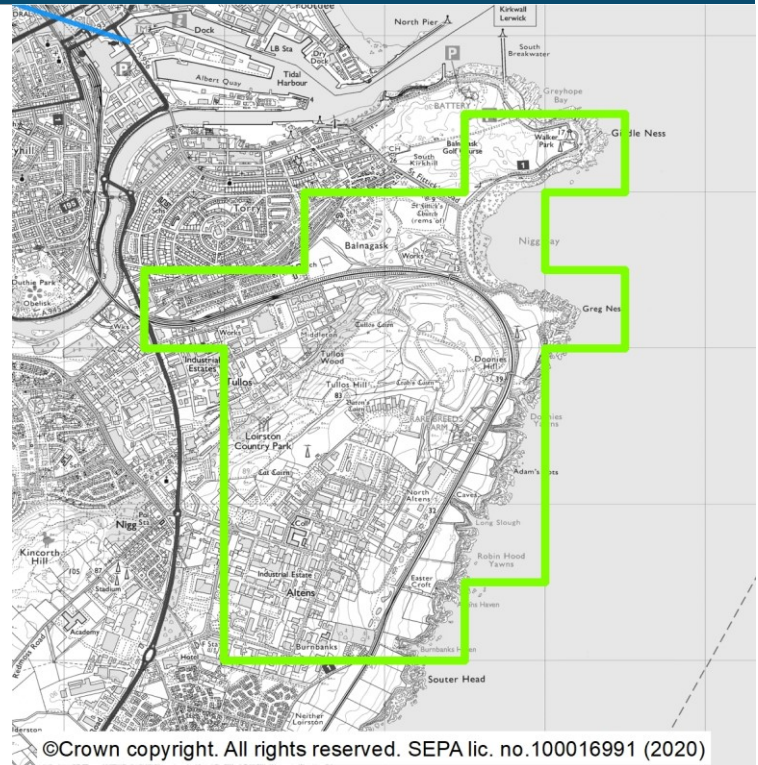
Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Nigg Bay (target area 426)

Summary

Nigg Bay is in the south east of Aberdeen within the Aberdeen City Council area. The main source of flooding is surface water. There are approximately 90 people and 90 homes and businesses currently at risk from flooding. This is likely to increase to approximately 120 people and 110 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of flooding, (principally associated with surface water) in this target area. The national level assessment is improving for surface water by the development of a surface water management plan for Torry and Cove, which includes Nigg Bay. This incorporates the results of the integrated catchment study and sewer flood risk assessment. There are limited records of flooding in the Nigg Bay target area.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4261	Avoid flood risk	Avoid inappropriate development that increases flood risk in the Nigg Bay area of Aberdeen.
4262	Reduce flood risk	Reduce the risk of surface water flooding in Nigg.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Sewer flood risk assessment (Ref: 42601)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg Headworks sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Surface water management plan (Ref: 42602)	
Action	Areas at risk of heavy or prolonged rainfall causing flooding due to water ponding on man-made surfaces or overwhelming the drainage system are to be identified. These priority areas will provide a baseline for the identification of next steps in managing water ponding or over-whelmed drainage systems. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Action detail	Aberdeen City Council should finalise and implement the Torry and Cove Surface Water Management Plan, which covers Nigg Bay. A surface water management plan should focus on areas at high risk of surface water flooding. This should incorporate the outputs of the integrated catchment study and sewer flood risk assessment. The impacts of climate change on future flood risk should be considered. Opportunities to disconnect surface water drainage from the sewerage system should be identified.
Coordination	The action delivery lead is Aberdeen City Council in coordination with Scottish Water.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

02/06/26 (Cruden Bay)

Cruden Bay is designated as a Potentially Vulnerable Area due to river flooding. There is a history of flooding, with recent flooding due to river flooding.

There is 1 area in this Potentially Vulnerable Area, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area is provided below.

List of target areas

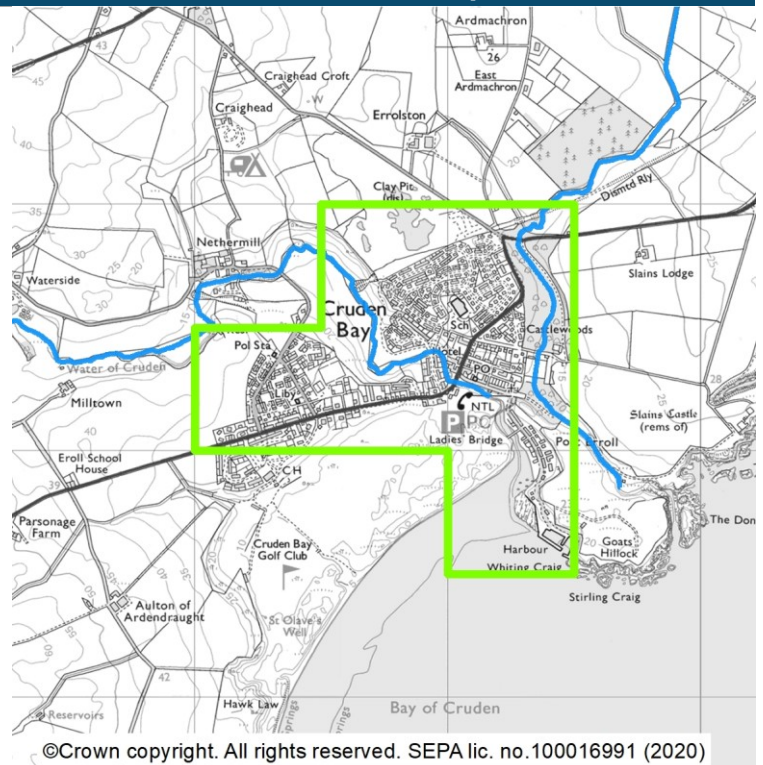
Cruden Bay (target area 447)

Cruden Bay (target area 447)

Summary

Cruden Bay is located approximately 40km north of Aberdeen on the east coast of Scotland and within the Aberdeenshire Council area. The main source of flooding in Cruden Bay is river flooding. There are approximately 100 people and 50 homes and businesses currently at risk from flooding. This is estimated to increase a little to 60 homes and businesses by the 2080s due to climate change.

Location map



What is the current understanding of flood risk?

This section provides a summary of information, which has helped to develop an understanding of flood risk in the area. Since 2011 SEPA has developed and updated national level assessments of flooding from rivers, surface water and coastal sources, and this national assessment has highlighted the risk of flooding from the Slains Burn (Back Burn) and the Water of Cruden. Cruden Bay has therefore been identified as a new target area for the 2021 flood risk management plans. There are limited records of flooding in Cruden Bay.

What are the objectives for the area?

In each target area, SEPA and the responsible authorities have set objectives for the management of flood risk. In some locations, the objectives provide a short-term direction that will be reviewed and updated when more information is available. In others they provide a long-term direction for the management of flooding within a community. The objectives along with the current understanding of flood risk help to identify the actions that are required in the short and long term. It may take several years or multiple 6 year cycles to achieve the identified objectives, but they set a common goal for multiple agencies. The following package of objectives have been established for this area. The objectives must be considered alongside national principles to manage flood risk. These include:

- Take a long term, risk-based approach to flood risk management decisions and one that considers the impacts of and adaptability to climate change.
- Deliver coordinated and integrated flood risk management by engaging with communities and working in partnership, sharing data, expertise, services, and resources.
- Consider whole catchments and coastlines and work with natural processes and the environment to deliver multiple outcomes.

Objective ref	Objective type	Objective description
4471	Avoid flood risk	Avoid inappropriate development that increases flood risk in Cruden Bay.
4472	Improve data and understanding	Improve data and understanding of the risk of flooding from the Water of Cruden in Cruden Bay.
4473	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Cruden Bay.

What actions are proposed for this area?

This section provides information on the draft proposed actions for this target area. The proposed actions take account of the understanding of flood risk and the package of objectives set for the area. Actions will be coordinated to achieve maximum benefit; this will be determined once the actions have been finalised. The proposed actions are draft for consultation and are provided for comment. Your comments will help shape future flood risk management. The delivery of the proposed actions is subject to available funding and resources.

Actions proposed to start before June 2028

Data collection (Ref: 44701)	
Action	Equipment that measures rainfall, river levels, erosion, ground levels or wave height may be installed and maintained to improve our understanding of flood risk. This can be done over short term or to measure longer term impacts.
Action detail	This may include data collection and monitoring to improve the confidence in flood sources, mechanisms and risk for the Water of Cruden. A review may be required to assess the need for rain and/or river gauges. Post flood event surveys may be required to collect data on flooding mechanisms, risk and damage caused.
Coordination	The action delivery lead is Aberdeenshire Council and coordination will be determined once the actions have been finalised.

Sewer flood risk assessment (Ref: 44702)	
Action	The volume of water that would overwhelm the sewer system and cause flooding from man-holes or inside our homes is to be assessed, to support understanding of the performance of the urban drainage network
Action detail	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Peterhead sewer catchment in this target area. This will help to improve knowledge and understanding of potential surface water flood risk. Funding for this action is secured through Scottish Water's strategic planning commitments.
Coordination	The action delivery lead is Scottish Water in coordination with the local authority and SEPA.

Flood warning maintenance (Ref: 44703)	
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Action detail	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.
Coordination	The action delivery lead is SEPA and coordination will be determined once the actions have been finalised.

SEPA and responsible authorities carry out actions in all areas which help to manage current and future flooding. These actions help to ensure that key aspects of flood risk management are taken forward in all locations. They ensure that for example new housing developments occur in the right places, and that critical flood risk information is developed and updated for all areas. A description of these actions is included in the Local Plan District section at the start of this document.

What are the opportunities for joint working?

Working in partnership is at the heart of flood risk management, responsible authorities and SEPA regularly work together in all areas to improve the coordination of flood management. Working across organisations and groups contributes to sustainable ways of managing current and future flood risk in a community. The potential for joint working will be further explored following the consultation feedback.

Flood Risk Management Glossary

July 2021

Term	Definition
Accretion	Accumulation of sediment.
Actions	Activities undertaken to reduce the impact of flooding. Actions describe where and how flood risk will be managed. These actions have been set by SEPA and agreed with flood risk management authorities. The actions presented in the consultation are draft and will be finalised after the consultation. Selection of actions to deliver the agreed objectives has been based on a detailed assessment and comparison of economic, social and environmental criteria.
Annual Average Damages (AAD)	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 AADs than rarer events. Within the flood risk management plans AADs 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).
Appraisal	Appraisal is the process of defining objectives, examining options and weighing up costs, benefits, risks and uncertainties before a decision is made. The flood risk management plans appraisal method is designed to set objectives and identify the most sustainable combination of actions to tackle flooding from rivers, the 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 overall impact.
Bathing waters	Bathing waters are classed as protected areas under Annex IV of the Water Framework Directive (WFD). There are 84 designated bathing waters in Scotland.

Term	Definition
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.
Blue infrastructure	Blue infrastructure is often complementary to 'green infrastructure' and includes sustainable drainage systems, swales (shallow, broad and vegetated channels designed to store and/or convey runoff and remove pollutants), wetlands, rivers, canals (and their banks) and all watercourses.
Business and services	Properties that are not used for people to live in, such as shops or other public, commercial or industrial buildings.
Catchment	All the land drained by a river and its tributaries.
Category 1 and 2 responders (Cat 1 / 2)	Category 1 and 2 Responders are defined as part of the Civil Contingencies Act 2004 which seeks to minimise disruption in the event of an emergency. Category 1 Responders are 'core' responders: local authorities, police, fire and rescue services, ambulance service, NHS health boards, SEPA and the Maritime and Coastguard Agency. Category 2 Responders are key co-operating responders in support of Category 1 Responders. These include gas and electricity companies, rail and air transport operators, harbour authorities, telecommunications providers, Scottish Water, the Health and Safety Executive and NHS National Services Scotland.
Channel improvement	Where work has been carried out on the river's channel allowing an increase in the volume of water it can carry.
Characterisation	Provides a description of the natural characteristics of catchments, coastlines and urban areas in terms of hydrology, geomorphology, topography and land use. It also includes the characterisation of existing levels of flood risk and existing flood risk management activity.
Coastal flooding	Flooding that results from high sea levels or a combination of high sea levels 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 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) (CSO)	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.

Term	Definition
Community facility	Within the flood risk management plans this term includes: Emergency Services (Police, Fire, Ambulance, Coastguard, and Mountain Rescue) Educational Buildings (crèche, nursery, primary, secondary, further, higher and special education premises) Healthcare facilities: hospitals, health centres and residential care homes.
Community flood action groups	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups.
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.
Cross Border Advisory Group (CBAG)	The Cross Border Advisory Group is a statutory group made up of representatives from the Environment Agency, SEPA, Scottish Water and the four lead local flood authorities located within the Solway Tweed River Basin District.
Cultural heritage site	Historic Environment Scotland maintains lists of buildings of special architectural or historic interest; these buildings are referred to as 'listed buildings'. The highest level of designation is a World Heritage Site. Other designations included in this assessment are scheduled monuments, gardens and designed landscapes, and battlefields.
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	<p>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.</p> <p>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 flood risk management plans, 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.</p> <p>See also 'Annual Average Damages'</p>

Demountable defences	A temporary flood barrier is one that is only installed when the need arises, that is, when flooding is forecast. A demountable flood defence is a particular type of temporary defence that requires built-in parts and therefore can only be deployed in one specific location.
----------------------	---

Term	Definition
Deposition	A natural process leading to an accumulation of sediment on a river bed, floodplain or coastline.
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	Flood embankments are engineered earthfill structures 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)	Environmental Impact Assessment (EIA) is a process which identifies the potential environmental impacts, both negative and positive, of a proposal.
Environmental sites / environmental designated areas/ environmentally designated sites	Areas formally designated for environmental importance, such as Sites of Special Scientific Interest (SSSI) Special Protection Area (SPA) or Special Areas of Conservation (SAC).
Episodic erosion	Erosion induced by a single event, such as a storm.
Erosion	A natural process leading to the removal of sediment from a river bed, bank, floodplain or coastline.
Estuarine surge attenuation	A reduction in the wave energy caused by storm surge. Breakwaters (barriers built out into the sea to protect a coast or harbour from the force of waves) or habitats such as saltmarsh can slow down and reduce the inland impact of storm surges (the rising of the sea due to wind and atmospheric pressure changes associated with storms), thereby reducing coastal flood risk.
Estuary	A coastal body of water usually found where a river meets the sea; the part of the river that is affected by tides.
Fault (fault line)	A break or fracture in the earth's crust as a result of the displacement of one side with respect to the other. In Scotland the Great Glen Fault is a major geological fault line cutting diagonally across the Highlands from Fort William to Inverness.

Flash flood	A flood that occurs a short period of time after high intensity rainfall or a sudden snow melt. A sudden increase in the level and velocity of the water body is often characteristic of these events, leaving a short time for warning or actions.
-------------	---

Term	Definition
Flashy watercourse	A 'flashy' river or watercourse has a short lag time (the delay between peak rainfall intensity and peak river discharge), high peak discharge, and quickly returns to average flow. Rivers with these characteristics can be prone to flooding and leave a short time for warning or actions.
Flood	In the terms of the Flood Risk Management Act, 'flood' means a temporary covering by water, from any source, of land not normally covered by water. This does not include a flood solely from a sewerage system, as a result of normal weather or infrastructure drainage. A flood can cause significant adverse impacts on people, property and the environment.
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 and embankments, 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 forecasting	SEPA operates a network of over 250 rainfall, river and coastal monitoring stations throughout Scotland that generate data 24 hours a day. This hydrological information is combined with meteorological information from the Met Office. A team of experts then predict the likelihood and timing of river, coastal and surface water flooding. This joint initiative between SEPA and the Met Office forms the Scottish Flood Forecasting Service.
Flood frequency	The probability that a particular size/severity of flood will occur in a given year (see likelihood).
Flood gate	An adjustable, sometimes temporary, barrier used as a flood defence to control the flow of water within a water system or during a flood. Flood gates can also be part of operational flood defences or protect individual buildings or sites.
Flood guard	Flood guards cover a variety of types of door and window barriers that can be fitted to individual properties and operated by the owners / occupiers prior to a flood event. They act as a physical barrier to water entering the property and can provide protection against frequent and relatively shallow flooding.
Flood hazard	In terms of the Flood Risk Management Act, hazard refers to the characteristics (extent, depth, velocity) of a flood.
Flood hazard map	Flood hazard maps are required by the Flood Risk Management 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 Scheme / Flood Protection Scheme (FPS)	A flood protection scheme, as defined by the Flood Risk Management 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.
---	--

Term	Definition
Flood Prevention (Scotland) Act 1961	The Flood Prevention (Scotland) Act 1961 gave local authorities discretionary powers to make and build flood prevention schemes. It was superseded by the Flood Risk Management (Scotland) Act 2009.
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 (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 Flood Risk Management 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 Risk Management Local Advisory Groups	Flood risk management local advisory groups are stakeholder groups convened to advise SEPA and lead local authorities in the preparation of flood risk management plans. SEPA and lead local authorities must have regard to the advice they provide.
Flood Risk Management Plan (FRM Plans)	A term used in the Flood Risk Management Act. Flood risk management plans set out a long-term vision for the overall management of flood risk. They contain a summary of flood risk in each Local Plan District, together with information on catchment characteristics and a summary of objectives and actions within Potentially Vulnerable Areas.
Flood Risk Management Strategy (FRM Strategy)	The term used for the first set of flood risk management plans, which were published in December 2015. These are now referred to as the flood risk management plans to keep consistency with the Flood Risk Management Act and other areas of the UK.

Flood risk map	Complements the flood hazard maps published on the SEPA website providing detail on the impacts of flooding on people, the economy and the environment. Flood hazard and risk maps are referred to collectively as flood maps and are available on the SEPA website.
Flood wall	A flood defence feature used to defend an area from flood water to a specified standard of protection.
Flood Warning Target Area (FWTA)	A Flood Warning target area is where SEPA operates a formal Flood Monitoring Scheme to issue targeted flood warning messages for properties located in the area.

Term	Definition
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.
Floods directive	European Directive 2007/60/EC on the Assessment and Management of Flood Risks builds on and is closely related to the Water Framework Directive (see river basin management planning). It was transposed into Scots Law by the Flood Risk Management (Scotland) Act 2009. The Directive requires Member States to assess if all watercourses and coastlines are at risk from flooding, to map the flood extent, assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk.
Floodplain	Area of land that borders a watercourse, an estuary or the sea, over which water flows in time of flood, or would 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.
Fluvial flooding	Flooding from a river or other watercourse.
Gabion	A metal cage filled with rocks often used in river bank protection.
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.” See also ‘blue infrastructure’.
Groundwater flooding	This type of flooding is caused by water rising up from underlying rocks or flowing from springs. In Scotland groundwater is generally a contributing factor to flooding rather than the primary source.
Integrated catchment study (ICS)	In urban areas, the causes of flooding are complex because of the interactions between rivers, surface water drainage and combined sewer systems and tidal waters. Scottish Water works with SEPA and local authorities to assess these interactions through detailed studies.

Land use planning (LUP)	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.

Term	Definition
Likelihood of flooding	The chance of flooding occurring. High likelihood: A flood event is likely in the defined area on average once in every ten years (1:10). Or a 10% chance of happening in any one year. Medium likelihood: A flood event is likely in the defined area on average once in every two hundred years (1:200). Or a 0.5% chance of happening in any one year. Low likelihood: A flood event is likely in the defined area on average once in every thousand years (1:1000). Or a 0.1% chance of happening in any one year.
Local Flood Risk Management Plans (Local FRM Plan)	Local flood risk management plans, produced by lead local authorities, will take forward the objectives and actions set out in flood risk management plans. They will provide detail on the funding, timeline of delivery, arrangements and co-ordination of actions at the local level during each six year, flood risk management planning cycle.
Local Nature Reserve (LNR)	A Local Nature Reserve is a protected area of land designated by a local authority because of its local special natural interest and / or educational value. Local authorities select and designate local nature reserves using their powers under the National Parks and Access to the Countryside Act 1949.
Local Plan District	Geographical areas for the purposes of flood risk management planning. There are 14 Local Plan Districts (LPDs) in Scotland.
Local Plan District Partnerships	Each LPD has established a local partnership comprised of local authorities, SEPA and Scottish Water and others as appropriate. These partnerships are distinct from the flood risk management plans local advisory groups and they retain clear responsibility for delivery of the flood risk management 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.
Montane habitat	This habitat encompasses a range of natural or near-natural vegetation occurring in the montane zone, lying above or beyond the natural tree-line.

National Flood Management Advisory Group (NFMAG)	The National Flood Management Advisory Group provides advice and support to SEPA and, where required, Scottish Water, local authorities and other responsible authorities on the production of flood risk management plans and Local flood risk management plans.
National Flood Risk Assessment (NFRA)	A national analysis of flood risk from all sources of flooding which also considers climate change impacts. First published 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 was reviewed and updated for the second cycle of flood risk management planning in 2018.

Term	Definition
Natural flood management (NFM)	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.
Objectives	Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. They were identified through an assessment of the underlying evidence of the causes and impacts of flooding.
One in 200 year flood	See 'likelihood of flooding' and 'return period'.
Options appraisal study	An options appraisal study looks to identify and assess a range of options that achieve flood risk management objectives whilst delivering other economic, social and environmental benefits. This helps to inform the decision-making process and identify how options work together to identify a preferred option for managing flooding within an area.
Planning policies	Current national planning policies, Scottish Planning Policy and accompanying Planning Advice notes restrict development within the floodplain and limit exposure of new receptors to flood risk. In addition to national policies, local planning policies may place further requirements within their area of operation to restrict inappropriate development and prevent unacceptable risk.
Potentially Vulnerable Areas (PVA)	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 PVAs identified by SEPA in the 2011 National Flood Risk Assessment and were the focus of the first flood risk management planning cycle. There are 233 PVAs identified for the 2018 National Flood Risk Assessment.
Preferred option	A preferred option identifies the collection of flood management options which combined offer the most suitable way of managing flooding within an area. Based on the economic, social and environmental benefits of the options.

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.
Property level protection scheme	Some responsible authorities may have a formal scheme to provide, install and maintain property level protection for properties.
Ramsar sites	Ramsar sites are wetlands of international importance designated under the Ramsar Convention.
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 which 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 Flood Risk Management (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. (See Likelihood).

Term	Definition
Revetment	Sloping structures placed on banks or at the foot of cliffs in such a way as to deflect the energy of incoming water.
Riparian	The riparian area is the interface between land and a river or stream. For the purposes of flood risk management plans this commonly refers to the riparian owner, which denotes ownership of the land area beside a river or stream.
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.

Sediment balance	Within a river where erosion and deposition processes are equal over the medium to long-term resulting in channel dimensions (width, depth, slope) that are relatively stable.
Sediment management	Sediment management covers a wide range of activities that includes anything from the small scale removal of dry gravels to the dredging of whole river channels and the reintroduction of removed sediment into the water environment. Historically, sediment management has been carried out for several reasons, including reducing flood risk, reducing bank erosion, for use as aggregate and to improve land drainage.
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.
Sewer flooding (and other artificial drainage system flooding)	Flooding as a result of the sewer or other artificial drainage system (e.g. road drainage) capacity being exceeded by rainfall runoff or when the drainage system cannot discharge water at the outfall due to high water levels (river and sea levels) in receiving waters.
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.
Shoreline Management Plan (SMP)	A Shoreline Management Plan is a large scale assessment of the coastal flood and erosion risks to people and the developed, historic and natural environment. It sets out a long-term framework for the management of these risks in a sustainable manner.
Site of Special Scientific Interest (SSSI)	Sites of Special Scientific Interest are protected by law under the Nature Conservation (Scotland) Act 2004 to conserve their plants, animals and habitats, rocks and landforms.

Term	Definition
Source of flooding	The type of flooding. This can be coastal, river, surface water or groundwater.
Special Area of Conservation (SAC)	Special Areas of Conservation are strictly protected sites 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.
Special Protection Areas (SPA)	Special Protection Areas are strictly protected sites classified in accordance with the European Birds Directive. They are classified for rare and vulnerable birds (as listed in the Directive), and for regularly occurring migratory species.
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.
Storage area	A feature that can be used to store floodwater, this can be natural in the form of low lying land or manmade such as a reservoir or modified landform.

Strategic Environmental Assessment (SEA)	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.
Strategic mapping improvements	Strategic mapping improvement actions have been identified in locations where SEPA is planning to undertake additional modelling or analysis of catchments and coastlines, working collaboratively with local authorities where appropriate, to improve the national understanding of flood risk.
Surcharge	Watercourses and culverts can carry a limited amount of water. When they can no longer cope, they overflow, or 'surcharge'.
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.
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. Flood risk management plan actions in this category include: Surface Water Management Plans, Integrated Catchment Studies and assessment of flood risk from sewerage systems (Flood Risk Management Act, Section 16) by Scottish Water. These have been selected as appropriate for each Potentially Vulnerable Area.
Term	Definition
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.
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.
Target area	Target areas are based on communities at risk of flooding. These are situated within Potentially Vulnerable Areas and should benefit from actions to reduce flood risk. To benefit the community, actions may apply to outside the target area. National flood risk management efforts and funding should be targeted to benefit these target areas.

UK Climate Change Projections (UKCP18)	The leading source of climate change information for the UK. It can help users to assess their climate risks and plan how to adapt to a changing climate. The high emissions scenario refers to the RCP8.5 emission scenario. See the UKCP18 climate change projections report for details.
Utility assets	Within the flood risk management plans this refers to electricity sub stations, mineral and fuel extraction sites, telephone assets, television and radio assets.
Voe	A dialect term, common in place names and used to refer to a small bay or creek in Orkney or Shetland.
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 (susceptibility) and the ability to recover following a flood (resilience).
Wave energy dissipation	Process by which a wave loses its energy.
Wave overtopping	Wave overtopping occurs when water passes over a flood wall or other structure as a result of wave action. Wave overtopping may lead to flooding particularly in exposed coastal locations.