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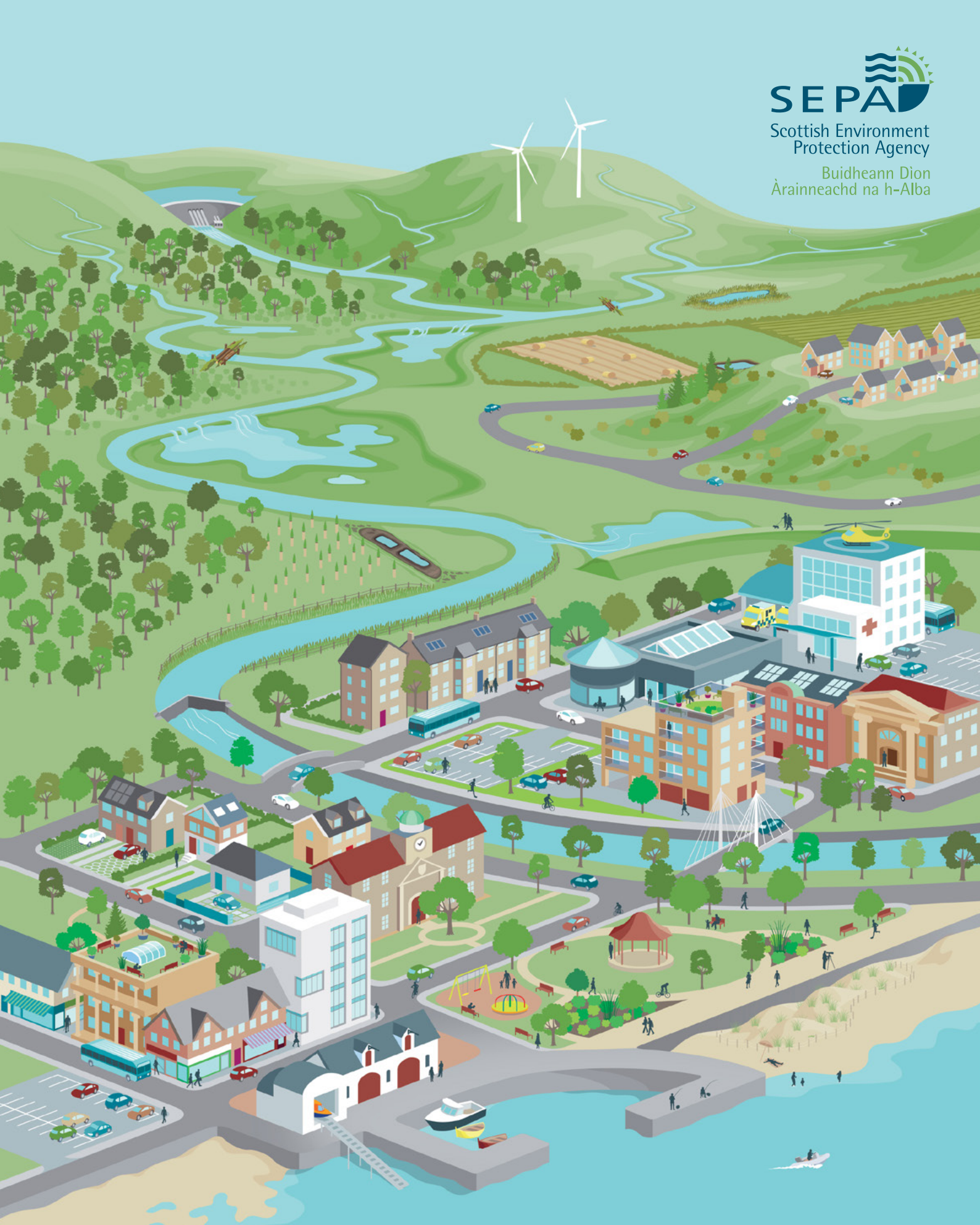

Flood Risk Management Plan

North East Local Plan District

Publication date: 22 December 2021

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Foreword

As we watch the news on TV or scan video clips on social media, we see much more regular violent weather. Bushfires of unprecedented size, ferocity and frequency happening in fire prone parts of the world and now happening where they were uncommon such as Siberia. Cyclones, tornadoes, heatwaves, droughts and, of course, as most affects Scotland - floods.

Anyone who has been in a flood area knows the intimidating terror it can bring. The foreboding that comes as people confront the potential damage or destruction of homes, businesses and other properties as well as injuries and, in the worst cases, loss of life.

This is all being made worse by the Climate Emergency. The recent COP26 meeting in Glasgow brought the world together to agree actions to do two things:

1. Reduce the emission of the greenhouse gases driving climate change, and
2. Help us adapt to the level of climate change that, despite our best efforts, is occurring.

The publication of this flood risk management plan is one of SEPA's key actions to help Scotland with this second aim.

As a society, we need to take action to manage the risk of flooding and its impacts on our lives, recognising that the risk can't ever be removed entirely. This plan takes our knowledge and understanding of flooding and the impacts of climate change and turns it into a set of actions that are planned, prioritised and co-ordinated to tackle flooding in the communities where it affects us the most.

Across Scotland, we now estimate that there are around 284,000 homes and businesses at risk of flooding. Our latest analysis shows that this could increase by around a further 110,000 homes and businesses if little or no action is taken to tackle climate change. Let's look at just one area of Scotland for an example of the local impact. Within the North East Local Plan District it is estimated there are around 30,000 homes and businesses at risk from flooding, and this may increase to 38,000 homes and businesses by the 2080s due to climate change. All up, in this part of Scotland, there is a risk of river, surface water and coastal flooding and the expected annual cost of flooding is around £26 million.

So given the assessment undertaken, this plan:

- Describes the ambition for managing flooding and the priorities for action that we believe are most important and helps inform the development of local plans. A local flood risk management plan co-ordinated by Aberdeenshire Council, provides additional detail on the responsibility for delivery, funding and coordination of actions across the Local Plan District. Taken together, these documents describe the commitment of responsible authorities to address flooding.
- Is published by SEPA and has been approved by Scottish Ministers. SEPA is just one organisation in the collective effort to manage flooding and this plan has been produced with the support and collaboration of Aberdeenshire Council, Aberdeen City Council, Moray Council, Cairngorms National Park Authority, Scottish Water and others with an interest in flood management. SEPA has taken account of the views received through a public consultation carried out during the development of the plan.
- Is based on the fact that how we plan for and manage our flood risk has far reaching consequences for Scotland's communities. The plans set the national direction of future flood risk management, helping to target investment and coordinate actions across public bodies. They explain what causes flooding in high-risk areas as well as the impacts when flooding does occur. This information is used as a basis for better decision-making across flood risk management organisations.

A lot of people, inside and outside SEPA, have contributed to the development of this plan. It underpins important decisions that will be made to protect people and property in Scotland from flooding and I hope that you find it valuable and useful.

Terry A'Hearn

Chief Executive

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Section 1: Flood risk management in Scotland

1.1 What is a flood risk management plan?

Flood risk management plans are Scotland's route map for reducing the effects of flooding on our communities. This is key to Scotland's health, well-being and economic success. They are also important in our response to the climate emergency as flooding is increasing due to climate change.

Flood risk management plans have been designed to ensure effort to reduce flood risk in Scotland is coordinated. Many organisations are responsible for flood risk management and the plans focus the work of these organisations to where the risk of flooding and benefits of action are greatest. The roles and responsibilities of some of the key organisations involved are set out later in this plan.

There is a plan for each of the 14 flood risk management districts in Scotland, which are called Local Plan Districts. These plans set out the long term ambition for flood risk management. They set objectives for tackling flooding in high risk areas and identify the actions needed to work towards those objectives. These are agreed by the responsible authorities and are based on the best available evidence on the causes and consequences of flooding. The actions are described and prioritised in 6 year planning cycles.

These plans complement the separate local flood risk management plans published in 2022. The local flood risk management plans explain in more detail how the actions set out in this plan for 2022 to 2028 will be delivered. They are published by the local authority who is nominated as the lead local authority for the Local Plan District.

The plans replace the first flood risk management plans which were published in 2015. At the time they were called flood risk management strategies. The updated flood risk management plans continue to build on the risk-based, plan-led approach established in the 2015 strategies.

The flood risk management plans are published by SEPA as Scotland's strategic flood risk management authority and are approved by Scottish Ministers. They have been prepared in

collaboration with all 32 local authorities, Scottish Water and other organisations with a responsibility or interest in managing flooding. They have also been shaped in consultation with the public.

The flood risk management plans are required under the Flood Risk Management (Scotland) Act 2009 and will be updated every 6 years.

1.2 Managing flooding in Scotland

Flooding needs to be managed sustainably so that flood risk is reduced without moving the problem elsewhere. It must be done in a way that contributes to the health and wellbeing of communities, supports the protection and regeneration of the environment, improves resilience to climate change and enables a sustainable economy. Actions are needed on all sources of flooding – including from rivers, the sea, surface water and groundwater – to meet the needs of present and future generations while also protecting and enhancing the environment.

Using a 6 year planning cycle enables new data, improved techniques and developing knowledge and understanding to be incorporated regularly into the national approach. Using all the latest information to regularly review our assessment of flood risk forms the foundation of a risk-based, plan-led approach to managing flooding sustainably. We have outlined below the key stages of the flood risk management process.

1.2.1 Progress in cycle 1: 2015-2021

The 2015 flood risk management strategies outlined the long term objectives to tackle flooding in the areas at highest risk.

In 2015 the objectives were split into two categories which were defined as:

- **Reduce overall flood risk**: to reduce the risk of flooding from all sources (river, sea and surface water) as far as reasonable, taking account of economic, environmental and social priorities.
- **Avoid an increase in flood risk**: to avoid increasing flood risk through land use planning and maintenance of existing flood management infrastructure.

The objectives for each area were agreed by the responsible authorities. Then actions were developed to deliver these objectives. Actions to deliver the reduce objectives included developing flood studies and flood protection schemes and providing public flood warnings and alerts. Actions for the avoid objective included maintenance of flood defences and storage areas and producing strong planning policies which prevent development from taking place in flood risk areas.

As the first planning cycle ends, it is important to review the progress made in achieving these objectives. A summary is provided below. A full assessment will be published in 2022 by the lead local authorities and will provide progress on each of the actions.

The summary is based on data from the mid-cycle reports published by lead local authorities in 2019. The status of each action at that time was assessed, and reported as red, amber or green:

- Red: The action is running late or over budget and is unlikely to meet its aims.
- Amber: The action is running late or over budget but is still likely to meet its aims.
- Green: The action is complete or is on track to meet its aims.

Actions with a green or amber status can be expected to succeed in working towards their objectives.

In this summary, the action progress described in the 2019 mid-cycle reports is used to assess progress in delivering the avoid and reduce objectives.

a) Progress towards meeting the avoid objectives

90% of the actions set out in the strategies to avoid an increase in flood risk were green at the time of the mid-cycle report. 10% of the actions were amber. By 2021, 100% of the actions are expected to be complete.

b) Progress towards meeting the reduce objectives

84% of the actions described in the strategies to reduce flood risk were green at the time of the mid-cycle report, 12% of the actions were amber and 4% were red. With 96% of the actions completed or underway by 2021, the actions developed to meet the reduce objectives will mostly be achieved.

This summary confirms that significant progress has been achieved towards meeting the objectives set out in the 2015 strategies.

Progress made towards delivering the objectives was fully considered when developing the objectives and actions in these updated flood risk management plans.

1.2.2 Improving the understanding of flooding

Since publication of the 2015 flood risk management strategies, SEPA has continued to develop the flood hazard and risk maps. The hazard maps show information on the extent of flooding, and also on depth and velocity where that information is available. The flood risk maps provide detail on the impacts of flooding on people, the economy, cultural heritage and the environment.

Many actions included in the 2015 strategies, such as detailed flood studies improved understanding of flooding. This is an ongoing area of development and new information resulting from actions in these plans will be incorporated into future reviews of the understanding of flooding, to better inform decisions on flood risk management in the future.

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

The flood hazard and risk maps and the assessment of the potential for natural flood management can be viewed on the SEPA website at https://www.sepa.org.uk/environment/water/flooding/flood-maps/

1.2.3 National flood risk assessment

SEPA's flood hazard maps form the basis for the national flood risk assessment (NFRA). The NFRA provides the underpinning evidence for the risk-based approach in the flood risk management plans. SEPA published the second NFRA in 2018 which is available to view at https://www.sepa.org.uk/data-visualisation/nfra2018/.

To make best use of the data available and new techniques and information, there were several areas of improvement in the 2018 NFRA, building on the first NFRA published in 2011. The most significant change was in the representation of buildings. The 2011 NFRA represented buildings as single points. In 2018 the whole footprint of the building was used meaning buildings can be identified at flood risk even when only partially within the flood extent. Updated information on building locations, property type and the economic classification of buildings was also used to improve the assessment. These method updates resulted in a 3% increase in the number of homes and a 45% increase in the number of businesses being identified at flood risk in 2018.

Another development for the 2018 NFRA was to take account of how frequently flooding occurs. Different likelihoods of flooding were used to assess the effects on individual receptors. This allowed for the frequency of impacts to be considered as well as the severity of larger floods.

The 2018 NFRA also assessed social vulnerability to flooding and the resulting flood disadvantage. This is important as it becomes clear that climate change will impact vulnerable communities disproportionately and therefore this has been included in the evidence used to plan actions to manage flood risk in Scotland.

Finally, updated methods outlined in The Flood Hazard Research Centre's Multi-Coloured Manual and Multi-Coloured Handbook 2016 were also incorporated. They are the best available techniques for assessing the impacts of flooding and are used to produce information on the annual cost of flooding.

1.2.4 Climate change

The latest science on the effects of climate change predicts that parts of Scotland will experience wetter winters and more extreme weather events. Although summers might generally be drier there will be a greater risk of very intense rainfall. Sea levels are also expected to rise, and all these effects will lead to an increase in the frequency and severity of damaging floods.

In November 2020 SEPA published future flood maps showing the impacts of climate change on flooding in Scotland for the first time. The maps are based on the 2080s high emissions scenario and their development allowed significant advances in how climate change was assessed in the 2018 NFRA. This enabled climate change to be more fully built into the development of the flood risk management plans. The future flood maps are available to view at https://map.sepa.org.uk/floodmaps

Currently 284,000 homes, business and services are at risk of flooding from rivers, surface water and the sea. With the effects of climate change, an additional 110,000 homes, businesses and services are expected to become at risk across all sources of flooding in Scotland. Compared with the current level of flood risk, this represents a 90% increase in the number of properties at risk of coastal flooding, 40% increase in the number for river flooding and 25% for surface water flooding.

1.2.5 Potentially vulnerable areas (PVAs)

The 2018 NFRA was used to review the areas where flood risk is considered to be nationally significant. These are the areas with the greatest current or future flood risk. They are based on catchment areas, as it is only within the context of the wider contributing catchment that flooding can be best understood and managed. These nationally significant areas are referred to as Potentially Vulnerable Areas (PVAs) and are where the plans must deliver objectives and actions to manage flood risk.

A detailed manual review process was applied to the identification of PVAs to allow local knowledge from responsible authorities, communities, and any other supporting information to be considered.

SEPA engaged the public through a 3 month consultation on the PVAs, providing the opportunity for others to contribute to the assessment and to provide any additional information. As a result, amendments were made before the final 235 PVAs were agreed.

Around 90% of Scotland's flood risk is contained within PVAs. That means that not every location experiencing flood risk is included within a PVA, as PVAs are used to prioritise where the risk is highest, and benefits of flood risk management will be greatest. This plan includes national actions that apply across whole Local Plan Districts, including areas that are not within a PVA. The identification of the PVAs is reviewed every 6 years.

1.2.6 Identifying objectives and selecting actions

The objectives provide the long term vision for delivering flood risk management in Scotland, and the actions give the practical steps required to achieve those objectives.

A community perspective was used to identify where flood risk management actions should target their benefits. Those areas are described as target areas.

A whole catchment approach was then used to understand the flood risk and the steps needed towards managing the risk. Objectives and actions have been set for each target area within each PVA. National actions have also been identified, which apply across all Local Plan Districts including to areas that are not within PVAs.

Objectives were set by SEPA in collaboration with other flood risk management authorities and partners and follow a set of national principles designed to deliver sustainable flood management. The national principles are:

- Take a long term, risk-based approach to decisions, considering the impacts of climate change and how we will be able to adapt.
- Deliver coordinated management of flood risk by engaging with communities and working in partnership with others.
- Consider whole catchments and coastlines, working with natural processes and the environment to deliver multiple benefits.

These national principles sit alongside the more specific target area objectives.

The target area objectives fall into the following four categories in the 2021 plans:

- Avoid increasing flood risk
- Improve understanding of the flood risk
- Prepare for current flood risk and future flooding
- Reduce the risk of flooding

Actions are required to achieve the objectives set for each community. To identify the most sustainable actions, SEPA created a long list of all potential structural and non-structural actions. A decision framework was used to identify the most appropriate set of actions taking account of how well flood risk is currently understood in the area, what the scale of the risk is and whether the options meet the national principles set out above. Indicative costs for different types of action can be found in Annex 1.

The potential for natural flood management and blue-green infrastructure measures was explored in developing the most sustainable actions. However, these actions are not specifically noted as the need to consider such options is built into all actions for detailed flood studies, and all actions to appraise potential options for managing risk.

The overall long-term aim is to reduce the impact of flooding across Scotland as far as is reasonable, taking full account of environmental, economic, and social priorities and needs.

1.2.7 Catchment opportunities and constraints

Our natural landscape plays an important role in managing flood risk and consideration of the whole catchment is essential to sustainable flood risk management. This has informed our approach, which is to identify the wider contributing catchments and coastlines for all the areas where actions are targeted. The catchment perspective has also underpinned the selection of all the objectives and actions.

Taking this approach can reveal opportunities for natural flood management, as well as constraints to the options for managing flood risk. The latest available data on land cover, land use, geology, topography, hydrology, coastal processes, development planning and natural flood management was used to identify opportunities and constraints in the wider

contributing catchments of every target area. This information was used to support the decision framework for identifying actions. It will also inform the more detailed analysis of the opportunities in the catchment required for implementation of the actions. This is a core requirement of some of the actions identified, particularly where a detailed flood study or options appraisal is planned.

For coastal areas, a significant development in the information available on opportunities and constraints is the national coastal change assessment. This analysis includes past coastal erosion rates and makes projections for the future. On this basis we can take longer-term decisions for coastal management. More information is available at www.dynamiccoast.com

1.3 How the flood risk management plans were developed

1.3.1 Partnership working

Many organisations and individuals are involved in flood risk management in Scotland. The causes and effects of flooding are complex, and issues cross the boundaries of neighbouring authorities as well as the responsibilities of different organisations. To be successful, flood risk management needs coordination, as set out in the flood risk management plans. Collaboration by those responsible for flood management is essential along with a commitment to work in partnership with the other organisations and stakeholders who can contribute to the sustainable management of flooding. Partnership working is at the heart of these plans and will be central to delivery of the objectives and actions they set out.

Strong relationships were developed through the first cycle of developing and delivering flood risk management strategies and local flood risk management plans. Building on that, the local partnerships established have worked throughout Scotland to develop this second set of flood risk management plans. SEPA has provided technical analysis and ensured a consistent national approach is taken, providing the evidence to make informed decisions. Local authorities, Scottish Water, other responsible authorities, and members of the local advisory groups have made significant contributions.

They have provided local knowledge, expertise and their experience from the actions delivered in the first cycle, to inform development of the new plans. The roles and responsibilities of some of the organisations with formal flood risk management responsibilities are set out below. There are a wide range of other stakeholders involved in flood risk management. Some work directly with responsible authorities through the local partnerships and advisory groups. Others, by virtue of their interests and activities, deliver direct action which can benefit flood risk management. Through the lifetime of this plan, we will seek to strengthen existing partnerships and establish new ones to achieve the best outcomes for flood risk management.

1.3.2 Roles and responsibilities for flood risk management

Individuals have a personal responsibility to protect themselves and their property from flooding. However, public bodies have responsibilities too and are working together to reduce the impacts of flooding in Scotland. Some of the key roles are outlined below and more information is available from the SEPA website, or the organisations listed.

a) Your responsibilities

It is your responsibility to manage your own flood risk and protect yourself, your family, property or business. There are steps you can take now to be flood prepared and reduce the damage and disruption flooding can have on your life.

- View our flood maps to check if your area is affected by flooding https://map.sepa.org.uk/floodmaps
- Sign up to Floodline to receive messages when flooding is forecast in your area https://www.floodlinescotland.org.uk/
- Know who to contact if flooding happens https://www.sepa.org.uk/media/28952/who_to_contact_2014.pdf

Other useful tools and advice on how to be prepared are available on the Floodline website.

b) SEPA

SEPA is Scotland's national flood forecasting, flood warning and strategic flood risk management authority. SEPA work in partnership with the Met Office to forecast flooding and operate Floodline to warn the public and emergency responders when flooding is likely. SEPA produce Scotland's flood risk management plans, working closely with other organisations responsible for managing flood risk to ensure that a nationally consistent approach to flood risk management is adopted. SEPA also provide flood risk advice on land use planning when requested and raise awareness of flooding at a national level through education initiatives, community engagement and campaigns.

c) Local authorities and lead local authorities

Local authorities are responsible for working together to produce Scotland's local flood risk management plans and work in partnership with SEPA, Scottish Water and other responsible authorities to develop these.

It is the responsibility of local authorities to implement action to manage flooding and maintain flood defences. Local authorities also inspect, clear and repair watercourses to reduce flood risk and routinely maintain road gullies on public roads and highways.

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

d) Scottish Water

Scottish Water is a responsible authority for flood risk management and is working closely with SEPA, local authorities and others to coordinate plans to manage flood risk. Scottish Water has the public drainage duty and is responsible for draining wastewater from properties and businesses, and rainwater run-off from roofs and paved areas within the boundary of properties. Pipework and guttering within the boundary, are the responsibility of the property owner.

Scottish Water helps to protect homes from flooding caused by sewers either overflowing or becoming blocked. This is done in a way that is fair and consistent to customers across the country, with sewer flooding investment prioritised to provide the biggest benefit for

customers and the environment first. Currently investment to reduce the risk of sewer flooding is prioritised towards properties that have experienced internal sewer flooding and are at the highest risk of repeat occurrence of sewer flooding during frequent rainfall events.

e) National parks

The National Park Authorities, Loch Lomond & Trossachs National Park and Cairngorms National Park, work with SEPA and other responsible authorities to develop the flood risk management plans and local flood risk management plans. They also fulfil a key role in land use planning, carrying out and permitting activities that can help manage and reduce flood risk.

f) Other organisations

The **Scottish Government** oversees the implementation of the Flood Risk Management (Scotland) Act 2009, which requires the production of flood risk management plans and local flood risk management plans. Scottish Ministers are responsible for setting the policy framework for how organisations collectively manage flooding in Scotland. Scottish Ministers have also approved this flood risk management plan.

Scottish Forestry and **Forestry and Land Scotland** took over the roles of Forestry Commission Scotland in 2018 when the Forestry and Land Management (Scotland) Act 2018 came into force. While these executive agencies of Scottish Government are not formally designated as a responsible authority under the Flood Risk Management (Scotland) Act 2009, they support Scottish Government in delivering its flood risk related duties. This includes engaging in the development of the flood risk management plans through national and local advisory groups, Local Plan District partnerships, and collaborative projects. This reflects the widely held view that forestry can play a significant role in managing flooding.

The **Met Office** provides a wide range of forecasts and weather warnings. SEPA and the Met Office work together through the Scottish Flood Forecasting Service, combining SEPA's hydrological expertise with the Met Office's meteorological data to predict the likelihood and timing of river, coastal and surface water flooding.

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

The **Scottish Flood Forum** aims to reduce the impacts of flooding by providing immediate support and by establishing a network of community resilience groups in flood risk areas, to equip communities to cope with flooding.

1.3.4 Consultation, engagement and advice

Further to the strong partnership approach to flood risk management planning in Scotland, it is essential to work with the people and communities that experience and live with the threat of flooding. This ensures that our assessment of the risk is accurate. How flooding is managed should support the communities at risk, and effort needs to be targeted to where most can be achieved. Two public consultations have been held during the development of the flood risk management plans. The first by SEPA was on the national flood risk assessment and the identification of PVAs (2018); the second, held jointly with local authorities, was on the understanding of flooding in these priority areas and on the objectives and actions to manage flooding (2021).

The second, most recent consultation ran from December 2020 to October 2021 in 2 parts. From December 2020, information on the Local Plan Districts, the PVAs and the communities identified as target areas was made available. Further information on the objectives and actions planned for each target area was added in July 2021. The consultation was advertised widely by both SEPA and the local authorities. 678 responses were received, and these helped shape the content of this plan. More information on the consultation and the responses SEPA has received is provided in **Annex 2**.

As this was a joint consultation, the responses were shared with local authorities who further considered all the submissions for the purpose of shaping the local flood risk management plans published in 2022. A summary of the consultation was submitted to Scottish Ministers along with this plan, and a more detailed report on what contributors said and what SEPA did in response will be available on SEPA’s website from March 2022.

In addition to the consultation, advice has been sought from relevant organisations at key stages. The plans have benefited from local advisory groups who have provided important community and area-based knowledge. This informed understanding of the causes and consequences of flooding and the appropriate actions for future management. Local advisory groups have been especially helpful in considering flood risk management in the context of wider plans and initiatives. The groups include representatives from a range of sectors, including government agencies like Transport Scotland, National Park Authorities, local authorities, non-government organisations, utility companies and land and asset managers.

Community based groups are key to planning for, responding to, and recovering from flooding. Communities have engaged through the consultation on these plans and will be consulted on more detailed information on the implementation of many of the specific actions. The local information provided on their experience of flooding has shaped the identification of PVAs and informed decision making on the objectives and actions.

In producing the flood risk management plans, SEPA has also taken advice from a National Flood Management Advisory Group. Over 50 member organisations have been invited at key stages to provide comment and input, reflecting the national importance and impact of flooding on our communities, economy, environment and cultural heritage.

Some of the work carried out by SEPA has been complex and technical in nature for which we have sought professional advice. Through membership of the Scottish Advisory and Implementation Forum for Flooding (SAIFF), SEPA has received assistance from local authorities, Scottish Water, Scottish Forestry, the National Park Authorities and other key interested organisations. SEPA has also developed some of its methods by working with other organisations with similar responsibilities within the UK and Europe, more specifically with the Environment Agency and English local authorities in the cross border areas.

1.3.5 Strategic Environmental Assessment and Habitats Regulation Appraisal

SEPA undertook a strategic environmental assessment to assess the significant environmental effects of the flood risk management plans. This assessment was published in an environmental report, and SEPA consulted with the public on the findings.

A statement will be published detailing how SEPA have taken account of the environmental assessment and the consultation responses, and how any significant environmental effects from the flood risk management plans will be monitored. SEPA also undertook a Habitats Regulations Appraisal to ensure that the flood risk management plans will not adversely affect the integrity of Special Areas of Conservation, Special Protection Areas and Ramsar Sites. SEPA consulted NatureScot on the appraisal method and took their views into account. Mitigation measures have been applied where required.

1.4 Links with other plans and policies

1.4.1 River basin management planning

River basin management aims to protect and improve the condition of Scotland's rivers, lochs, estuaries, coastal waters and groundwater. Taking action to reduce flood risk in Scotland provides opportunities to deliver joint objectives for restoration and flood risk management. Coordination between river basin management and flood risk management can reduce flood risk, while also improving water quality and biodiversity. SEPA is leading the delivery of both the river basin management plan and the flood risk management plans so has worked to ensure that there is integration and coordination between them. This coordination, particularly in regard to consultation and engagement, is important for stakeholders who have an interest in the objectives of both plans.

1.4.2 Land use and spatial planning

Land use planning decisions are one of the most powerful tools available to manage flood risk, and the alignment of flood risk management and land use planning policy is pivotal to achieving sustainable flood risk management. Decisions relating to flood risk management can have significant implications for the location of development and, likewise, decisions relating to the location of development can impact on flood risk. Flood risk management plans must take account of local development plans relating to the district, and the need for development plans to take account of flood risk management plans is included in the Town

and Country Planning (Development Planning) (Scotland) Regulations 2008 (as amended 2011). SEPA is a key agency in the land use planning process with a duty to cooperate with planning authorities in the preparation of development plans and a statutory role to provide flood advice for appropriate development management applications. The advice we give seeks to promote flood avoidance. In addition, land use planning objectives and actions have been agreed with responsible authorities, which will ensure flood risk is adequately considered in local planning decisions.

1.4.3 Emergency planning and response

Many organisations across Scotland, 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, ensuring the effective management of response to emergencies. 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.

1.4.4 Scottish Water investment plans

There is a close relationship between flood risk management plans and Scottish Water's 25 year strategic plan. Sewer flooding is not considered in detail in the flood risk management plans as it remains a high priority for Scottish Water and its customers. Scottish Water's close involvement in flood risk management planning aims to ensure that there is strong coordination between the management of sewer flooding and wider surface water flood risk, and the actions to be taken forward by local authorities and others.

1.5 Next steps and monitoring progress

Flood risk management planning has progressed significantly in recent years. Scotland now has the most advanced, nationally consistent and locally informed understanding of the causes and consequences of flooding that it has ever had. Key partnerships have been developed and the plan-led approach has been strongly established through the first set of strategies and local flood risk management plans. SEPA and the other responsible authorities are committed to continuing to work together, improving the understanding and response to flooding and managing flood risk for the good of Scotland through this and subsequent planning cycles. Lead local authorities will publish the local flood risk management plans in 2022 with greater detail on the scope of the actions identified in this plan and how they will be funded, coordinated and delivered between 2022 and 2028.

Progress will be monitored throughout the years covered by this plan through ongoing joint working arrangements under the Local Plan District partnerships. Lead local authorities will provide an interim report on the progress of delivering all actions in the local flood risk management plans not earlier than 2 years and not later than 3 years from its publication. A final report will also be prepared at the end of the second planning cycle. A third set of flood risk management plans and local flood risk management plans will be published in 2027/2028.

1.5.1 Funding review for future flood risk management actions

SEPA has carried out a national prioritisation exercise based on the best available understanding of flood risk and the capacity of lead organisations to deliver actions. Funding for flood risk management actions typically come either directly from the lead organisations or as happened in 2016, through an allocation of capital grant from the Scottish Government. However, funding can be procured from other sources.

The distribution of Scottish Government grant funding for actions in the plan for the period 2022-2028 is currently being considered by a flood risk management working group[1]. This group will put forward options and recommendations to Scottish Ministers and COSLA, through the Settlement and Distribution Group, for consideration. A decision will not be made in time for the publication of this plan. As such it should be noted that it may not be possible for all actions identified in the flood risk management plans to be grant funded. Inclusion of an action in this plan does not formally commit a Council to implement it, if reasons arise which make any actions undeliverable, including inability to secure adequate funding.

A decision on grant funding is expected in time for the publication of the local flood risk management plans. As a result, there may be changes to the detail of actions, or the ability to deliver actions in the identified timescales, compared with this plan. This plan remains the best understanding of the objectives and actions required over the long term to manage flood risk in the identified high risk areas of Scotland. The delivery of the plan, particularly the ambitions on how quickly actions can be delivered, may have to be adapted to reflect wider developments in public funding, the ability of responsible authorities to access funding from other sources, pandemic recovery, and other national priorities.

1.5.2 Licensing acknowledgements

Full data licensing acknowledgements can be found in **Annex 3** of this plan.

[1] Membership of the group includes representatives from Scottish Government, the Convention of Scottish Local Authorities (COSLA), local authorities, Society of Chief Officers of Transportation in Scotland (SCOTS) flood risk management group and SEPA.

1.6 Supporting information

1.6.1 Sources of flooding described in this plan

This flood risk management plan targets the risk of flooding from rivers, the coast, surface water and groundwater. The risk of flooding from rivers is usually due to heavy or prolonged rainfall causing a river to rise above the top of the bank. Water spreads out and floods nearby areas. Coastal flooding is where the risk is from the sea. Sea levels can be higher than usual due to normal tidal cycles or stormy weather systems. Over the longer term, sea levels and coastal flood risk will increase due to climate change. Surface water flooding happens when rainwater does not drain away through the normal drainage systems or soak into the ground. Instead, it collects or flows over the ground. There can be interactions between these sources of flooding.

Groundwater is usually a contributing factor to flooding rather than the primary source. It is caused by water rising up from underlying rocks or flowing from springs. Actions to directly target groundwater are quite limited in this plan. However, susceptibility to the contributing effects of groundwater on flooding was considered everywhere in the national flood risk assessment which underpins this plan. Maps of areas where groundwater can contribute to flood risk are available to view on our website: https://map.sepa.org.uk/floodmap/map.htm

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

Reservoir breaches have been assessed under separate legislation (Reservoirs (Scotland) Act 2011) and so flood risk from reservoir breach is not considered in this plan. There are fundamental differences in probability of flooding and associated management actions for reservoirs. Further information and maps can be found on SEPA's website: www.sepa.org.uk/regulations/water/reservoirs/

The Flood Risk Management (Scotland) Act 2009 does not require SEPA or responsible authorities to assess or manage coastal erosion. However, SEPA has included consideration of coastal erosion in the flood risk management plans by identifying areas that are likely to be susceptible to erosion and where erosion can exacerbate flood risk.

As part of considering where actions might deliver multiple benefits, SEPA have looked to see where the focus of coastal flood risk management studies coincides with areas at risk of coastal erosion as identified by the Dynamic Coast project. Subsequent detailed flood studies and scheme design will need to consider coastal erosion in these areas. This includes ensuring that actions to manage flood risk do not contribute to increased coastal erosion and where appropriate, help to manage risks from coastal erosion now and in the future.

The information on coastal flooding used to set objectives and identify actions is based in most areas on SEPA modelling using simplified coastal processes and flooding mechanisms. As a result, coastal flood risk may be underestimated in some areas and overestimated in others. Where more detailed local models were available from flood studies or from flood warning schemes, these have been incorporated into the development of the flood risk management plans, as have other sources of local information such as records of past flooding. SEPA is currently working on updates to the national coastal flood mapping to better represent the effects of waves. Actions in the plans reflect the best information currently available.

1.6.3 Commonly used terms

Below are explanatory notes for commonly used terms in this plan. A glossary of terms is also available at the end of this document.

Reference to flood risk. To develop this plan, flood risk has been assessed over a range of likelihoods. For consistency in reporting information, unless otherwise stated, all references to properties or other receptors being ‘at risk of flooding’ refer to a medium likelihood flood (up to a 0.5% chance of flooding in any given year). By exception, references will be made to high or low risk flooding, which should be taken to mean a 10% chance/likelihood or 0.1% chance/likelihood of flooding in any given year respectively.

Chance / likelihood of flooding		
Likelihood	**Return Period**	**Annual chance**
High	1 in 10 year	10%
Medium	1 in 200 year	0.5%
Low	1 in 1000 year	0.1%

An **annual cost of flooding** is given as an assessment of the economic impact of flooding within an area. Depending on its size or severity each flood will cause a different amount of damage to a given area. Annual average damages are the theoretical average economic damages caused by flooding when considered over many years. It does not mean that value of damage will occur every year: in many years there will be no damages and in some years the damages will be minor. In most places, there will be a very small number of years when much bigger floods occur, and that is when the highest damage costs will occur. To assess the annual cost, this is averaged over many years. In some areas, smaller floods which happen frequently contribute more to the annual cost than much larger events which are rarer. Within the plans, the annual cost of flooding has been calculated based on the methods set out in the Flood Hazard Research Centre's Multi-Coloured Handbook (2016).

History of flooding. Where the plans refer to a history of past flooding, flood events up to 2019/20 have been taken into account.

Section 2 North East Local Plan District (LPD 6)

Flood risk management plan 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 northeast 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.

2.2 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 6 years, and most of these are carried out on an ongoing basis.

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

	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.

	Data to support climate resilience
Action	As Scotland's hydrometric authority, SEPA operates a network of stations to measure river level, flow, rainfall, sea level, loch and groundwater level. The data goes into a long term data archive and is critical to underpin all flood risk management activities including flood warning, flood mapping, design of flood protection and sustainable development as well as supporting a range of regulatory and recreational uses. SEPA will continue to maintain and develop its hydrometric network, contribute to UK and international data archives, and improve and update the datasets used for flood frequency analysis. SEPA will support research and development of data, methods and guidance to improve the evidence on which decisions can be made, and to enable the impact of climate change to be included in all flood risk management activities.

	Emergency plans
Action	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.

	Flood forecasting
Action	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.

	Flood warning development framework
Action	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. 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. 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.

	Future flood risk management planning
Action	The years covered by the lifetime of this plan are crucial. Radical progress is needed in how we reduce our impact on the climate and respond to the effects of climate change. How we plan to manage flooding to our communities is on the front line of the challenges of this decade. The 2027 flood risk management plans will be more ambitious than ever before. We will plan for a better future by publishing our flooding services strategy in 2022 with a clear and measurable delivery plan. We will put greener, fairer communities at the heart of our ambitions. SEPA has set its own target to be a regenerative organisation by 2030 and the next set of plans will further this ambition. During this plan cycle, SEPA will work to develop new partnerships with a wider range of stakeholders, including businesses and commercial sectors. We will investigate alternative sources of finance to tackle flooding and drive forward practical options for adaptation.

	Guidance development
Action	The Scottish Government and SEPA will develop and update guidance to inform flood risk management projects. This guidance will be produced in 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. Technical guidance to support flood risk management partners will be reviewed and updated by SEPA where required.

	Scottish Forestry, in collaboration with its UK counterparts, will produce guidance on designing and managing forests to reduce flood risk. Guidance will be developed to help local authorities understand the requirements for mapping relevant bodies of water and sustainable urban drainage systems in their areas.

	Hazard mapping updates
Action	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: https://www.sepa.org.uk/environment/water/flooding/flood-maps/. 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.

	Land use planning
Action	Local authorities, SEPA and Scottish Water all have a responsibility under the Flood Risk Management (Scotland) Act 2009 to support sustainable flood risk management through the land use planning process. National planning policies set out the Scottish Ministers' priorities 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 aim to restrict development within the floodplain and limit exposure of new receptors to flood risk, promote flood reduction via natural and structural flood management measures and restoration of natural features, and avoid increased surface water flooding through sustainable drainage and the minimisation of impermeable surfaces.

	Locally determined planning policies may place further requirements within their area of operation to restrict inappropriate development and prevent unacceptable risk.

	Maintenance
Action	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. Scottish Water will continue to undertake risk-based inspection, maintenance and repair on the public sewer network. Asset owners and riparian landowners are responsible for the maintenance and management of their own assets including those which help to reduce flood risk.

	Natural flood management mapping
Action	SEPA will continue to support activities that improve our understanding of how to effectively target and deliver natural flood management. As part of this, SEPA will review and update the opportunities mapping for natural flood management. This will include linking blue-green infrastructure with the surrounding natural catchment and coastline. 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, recreation, and carbon storage.

	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 21st century. SEPA will use the most suitable data to develop the national flood risk assessment (NFRA) 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 6 year cycle SEPA will look to vastly improve its national understanding of surface flood risk by undertaking a wholescale 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	The Scottish Flood Defence Asset Database provides information on existing flood protection schemes. National data on flood protection infrastructure is needed to understand flood risk and to develop adaptation planning for Scotland. SEPA will continue to host SFDAD and look for opportunities to support the development of our understanding of how and when Scotland's flood defence assets should be adapted to continue to maintain protection from flooding in the future.

	Self help
Action	Everyone is responsible for protecting themselves and their property from flooding. People can take 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. The following places offer help with taking steps to protect yourself: https://www.floodre.co.uk/ https://www.biba.org.uk/current-issues/flood-insurance/ https://floodlinescotland.org.uk/ https://scottishfloodforum.org/ 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.

More specific local actions to manage flood risk in target areas are detailed in the potentially vulnerable areas (PVAs) sections below.

2.3 Potentially vulnerable areas

Potentially vulnerable areas (PVAs) 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 (available to view at: https://www.sepa.org.uk/data-visualisation/nfra2018/). As part of continued analysis of flood risk, the national flood risk assessment and potentially vulnerable areas (PVAs) will be reviewed every 6 years to take on board any new information. There are 26 potentially vulnerable areas (PVAs) in this Local Plan District. Following sections provide more information on these areas.

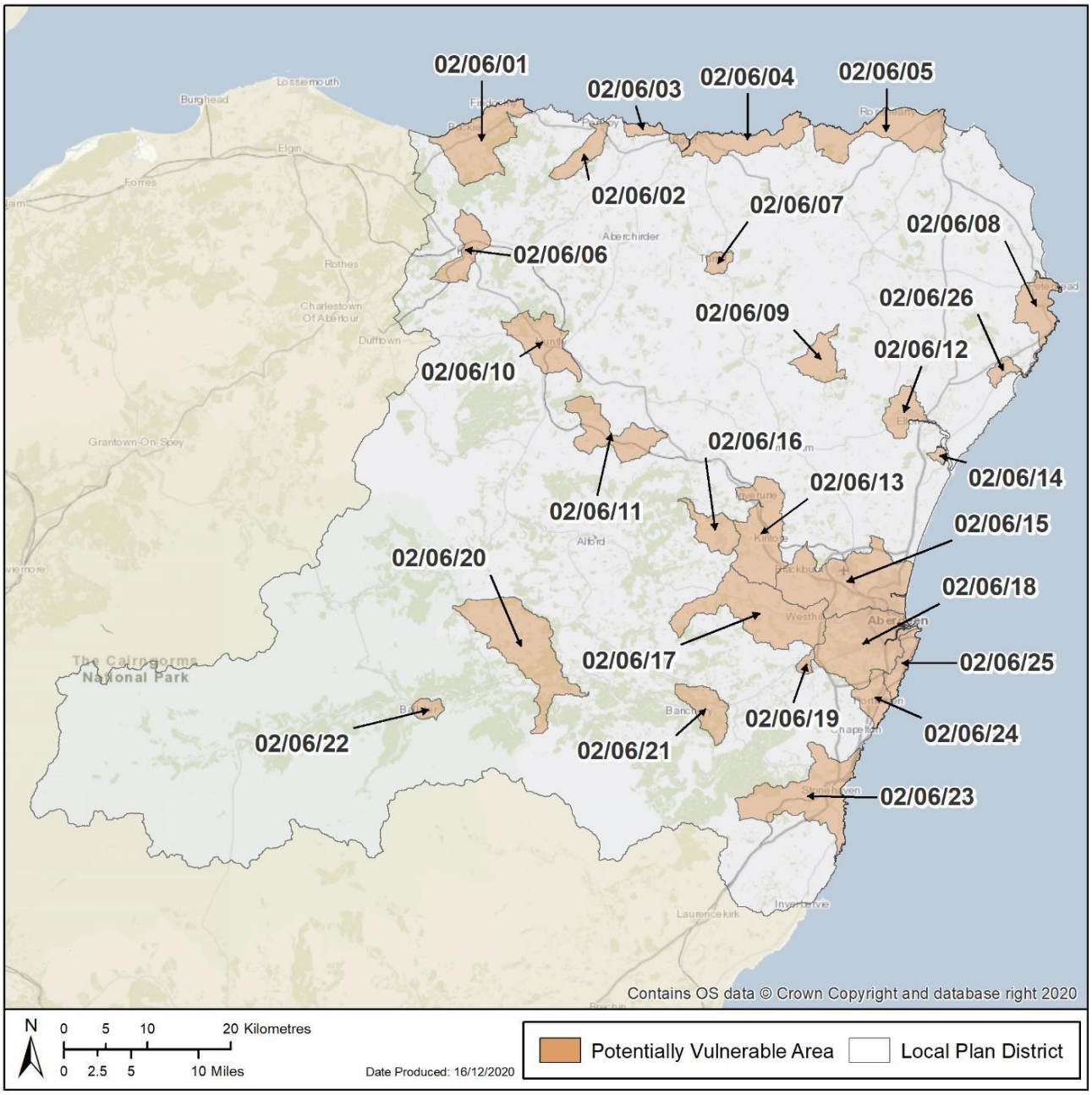


Figure 1. Potentially vulnerable areas in the North East Local Plan District

LPD 6 North East – List of PVAs

Click the blue text to select your area of interest

PVA Ref	PVA Name	Local authority	Page number
02/06/18	Aberdeen City - South	Aberdeen City	124
02/06/19	Peterculter	Aberdeen City	129
02/06/20	Aboyne	Aberdeenshire	133
02/06/21	Banchory	Aberdeenshire	138
02/06/22	Ballater	Aberdeenshire	141
02/06/23	Stonehaven	Aberdeenshire	145
02/06/24	Portlethen	Aberdeenshire	150
02/06/25	Cove and Nigg Bay	Aberdeen City	153
02/06/26	Cruden Bay	Aberdeenshire	158

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

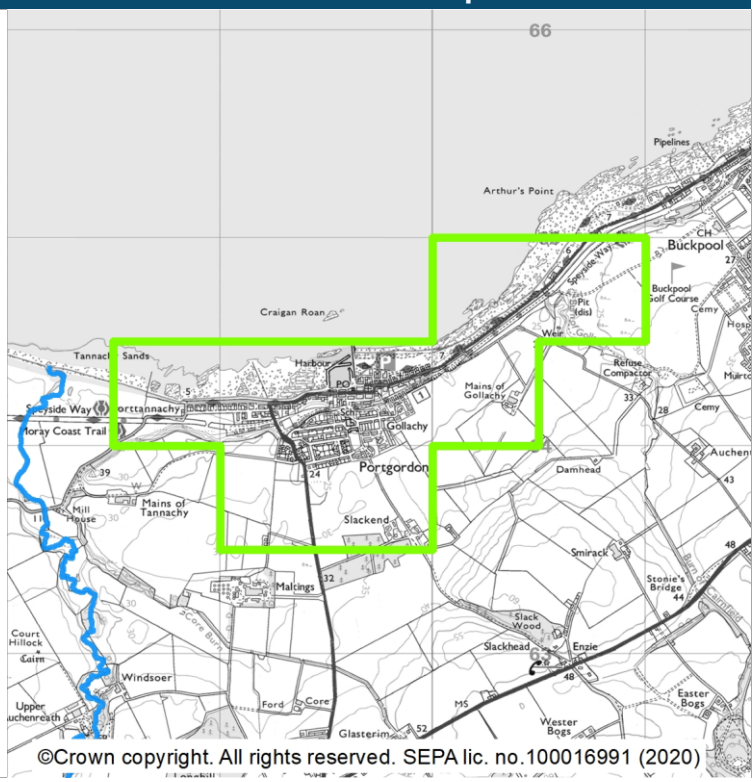
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 39801)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	Consider how the improved understanding of long term flood risk can be managed in the area through an adaptation plan.

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.

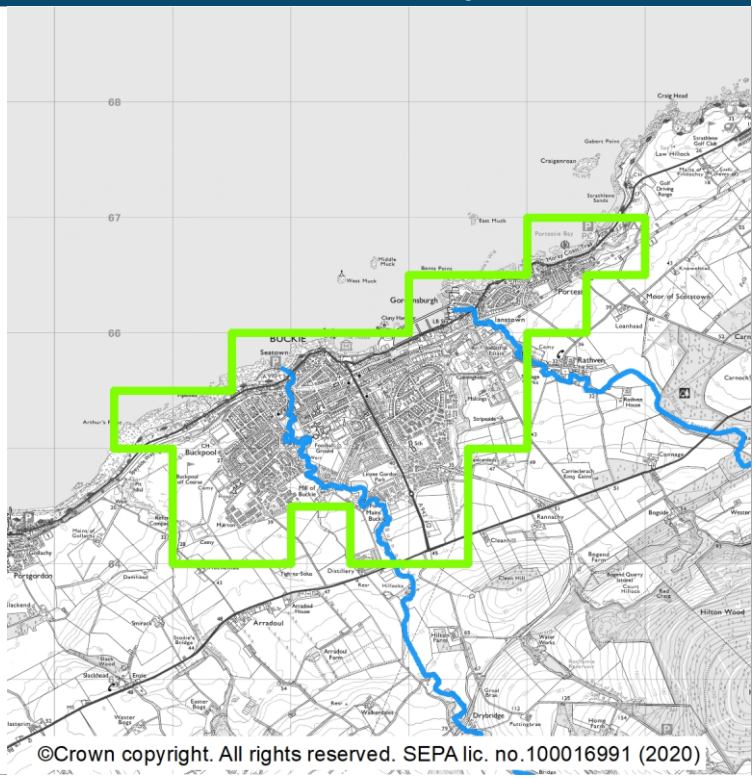
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	Flood scheme or works implementation (Ref: 45502)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	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.

	Flood scheme or works implementation (Ref: 45504)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	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.

	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
Description	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.

	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.
Description	The surface water management plan will be implemented. It should regularly be updated and reviewed.

	Strategic mapping improvements (Ref: 45508)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Portsoy	(target area 399)

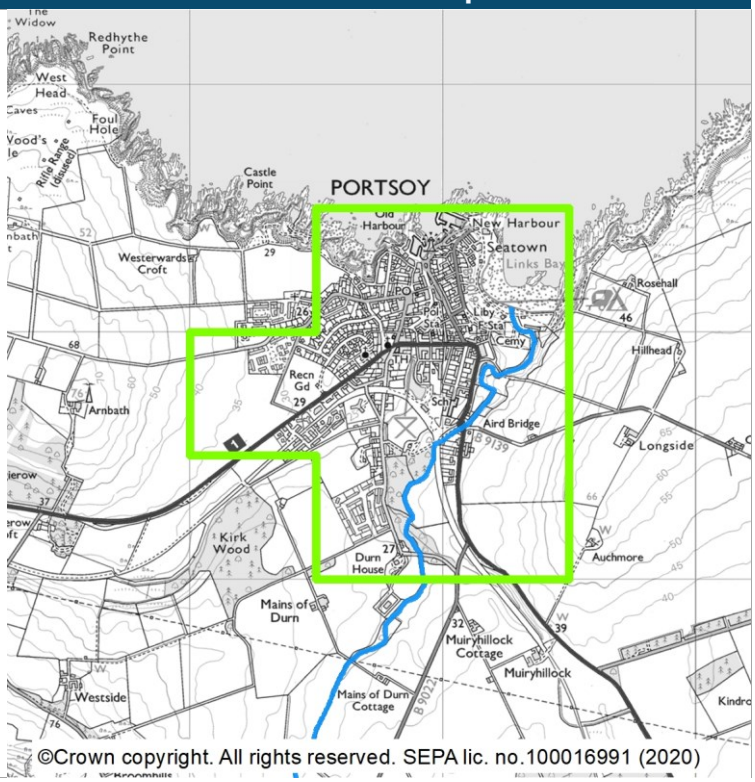
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

	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.
Description	Develop a surface water management plan for Portsoy. This should incorporate the results of Scottish Water's sewer flood risk assessment.

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.

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

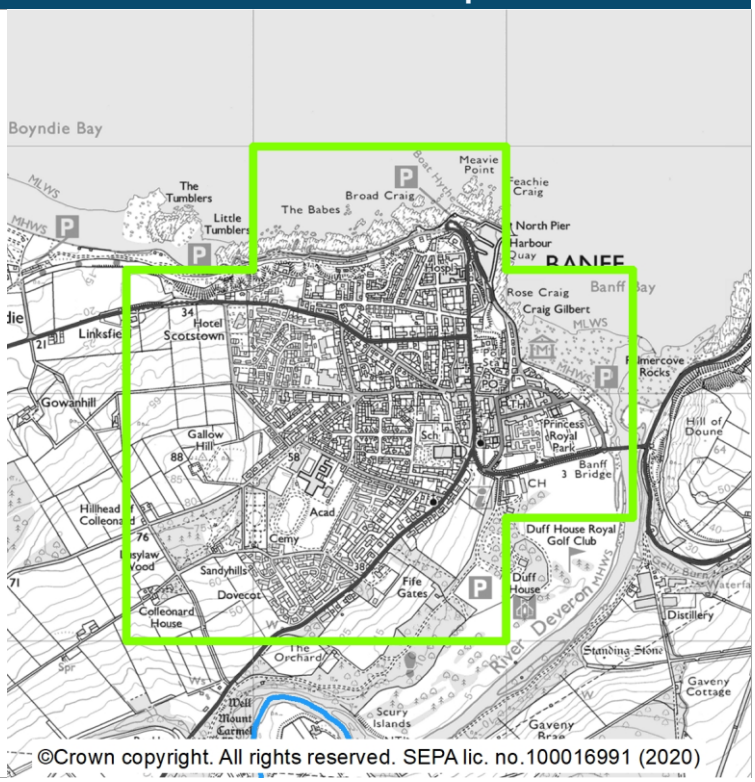
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 40001)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

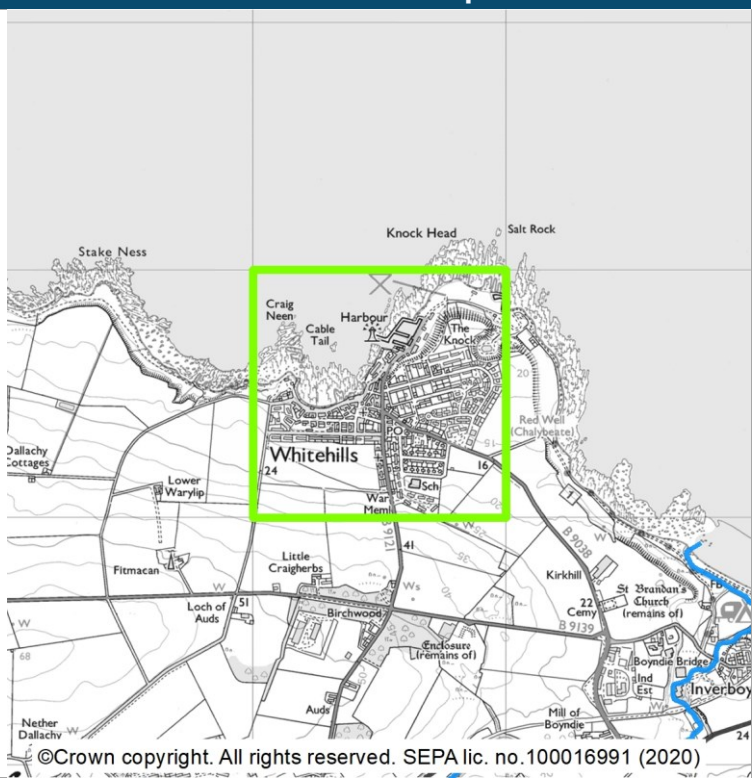
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 40101)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

	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.
Description	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.

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.

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

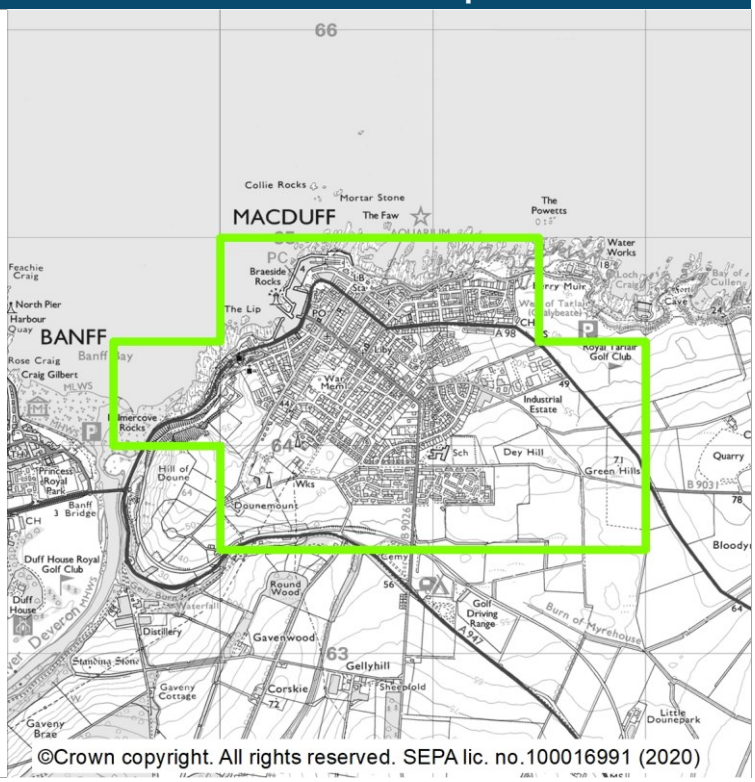
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 40201)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	Develop a surface water management plan for Macduff. This should take into account the results of Scottish Water's 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.

	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.
Description	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.

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.

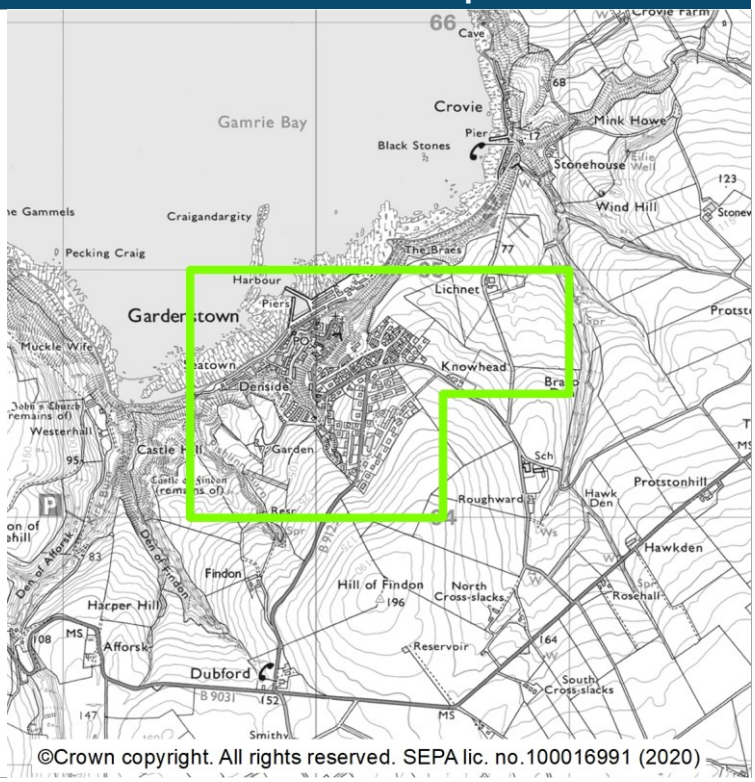
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 45801)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

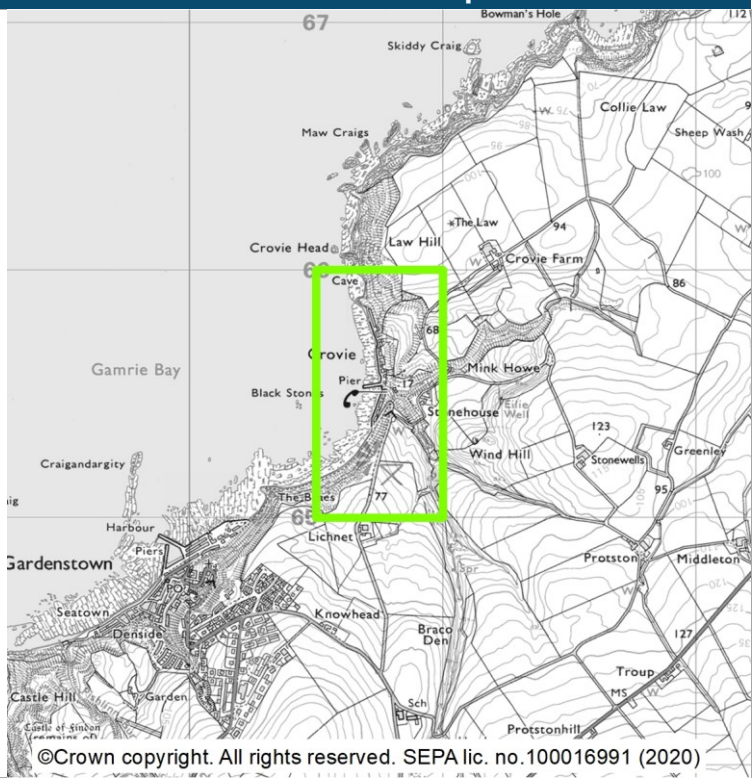
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 45901)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

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 surface water flooding affected parts of the potentially vulnerable area in September 2019.

There are 4 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

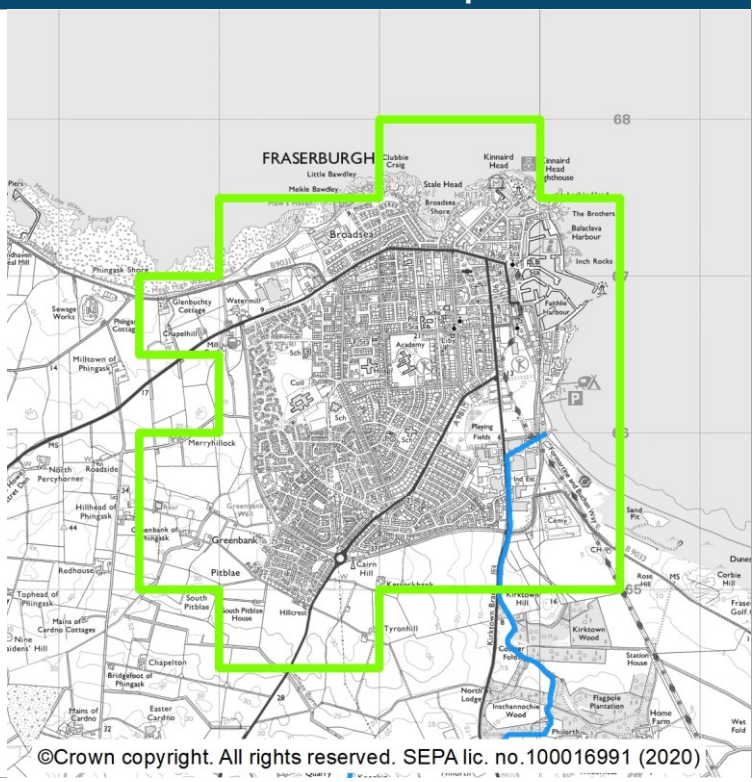
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 40801)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.

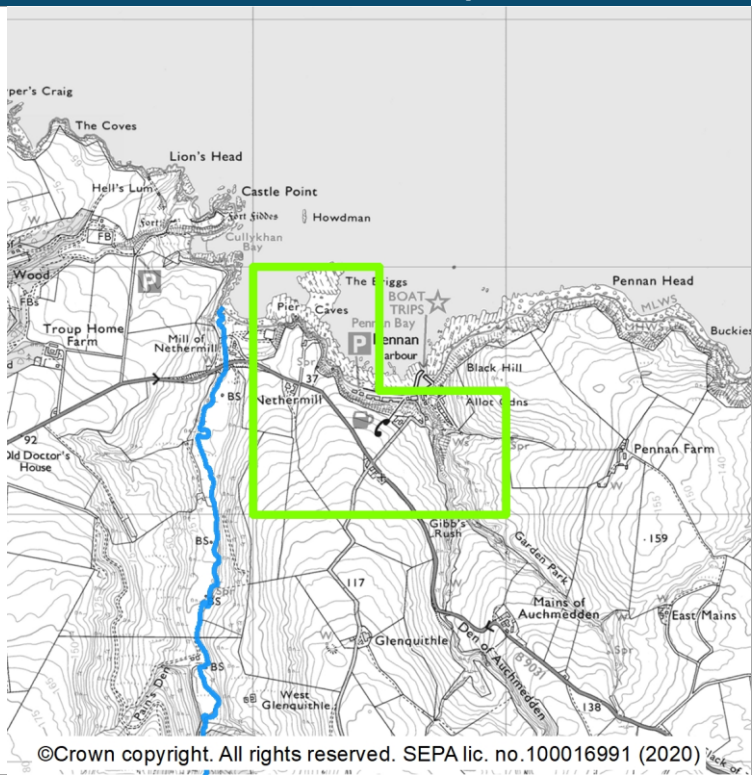
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 46001)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 46101)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

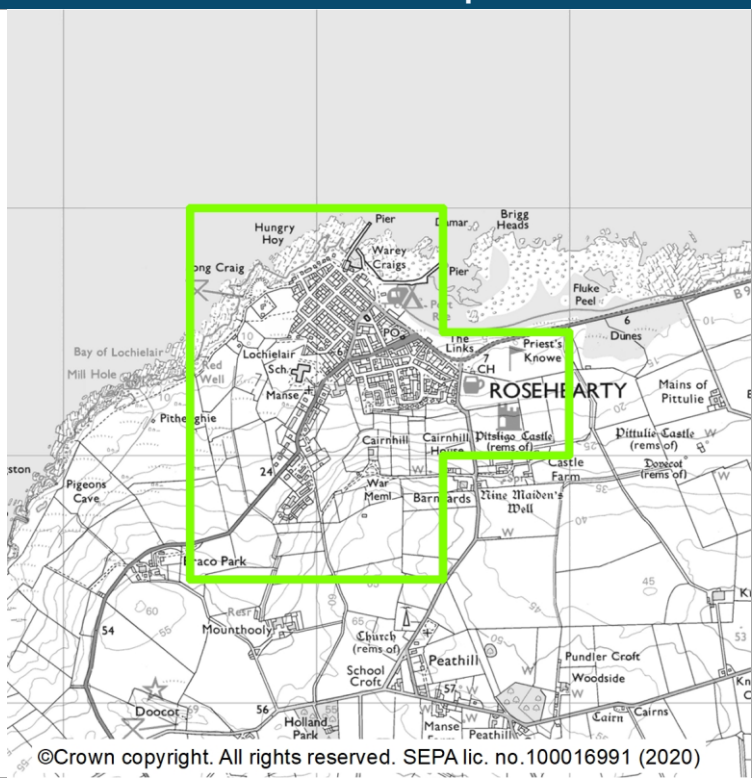
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 46201)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	Progress the surface water management plan. The results from Scottish Water's 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.

	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.
Description	SEPA should maintain the Moray Firth coastal flood warning scheme.

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.
Description	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.

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.

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the objectives and actions to manage flood risk within these areas is provided below.

List of target areas

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

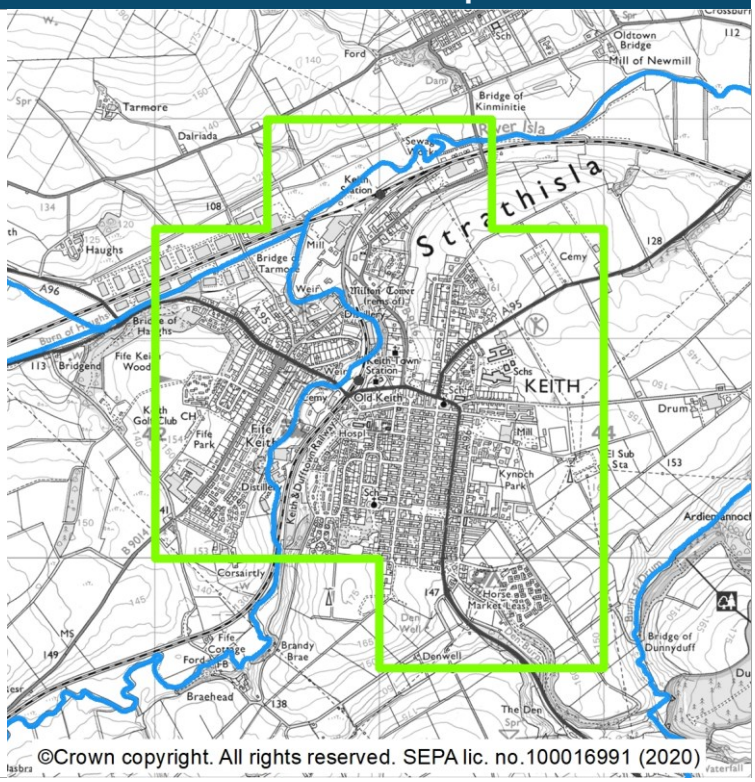
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.

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.
Description	Implement the surface water management plan, working with Scottish Water as appropriate. This may include further assessments of surface water flood risk.

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.

Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	Continue to maintain the Newmill Flood Protection Scheme.

	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.
Description	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Turriff	(target area 449)

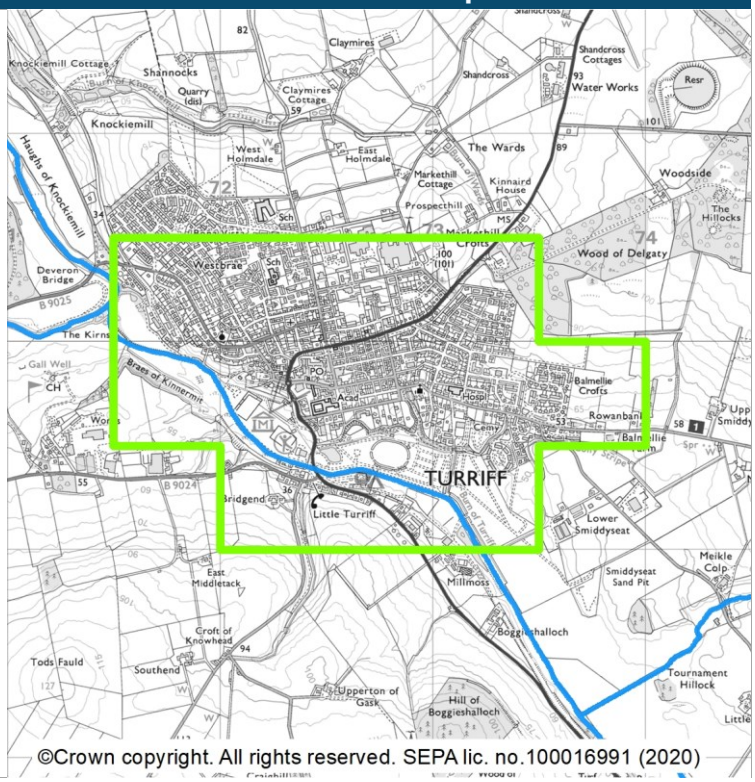
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	SEPA should maintain the River Deveron flood warning scheme. The scheme should be investigated for improvement and/or recalibration.

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.
Description	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 Water's sewer flood risk assessment should be incorporated.

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.

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the objectives and actions to manage flood risk within these areas is provided below.

List of target areas

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

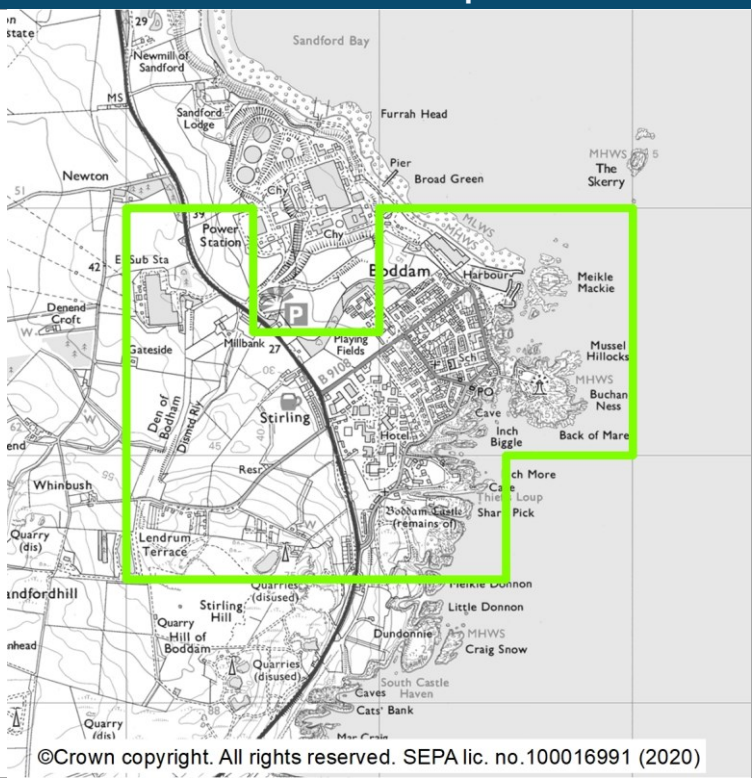
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.

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.

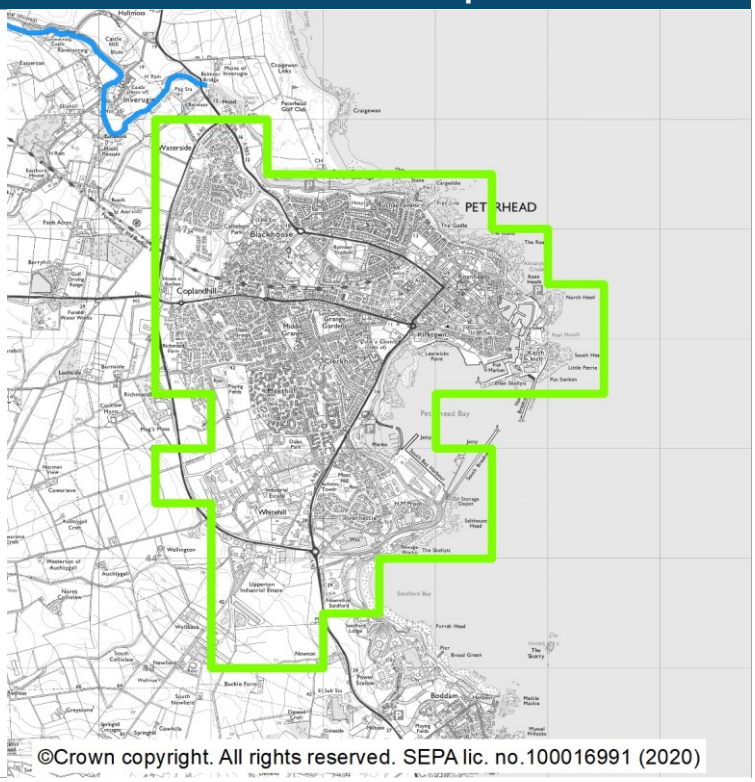
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 40701)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.

	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
Description	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.

	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.
Description	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.

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.
Description	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.

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.

02/06/09 (Methlick)

Methlick is designated as a potentially vulnerable area due to river and surface water flood risk. Recently flooding was caused by rivers.

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

List of target areas

Methlick	(target area 450)

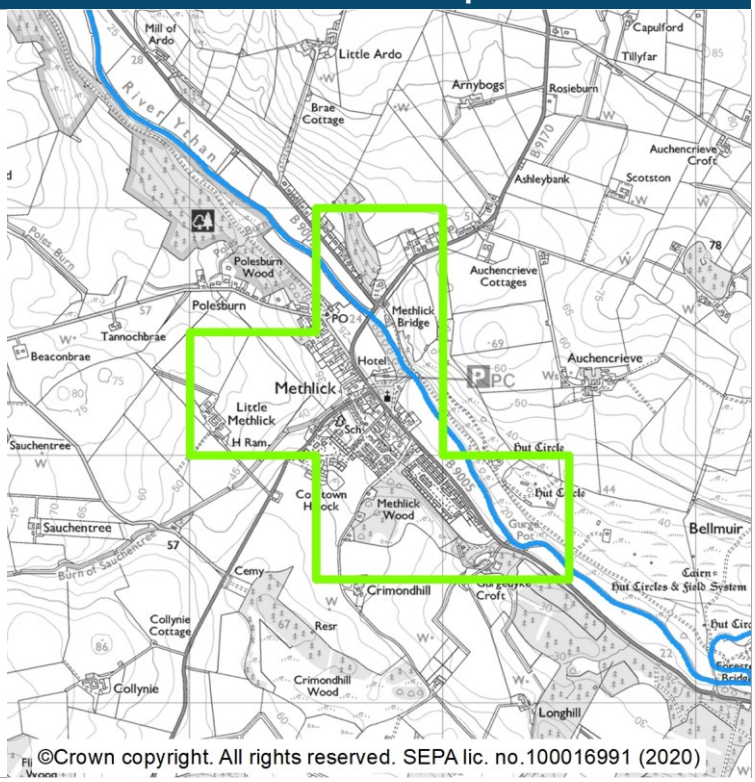
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

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.

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 a 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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Huntly	(target area 403)

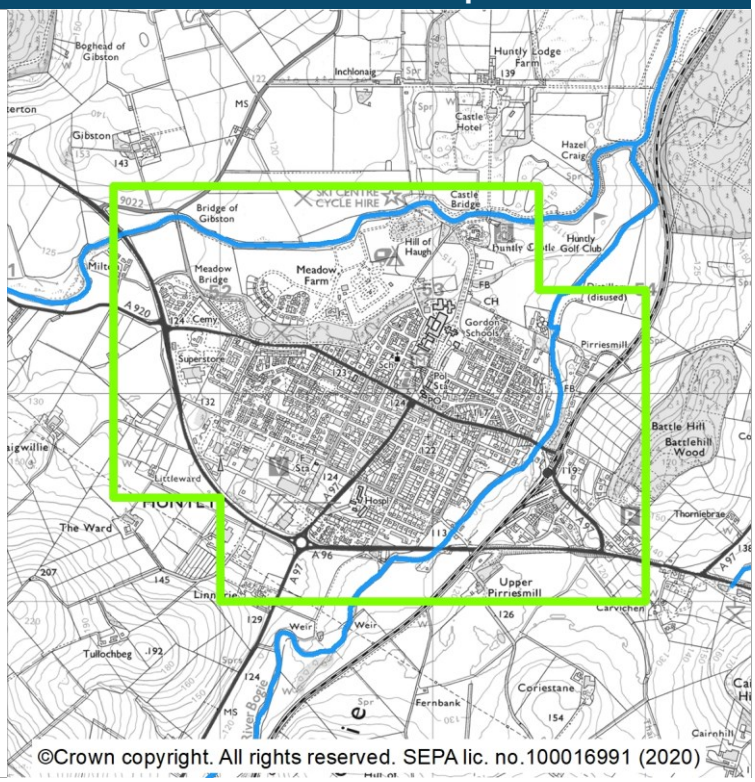
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the River Deveron and the Bogie flood warning schemes. The schemes should be investigated for improvement and/or recalibration.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Insch	(target area 411)

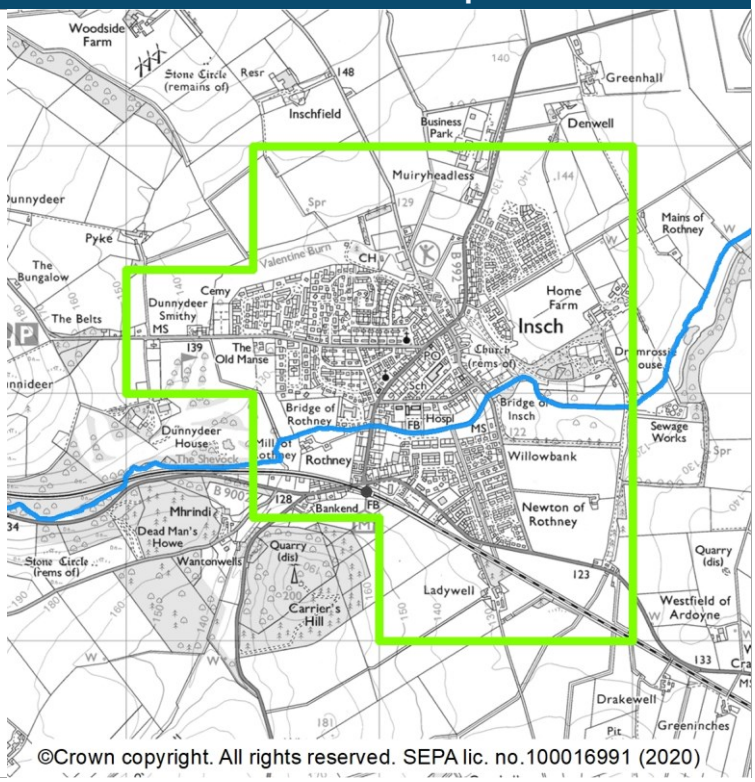
Flood risk management plan datasheet

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 Insch.
4112	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Insch.
4113	Reduce flood risk	Reduce the risk of flooding from The Shevock and the Valentine Burn in Insch.

What actions are proposed for this area?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	Aberdeenshire Council to continue to engage with the community, with particular focus on improving community resilience to flood risk.

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.
Description	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.

	Flood scheme or works implementation (Ref: 41103)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Progress the Insch 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.

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.

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 been river and surface water flooding.

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

List of target areas

Ellon	(target area 405)

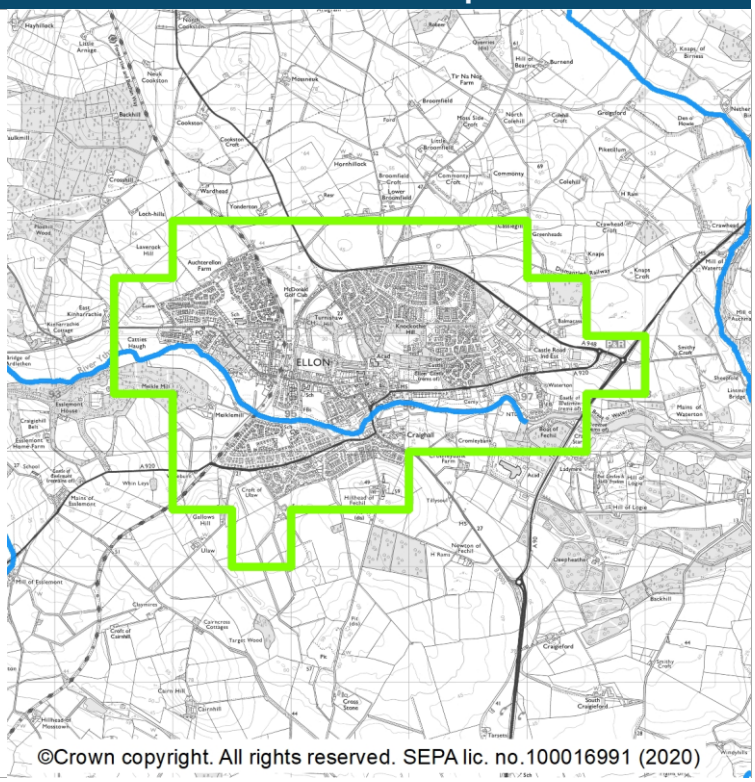
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	SEPA will investigate the potential to develop and implement a new flood warning scheme for the River Ythan catchment

	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
Description	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.

	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.
Description	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 Water’s 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.

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.
Description	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.

	Flood scheme or works implementation (Ref: 40505)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

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.

02/06/13 (Inverurie and Kintore)

This area is designated as a potentially vulnerable area due to the recent occurrence of surface water and river flooding in Inverurie and Kintore.

There are 2 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

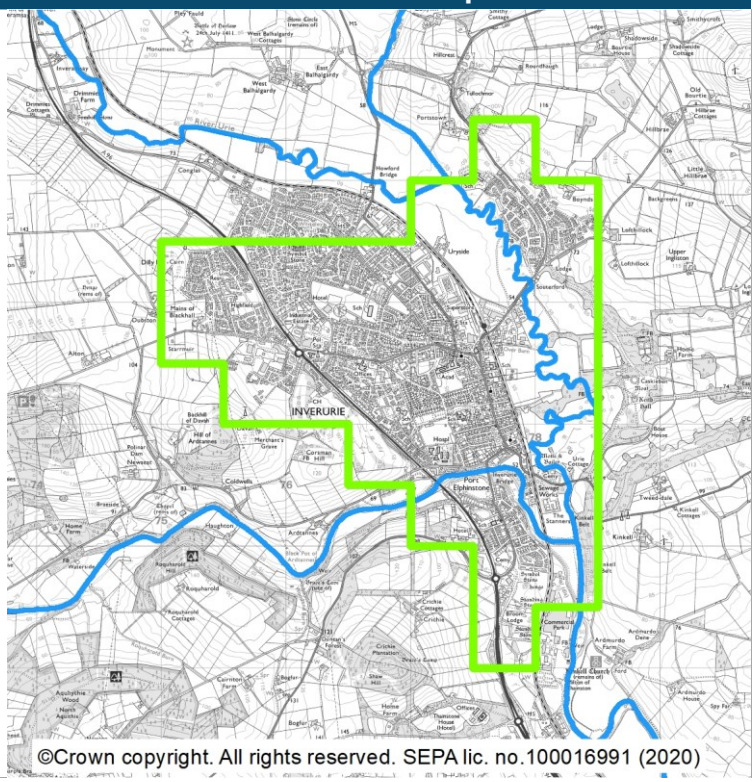
Flood risk management plan datasheet

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 Elpinstone 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 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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	Aberdeenshire Council to continue to engage with the community on the detailed design of the Inverurie Flood Scheme.

	Flood scheme or works implementation (Ref: 40903)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	Continue to maintain the Inverurie (Strathburn and Overburn) Flood Prevention Scheme (1978) and the Overburn Culvert (2001).

	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
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the River Don flood warning scheme.

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.

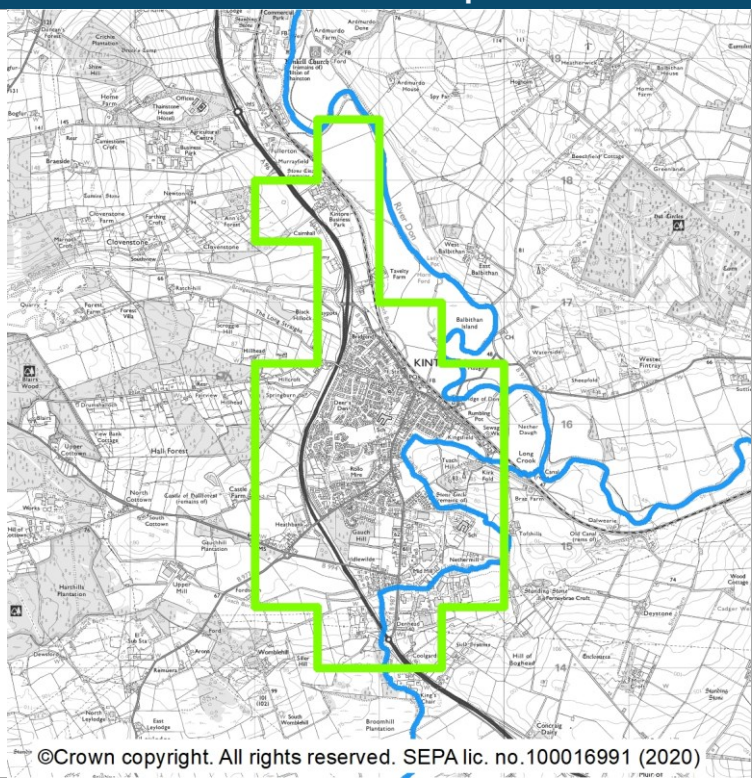
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the River Don flood warning scheme.

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.

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 as a result of sea level rise due to climate change.

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

List of target areas

Newburgh (Aberdeenshire) (target area 423)

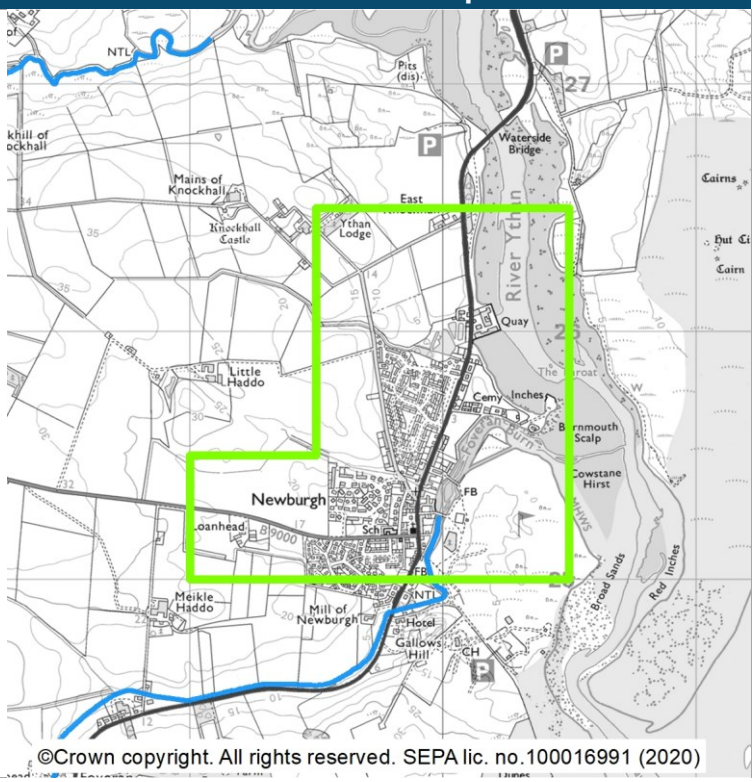
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 2028

	Strategic mapping improvements (Ref: 42301)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	Flood warning maintenance (Ref: 42302)
Action	The Floodline flood warning service is to be kept operational through maintenance to the existing system and updates being undertaken as required.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.

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: 42303)
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.
Description	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.

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.

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). There is a history of flooding to parts of the potentially vulnerable area from these sources, including recent flooding from surface water and small watercourses.

There are 3 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

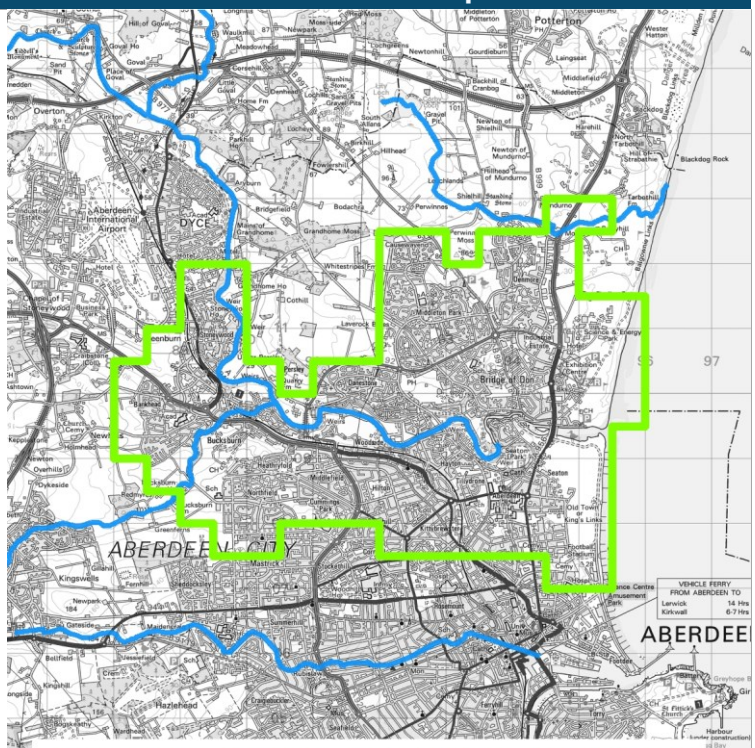
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	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.

	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.
Description	Community engagement should continue during the development of detailed design of works identified in the Jesmond Drive Flood Study.

	Flood scheme or works implementation (Ref: 41204)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

	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.
Description	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.

	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.
Description	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.

	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.
Description	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.

	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.
Description	SEPA should maintain the River Don and the Aberdeenshire and Angus coastal flood warning schemes.

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.

Coordination with the river basin management plan

This area has been identified as having potential for restoration in Scotland's river basin management plan. Actions should be coordinated to deliver any potential joint objectives for restoration and flood risk management. This should be considered in the earliest stages of any projects.

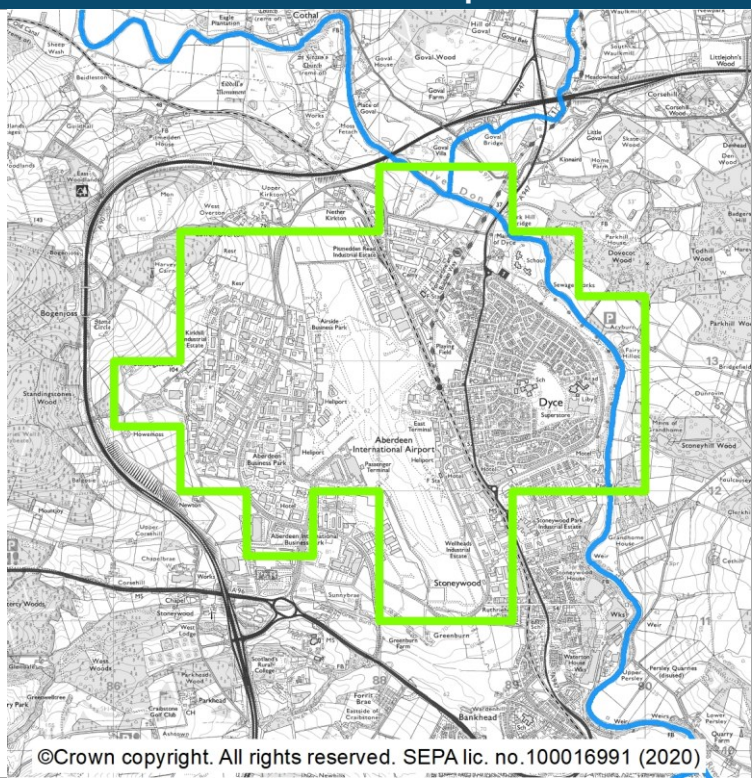
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	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.

	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
Description	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.

	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.
Description	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.

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.

Coordination with the river basin management plan

This area has been identified as having potential for restoration in Scotland's river basin management plan. Actions should be coordinated to deliver any potential joint objectives for restoration and flood risk management. This should be considered in the earliest stages of any projects.

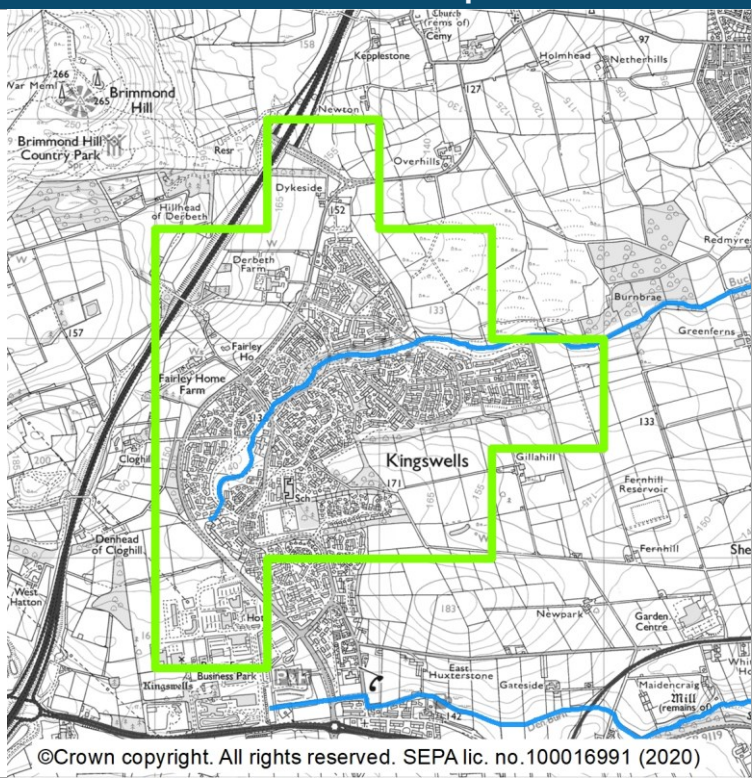
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Kemnay	(target area 422)

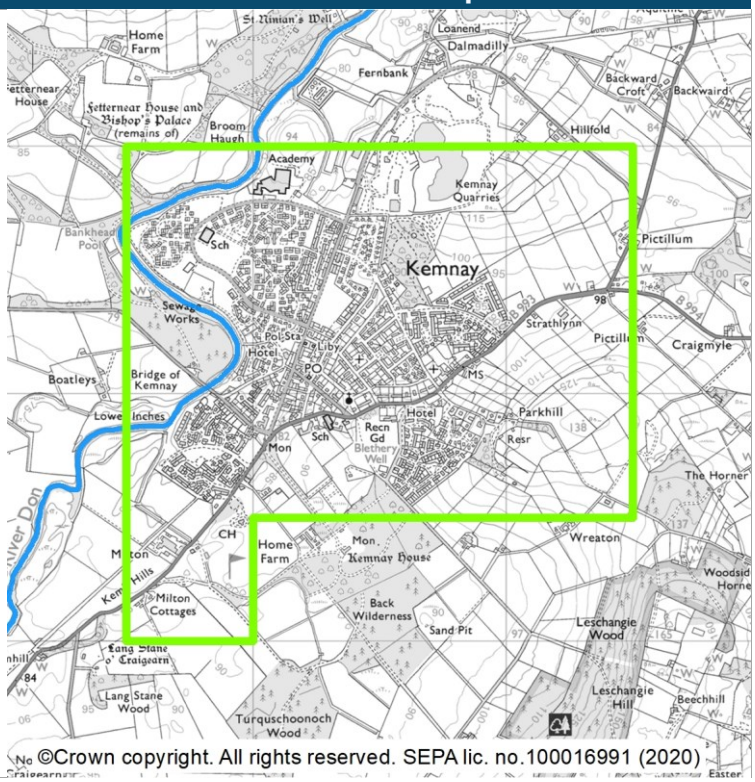
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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
Description	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.

	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.
Description	Develop a surface water management plan for Kemnay. The impacts of climate change on flood risk should be considered.

	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.
Description	Milton Meadows has its own community flood warning system on a small unnamed waterourse at Milton Drive.

	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.
Description	SEPA should maintain the River Don flood warning scheme.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Westhill	(target area 416)

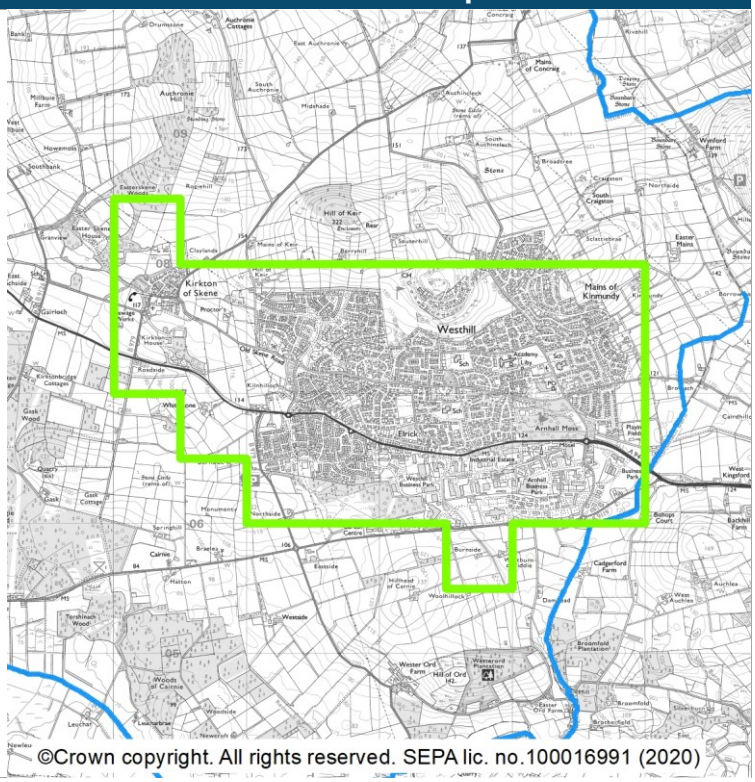
Flood risk management plan datasheet

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 in areas surrounding 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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Aberdeen Central	(target area 413)

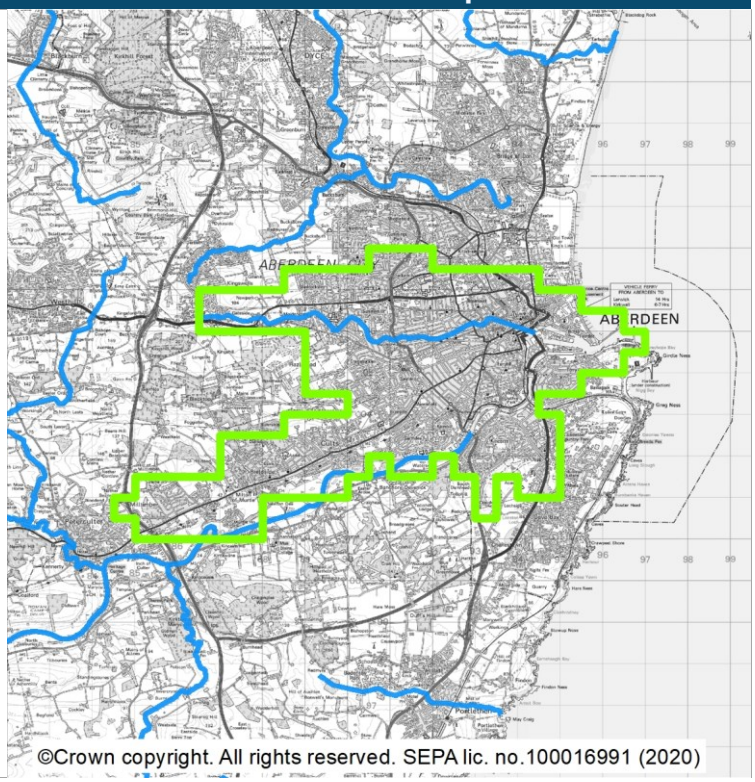
Flood risk management plan datasheet

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, 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
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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	Aberdeen City Council and Scottish Water should continue working together towards identifying flood risk mitigation measures for the Merchant Quarter. In accordance with the flood risk management plan, as part of the scheme or works, the responsible authority should aim to ensure the action will not have an adverse effect on the integrity of the River Dee Special Area of Conservation.

	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.
Description	Community engagement should continue during the development of the detailed design of works for Merchant Quarter.

	Flood scheme or works implementation (Ref: 41304)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	A flood study has been commissioned to understand flood risk in the valley of Denburn. The study should continue to be progressed.

	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.
Description	SEPA should maintain the River Dee flood warning scheme. The performance of the scheme at Riverside Drive should be investigated.

	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.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.

	Strategic mapping improvements (Ref: 41308)
Action	SEPA will continue to update flood maps based on new information.
Description	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.

	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.
Description	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.

	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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Peterculter	(target area 415)

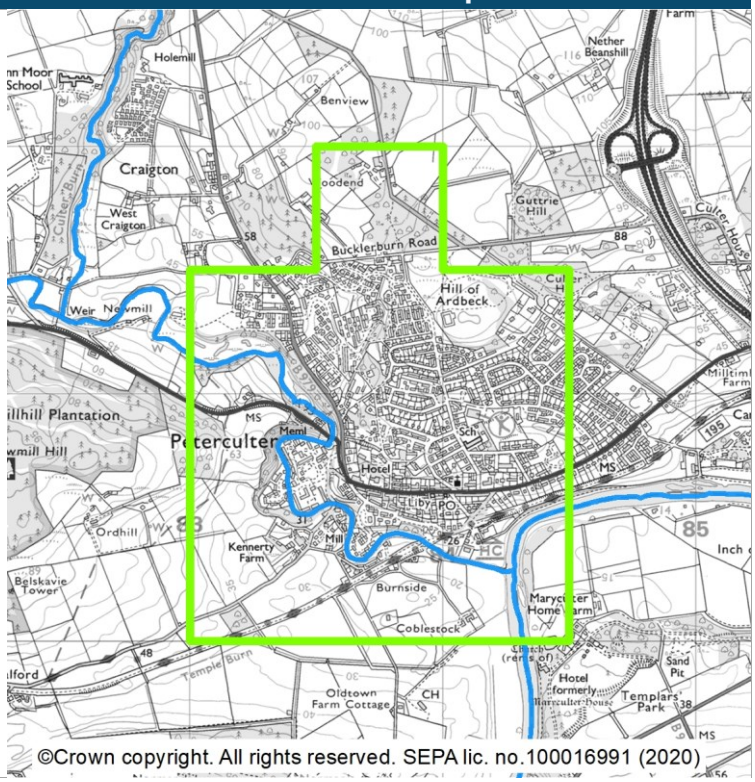
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	A community river level alerting system for the Culter Burn should be implemented and maintained based on the monitoring scheme which is being developed.

	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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

	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.
Description	SEPA should maintain the River Dee flood warning scheme.

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.

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 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

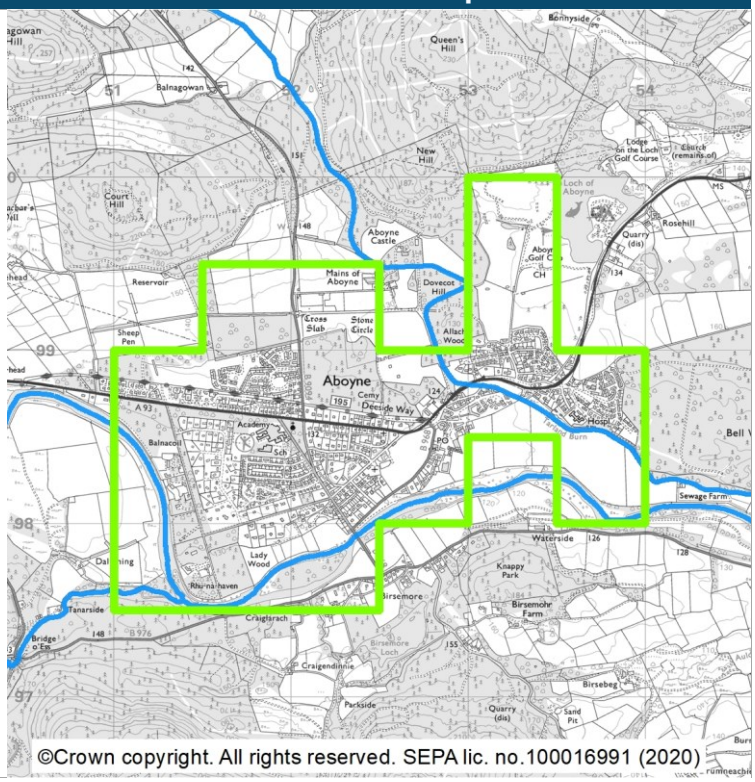
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	Aberdeenshire Council to implement the surface water management plan. This should be reviewed and updated regularly. The results of Scottish Water's sewer flood risk assessment should be considered. The impacts of climate change on rainfall patterns and flood risk should be assessed.

	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.
Description	SEPA should maintain the River Dee flood warning scheme.

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.

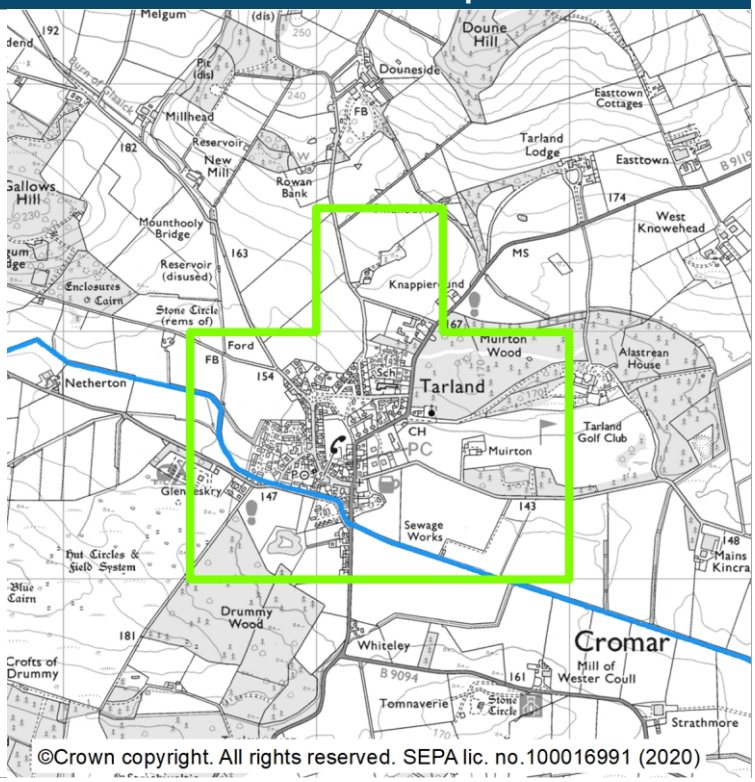
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Banchory	(target area 433)

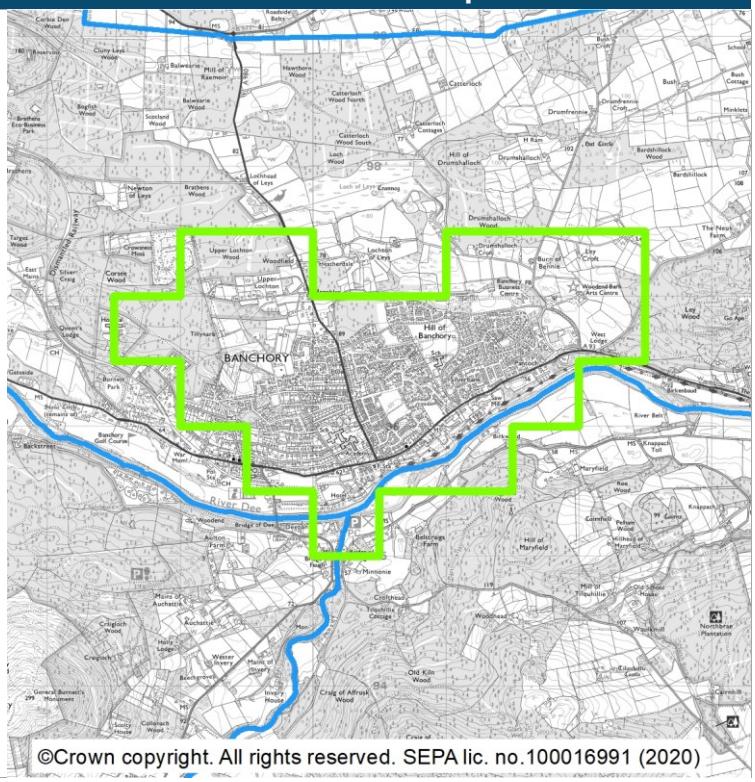
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	SEPA should maintain the River Dee flood warning scheme.

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.
Description	Develop a surface water management plan for Banchory. The results of Scottish Water's sewer flood risk assessment should be considered. The impacts of climate change on rainfall patterns and flood risk should be taken into account.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Ballater	(target area 414)

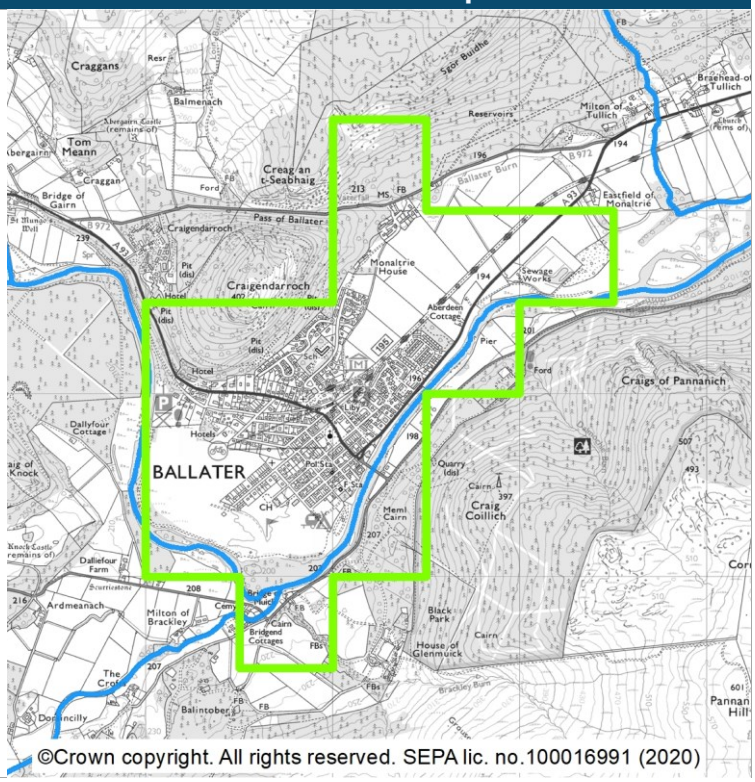
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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. In accordance with the flood risk management plan, as part of the scheme or works, the responsible authority should aim to ensure the action will not have an adverse effect on the integrity of the River Dee Special Area of Conservation.

	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.
Description	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.

	Flood scheme or works implementation (Ref: 41403)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	The local flood risk management plans published in December 2022 will establish further detail on the actions.

	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.
Description	SEPA should maintain the River Dee flood warning scheme.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Stonehaven	(target area 419)

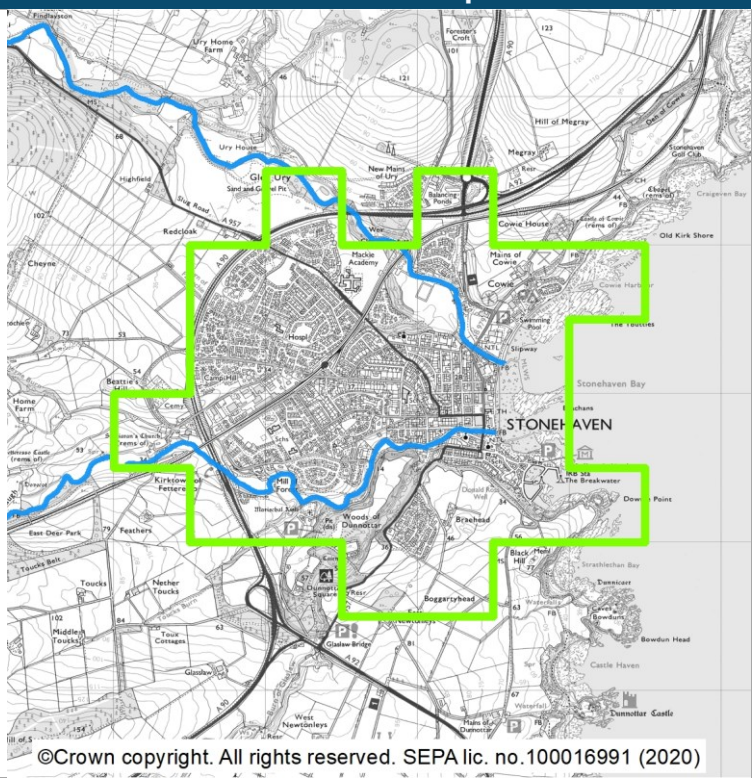
Flood risk management plan datasheet

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 Covie 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, 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
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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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.
Description	Once completed, the River Carron Flood Protection Scheme should be maintained.

	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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

	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.
Description	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.

	Flood scheme or works implementation (Ref: 41906)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

	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.
Description	Aberdeenshire Council to continue to engage with the community, with particular focus the design of the coastal and Farrochie Burn flood schemes.

	Strategic mapping improvements (Ref: 41908)
Action	SEPA will continue to update flood maps based on new information.
Description	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

	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.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme and the River Carron flood warning scheme.

	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.
Description	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.

	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.
Description	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.

	Flood scheme or works implementation (Ref: 41912)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Portlethen	(target area 425)

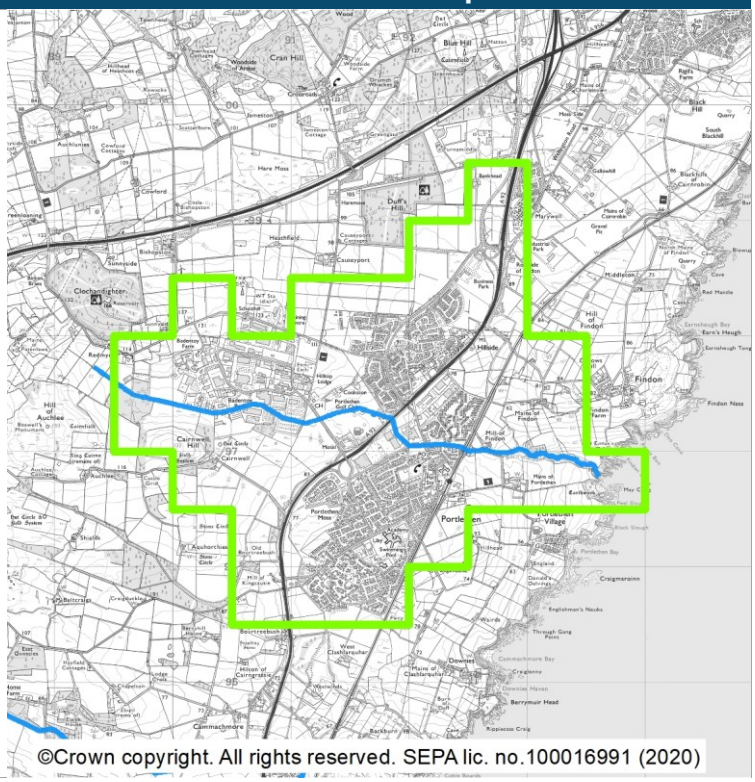
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

Coordination with the river basin management plan

This area has been identified as having potential for restoration in Scotland’s river basin management plan. Actions should be coordinated to deliver any potential joint objectives for restoration and flood risk management. This should be considered in the earliest stages of any projects.

02/06/25 (Cove and Nigg Bay)

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

There are 2 target areas in this potentially vulnerable area, which have been the focus of further assessment, these are listed below. Further information on the 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)

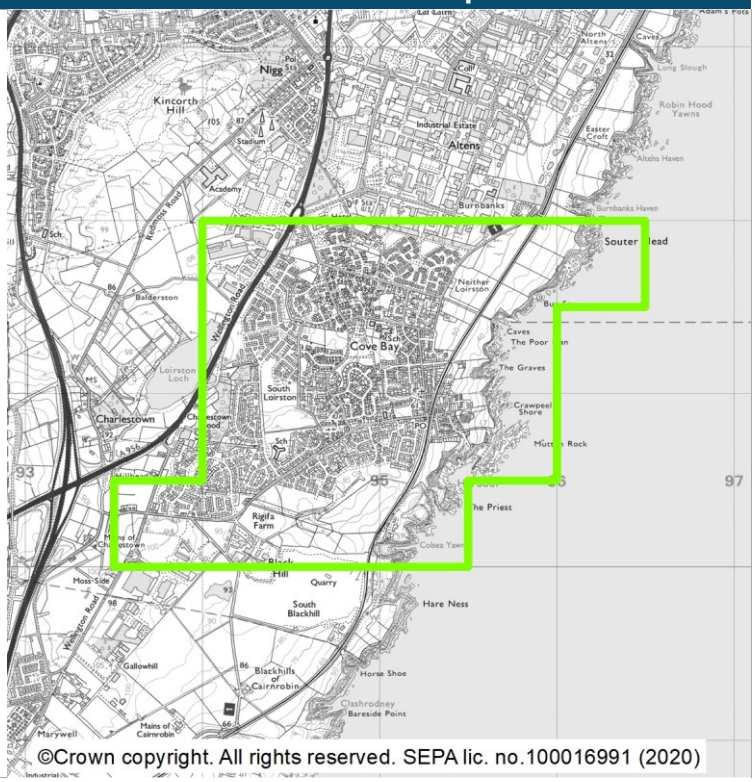
Flood risk management plan datasheet

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. Cove Bay has therefore been identified as a new target area for the 2021 flood risk management plans. 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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

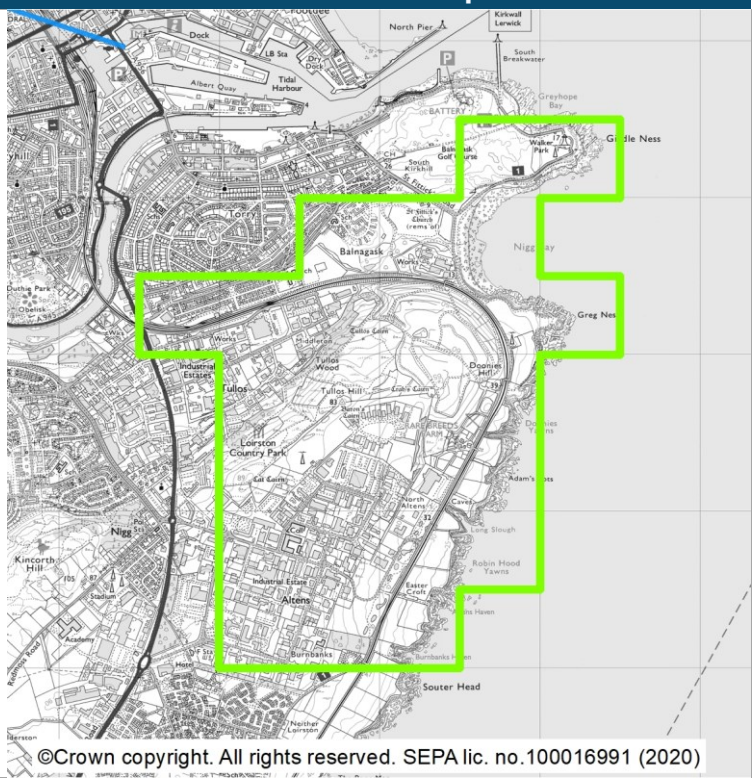
Flood risk management plan datasheet

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. Nigg Bay has therefore been identified as a new target area for the 2021 flood risk management plans. 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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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
Description	Scottish Water will carry out an assessment of sewer flood risk within the highest priority sewer catchments, which includes Nigg 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.

	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.
Description	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.

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.

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 target area in this potentially vulnerable area, which has been the focus of further assessment, this is identified below. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Cruden Bay	(target area 447)

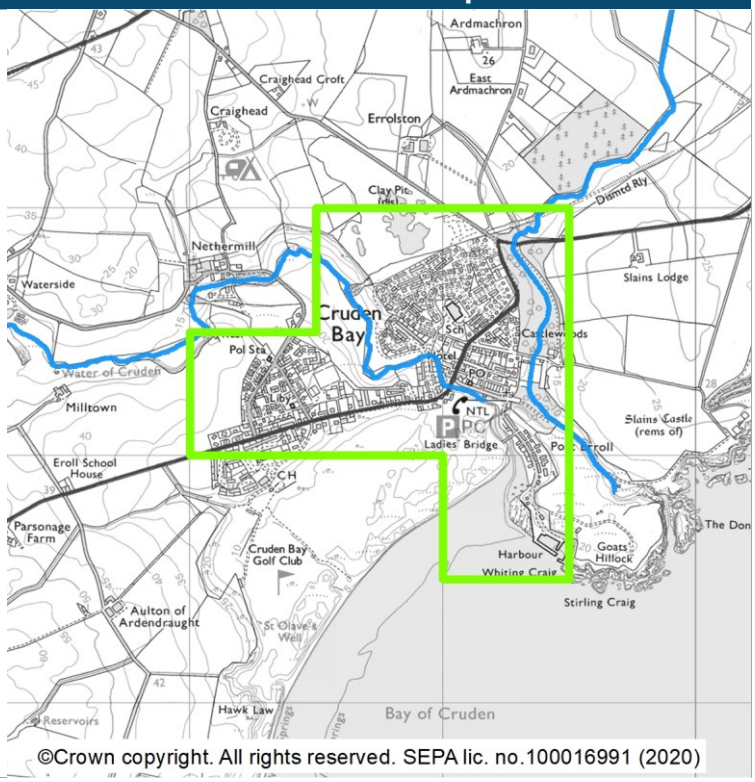
Flood risk management plan datasheet

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?

As outlined in Section 1 of this plan, at the date of publication the actions below represent the best understanding of what is needed to work towards the objectives for the area. They have been developed with the other responsible authorities and take account of progress achieved to date, the understanding of flood risk and the objectives set for the area. The local flood risk management plan published in 2022 provides more information on the actions, their timing and how they will be funded and coordinated.

Actions proposed to start between 2022 and 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.
Description	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.

	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
Description	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.

	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.
Description	SEPA should maintain the Aberdeenshire and Angus coastal flood warning scheme.

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.

Annex 1: Costs of actions

Action	Indicative capital cost (£)	Notes
Adaptation plan	30,000	Costs can vary greatly depending on the scale and complexity of flooding
Data collection	20,000	
Flood scheme or works design	300,000	Costs can vary greatly depending on the scale and complexity of flooding, along with the ground conditions
Flood study	50,000	Costs can vary greatly depending on the scale and complexity of flooding
Flood study (existing flood defences)	80,000	
Flood study (options appraisal)	40,000	
Shoreline Management Plan (Coastal Adaptive Plan)	100,000	
Surface water management plan	30,000	
Flood scheme or works implementation	N/A	Schemes are very individual and it is not possible to provide an indicative cost.
The costs involved in the following actions are predominately from staff resource:		
Community engagement	N/A	Resources required are very specific for the individual action. It is currently not possible to estimate a resource cost.
Community flood alert	N/A	
Community resilience group	N/A	
Emergency plan	N/A	
Flood defence maintenance	N/A	Cost of maintenance is specific to the defence and is impacted by among other things age and type of the defences. It is not possible to provide indicative costs.
Flood risk management review	N/A	Resources required are very specific for the individual action. It is currently not possible to estimate a resource cost.
Flood warning maintenance	N/A	
Flood warning scoping	N/A	
Land Use Planning	N/A	
Maintain flood protection scheme	N/A	
New flood warning area	N/A	
Property flood resilience scheme	N/A	
Sewer flood risk assessment	N/A	
Site protection plan	N/A	
Strategic mapping improvements	N/A	

Annex 2: Flood risk management plans consultation summary

Asking for and listening to input from stakeholders and the public is a key part of flood risk management in Scotland. SEPA and the local authorities undertook a joint consultation, which ran in 2 phases between December 2020 and October 2021. Phase 1, opened in December 2020 and included a summary of flooding in each Local Plan District, a description of the potentially vulnerable areas and the identified local target areas. Phase 2 opened for responses on 30th July 2021 and closed on 31st October 2021. Phase 2 identified the objectives for each target area and the actions needed to achieve these objectives. It also included prioritisation of the actions by 6 year cycle. Local authorities provided more detail in the draft local flood risk management plans, which included an expanded description of the actions, and who would lead and coordinate delivery.

The consultation was open to everyone with an interest in flood risk management.

The communications campaign to publicise the consultation aimed to encourage anyone with an interest in flooding to have their say on how flood risk is managed across Scotland.

Communication activities included:

- A public notice in the Edinburgh Gazette and The Herald
- A national press release
- Social media posts on Facebook, Twitter, LinkedIn, Instagram
- A national targeted, paid social media campaign on Facebook, Twitter, and Instagram.

An animation and graphics were created to promote the consultation. These were shared with all responsible authorities in advance of the consultation and were regularly publicised via social media. The consultation was picked up by many local media outlets including local newspapers.

SEPA staff also supported several national events aimed at raising awareness of the consultation.

Demonstration of the consultation platform was provided to ensure that stakeholders were able to navigate the Citizen Space platform and answer the consultation questions.

Local authority flooding teams were provided with briefing packs with access to draft article templates and social media messages which they could use to promote the consultation within their own organisation and local area. Many local authorities used their network of community councils to promote the consultation.

In total SEPA received 677 responses. These included 654 online responses via the consultation platform Citizen Space and 23 e-mail responses received via SEPA's consultation mailbox. Compared to the first consultation on the flood risk management strategies in 2014, there has been a welcome three-fold increase in the number of responses. The majority of the responses (520) were from members of the public. This reflects increased public awareness of flooding and flood risk management, and the increasing risk due to climate change.

SEPA is grateful to individuals and organisations for considering the proposals and providing feedback. Responses varied from detailed comments on the actions proposed in individual target areas, to general comments on flooding and flood risk management. The sections below provide a brief outline of the responses received and changes made as a result.

Many of the aspects raised relate to the underlying requirements of the Flood Risk Management (Scotland) 2009 Act, to activities which are the responsibility of other organisations, or to the content of the local flood risk management plans. Working within safe data sharing practices, SEPA will ensure the feedback received is passed to other responsible authorities to consider and act on.

This summary is a factual statement of the responses provided. All responses received have been read and considered, resulting in a number of changes to the plans. Further detail on the analysis of responses will be published by SEPA in Spring 2022.

Identifying communities and infrastructure at risk

In the consultation SEPA asked whether all the main communities and infrastructure at significant risk of flooding were identified. 45% of respondents agreed that the main communities and infrastructure were identified and 29% stated they were not sure. 21% of respondents felt that some communities were missing from the plans.

Some respondents who had recently flooded were concerned that their communities were not identified as target areas. Some respondents suggested additional areas for SEPA to consider where flooding has occurred in the past. Concerns were also expressed about the method used to identify the main communities at risk.

Proposed objectives

34% of respondents supported the proposals for objectives to manage flood risk in target areas and 30% were not sure. 25% did not agree and 10% did not answer this question.

The main concerns of those who did not agree with the proposed objectives were that timescales were long-term and would not result in immediate action, objectives did not cover wider issues such as sewerage flooding, objectives were not detailed enough, and that objectives did not limit new development. There were concerns that there was no evidence being provided to show that the objectives were being met by the authorities, and that objectives were not leading to actions on the ground.

Proposed actions to manage flood risk

43% of respondents were not sure whether the actions would work towards achieving the objectives. 25% of respondents did not agree with the proposed actions to manage flood risk. 20% agreed with the proposed actions and 12% did not answer this question.

Those who did not agree expressed concerns that flood studies were not resulting in actions on the ground, that actions were not detailed enough, some stressed the need for other actions such as drain clearance being done now and some emphasised the need for a catchment-based approach and natural flood management.

Others asked for more watercourse clearing and river management and more transparency from the local authority in publicising the maintenance plan for flood defences. Concerns were also expressed that new development is not being controlled and is contributing to increased surface water flooding and that there were no actions to address sewerage flooding. Concerns were also raised about funding for actions.

NatureScot provided feedback on specific target areas and the impacts on biodiversity and designated sites.

Timescales for implementing actions

In terms of the proposed timescales, 36% of respondents did not agree and 32% were not sure of the identified timescales. 17% agreed and 15% did not respond to this question.

Those who disagreed were concerned that actions were taking too long and that more urgent action is needed in light of climate change. Respondents also commented that timescales were too vague and should be more detailed.

What can individuals, communities and organisations do to help manage flood risk?

SEPA also asked whether individuals, communities or organisations were able to help with flood risk management in Scotland. There was a range of responses to this question, with 39% of respondents agreeing that there is something they could do to help manage flood risk and 26% of respondents not sure that there are things they could do.

Those who were not sure asked for more guidance from the authorities. However, many felt that there was something that communities or individuals can do. Suggestions included less paving of gardens to help attenuate rainwater, authorities developing information to help the public make more informed decisions, community organised clearance of watercourses where it is safe to do so, reporting blockages and flooding to the authorities, planting trees and greening of cities.

Acting on consultation feedback

Several changes were made to the final flood risk management plans as a result of the input received during the consultation. A summary of those changes is provided in the table below, and full details will be provided in the consultation digest to be published by SEPA in Spring 2022.

Summary of changes made to the plans following the consultation
1. Further actions were added to manage flood risk in several target areas.
2. Additional Local Plan District actions were added.
3. Some actions were removed from the flood risk management plans at the request of local authorities responsible for their delivery due to completion in the time between consultation and publication.
4. Further information was included on how climate change was assessed in the preparation of the plans.
5. Further information was included on how potentially vulnerable areas were identified, and when they will be reviewed again.
6. Information was included on the progress made in implementing actions and working towards objectives in the 2015 strategies.
7. A target area boundary was amended based on new information provided.
8. A description of the importance of community actions, recognising the work that communities do to manage flooding was included, along with further information on where support is available to help people reduce their own flood risk.
9. A description of the catchment-based approach SEPA has taken, and the role it plays in delivering flood risk management actions was provided.
10. The link between flood risk management plans and land use planning was clarified.
11. Habitats Regulations Appraisal statements were added to each relevant action.
12. Some other changes were made to the way information is presented to try to make it clearer e.g., on the timing of actions being carried out.
13. Further information was provided on the uncertainty associated with funding of flood risk management actions.

Annex 3: Acknowledgements

SEPA acknowledges the cooperation and input provided in preparing these plans, including the following:

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Local authorities SEPA acknowledges the provision of flood models and other supporting data and information from local authorities in Scotland and their collaboration in the production of flood risk management information.

Scottish Water SEPA acknowledges the inclusion of surface water flooding data generated by Scottish Water in preparation of flood risk information.

The Flood Hazard Research Centre Multi-coloured Manual and Multi-coloured Handbook 2016.

All contributors to the **2018 NFRA**, more information on which can be found at https://www.sepa.org.uk/data-visualisation/nfra2018/