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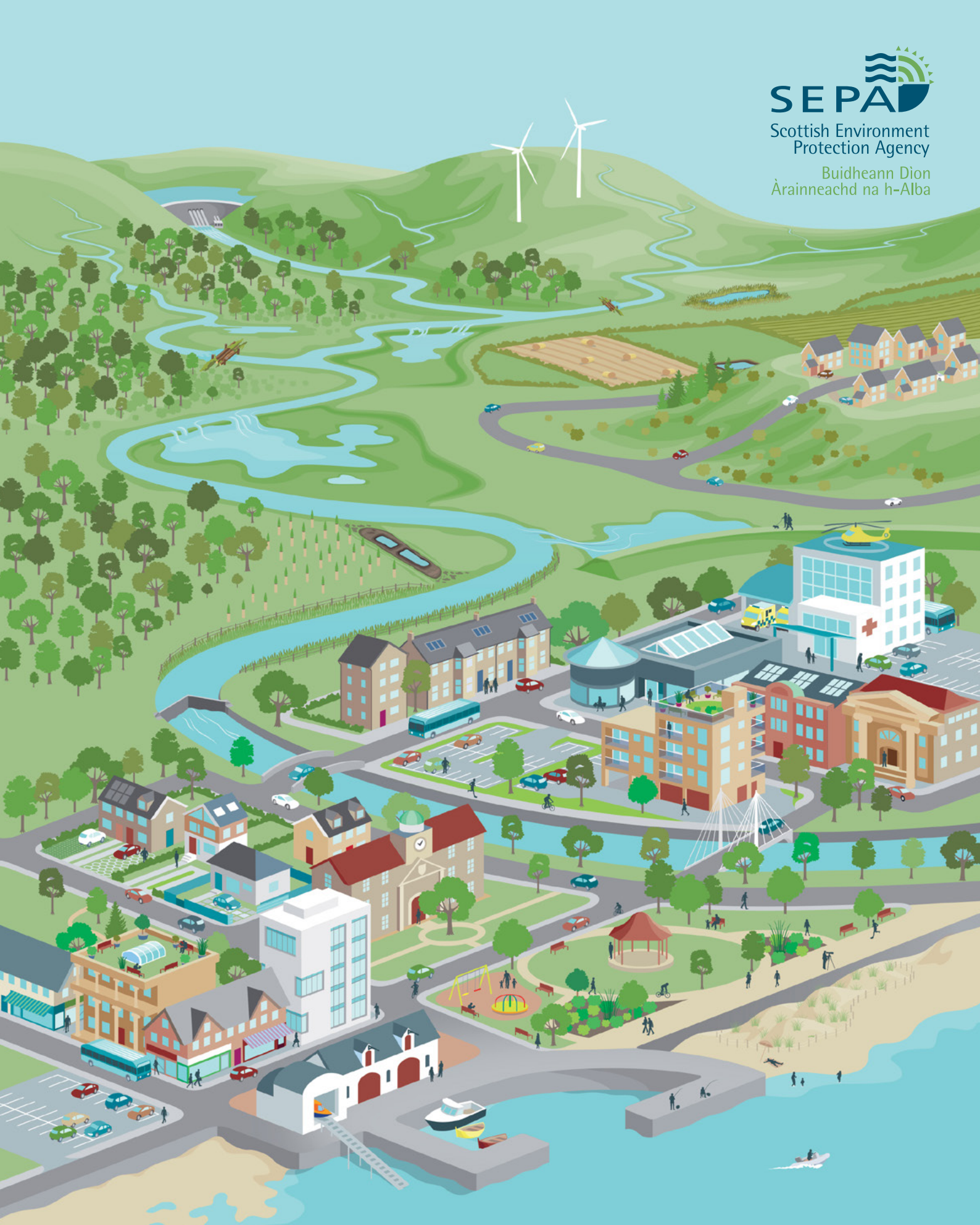

Flood Risk Management Plan

Highland and Argyll 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 Highland and Argyll Local Plan District it is estimated there are around 15,000 homes and businesses at risk from flooding, and this may increase to 23,000 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 The Highland 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 The Highland Council, Argyll and Bute Council, Scottish Water, Cairngorms National Park Authority and Loch Lomond and The Trossachs National Park Authority 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: Highland and Argyll Local Plan District (LPD 1)

Flood risk management plan 2022-2028

The Highland and Argyll Local Plan District covers an area of around 29,000km^2 and has a population of approximately 260,000 people. It stretches from Campbeltown in the southwest to John o' Groats in the north and from Ardersier in the east to the Inner Hebrides in the west.

Much of the area is characterised by mountainous terrain with some low-lying land in the east around Inverness and the northeast around Wick and Thurso. The area is predominantly rural with the land cover mainly heath, grassland, bog, coniferous woodland and some agricultural land. There are numerous large lochs, including Loch Ness and Loch Awe. Given the hilly nature of much of the area, rivers are abundant. The larger river systems are in the east and northeast including the River Ness, the River Thurso, the River Beauly and the River Conon. The coastline is over 4,200 km in length and typically hard and often deeply indented with sea lochs, firths and occasional beaches. More extensive beach systems are found on parts of the north and east coast.

There is river, surface water and coastal flood risk, with the main risk coming from river and coastal flooding. The area has been affected by several large floods, notably in January 2016 and March 2015 when severe weather led to extensive flooding. This flooding affected many areas, including Inverness, Wick, Halkirk, Beauly, Fort Augustus and Oban.

Currently it is estimated that there are 22,000 people and 15,000 homes and businesses at risk from flooding. This is estimated to increase to 34,000 people and 23,000 homes and businesses by the 2080s due to climate change. The annual cost of flooding is approximately £26 million. There is a significant risk of flooding to transport infrastructure in rural areas. This could leave communities isolated for long periods of time or result in long diversions.

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 The Highland Council who is the lead authority. Other responsible authorities include Argyll and Bute Council, Scottish Water, Cairngorms National Park Authority and Loch Lomond and The

Trossachs National Park Authority. 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 30 potentially vulnerable areas (PVAs) in this Local Plan District. Following sections provide more information on these areas.

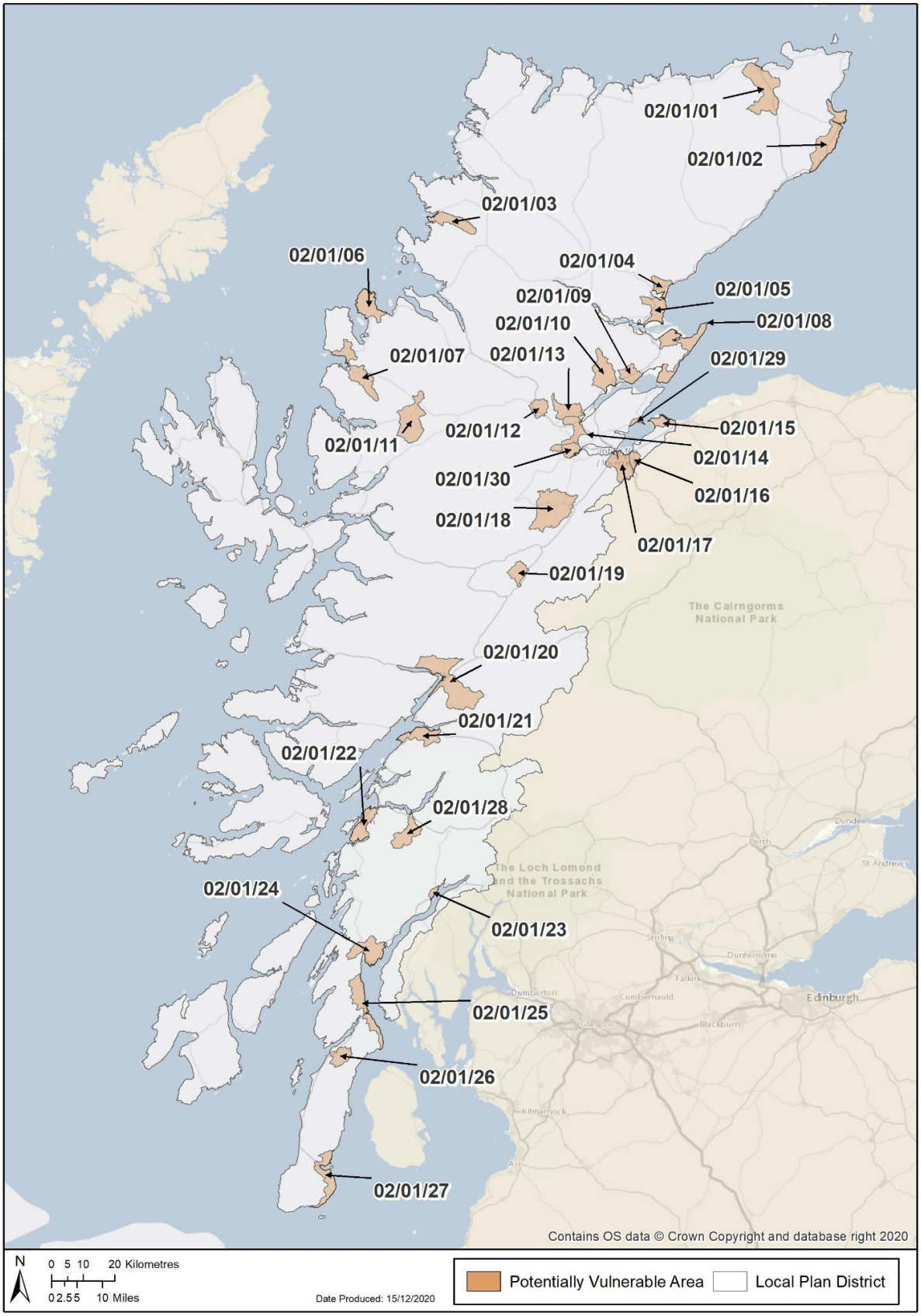


Figure 1. Potentially vulnerable areas in Highland and Argyll Local Plan District

LPD 1 Highland and Argyll – List of PVAs

Click the blue text to select your area of interest

02/01/01 (Thurso and Halkirk)

This area is designated as a potentially vulnerable area due to the risk of river, coastal and surface water flooding. Thurso flooded in the past from a combination of high sea levels and high water levels on the River Thurso. Halkirk is frequently affected by 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

Halkirk	(target area 352)
Thurso	(target area 367)

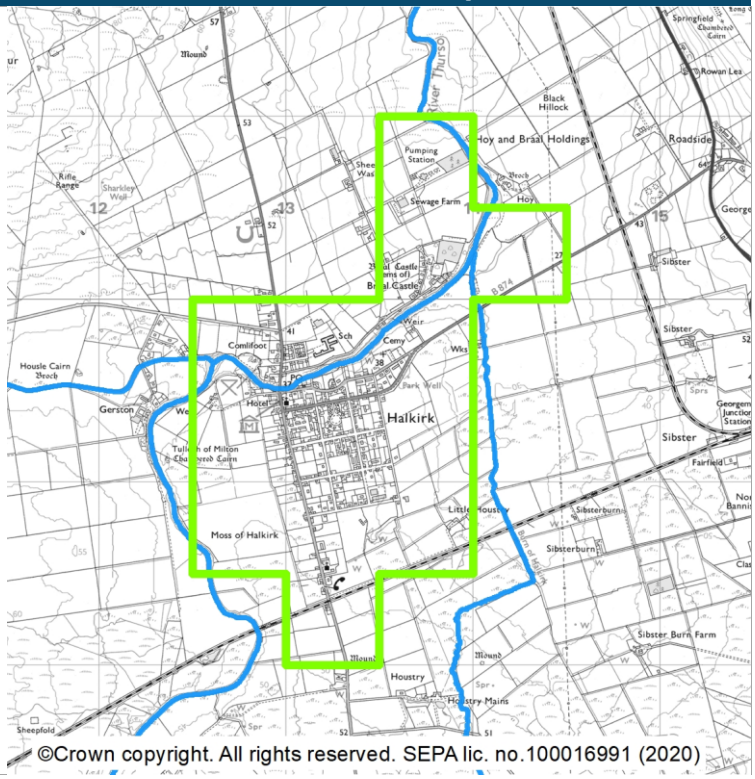
Flood risk management plan datasheet

Halkirk (target area 352)

Summary

Halkirk is in Caithness, within the Highland Council area. The main source of flooding in Halkirk is from surface water, however this is not accurately reflected in the current SEPA flood maps. There are approximately 90 people and 50 homes and businesses currently at risk from flooding. This is estimated to increase to approximately 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, (principally associated with surface water flood risk) in this target area. Halkirk 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 due to the ongoing development of a Highland wide surface wide management plan which includes Halkirk as a priority area and a sewer flood risk assessment. There is a long history of flooding in Halkirk including records of surface water flooding in November 2013 and 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
3521	Avoid flood risk	Avoid inappropriate development that increases flood risk in Halkirk.
3522	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Halkirk.
3523	Reduce flood risk	Reduce the risk of surface water flooding in Halkirk.

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: 35201)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan which includes Halkirk as a priority area. The surface water management plan identifies areas most at risk from surface water flooding in Halkirk and identifies options that could alleviate this 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.

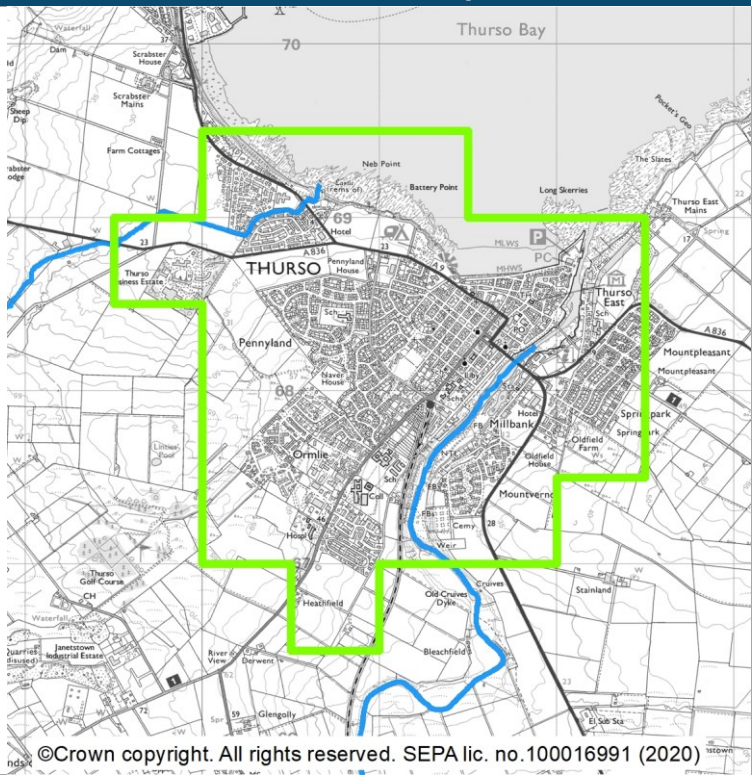
Flood risk management plan datasheet

Thurso (target area 367)

Summary

Thurso is located in Caithness on the north coast of Scotland and is within the Highland Council area. Thurso is at risk from river flooding and coastal flooding. Thurso has flooded in the past from a combination of high sea levels and high water levels on the River Thurso. This combined flood risk is not reflected in SEPA's flood maps. There are approximately 140 people and 90 homes and businesses currently at risk from flooding. This is likely to increase to 200 people and 130 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 understanding of river and coastal flood risk has improved due to the completion of the River Thurso Flood Protection Study (2019). There is a long history of flooding in Thurso, including combined tidal and river flooding in January 2005.

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
3671	Avoid flood risk	Avoid inappropriate development that increases flood risk in Thurso.
3672	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Thurso.
3673	Reduce flood risk	Reduce the risk of coastal flooding in Thurso.
3674	Reduce flood risk	Reduce the risk of flooding from the River Thurso in Thurso.

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: 36701)
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	Subject to Scottish Government funding and the outcome of national prioritisation of flood protection schemes. The Highland Council should progress with the detailed design for the River Thurso Flood Protection Scheme. The preferred option consists of flood defence walls and an embankment. 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 Thurso Special Area of Conservation.

	Flood scheme or works implementation (Ref: 36702)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Subject to Scottish Government funding The Highland Council should progress with the River Thurso Flood Protection Scheme based on the detailed design.

	Strategic mapping improvements (Ref: 36703)
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.

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.

02/01/02 (Wick)

This area is designated as a potentially vulnerable area due to the risk of river, coastal and surface water flooding. The main source of flood risk is surface water. Recent floods were caused by surface water and coastal flooding.

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

List of target areas

Wick	(target area 386)

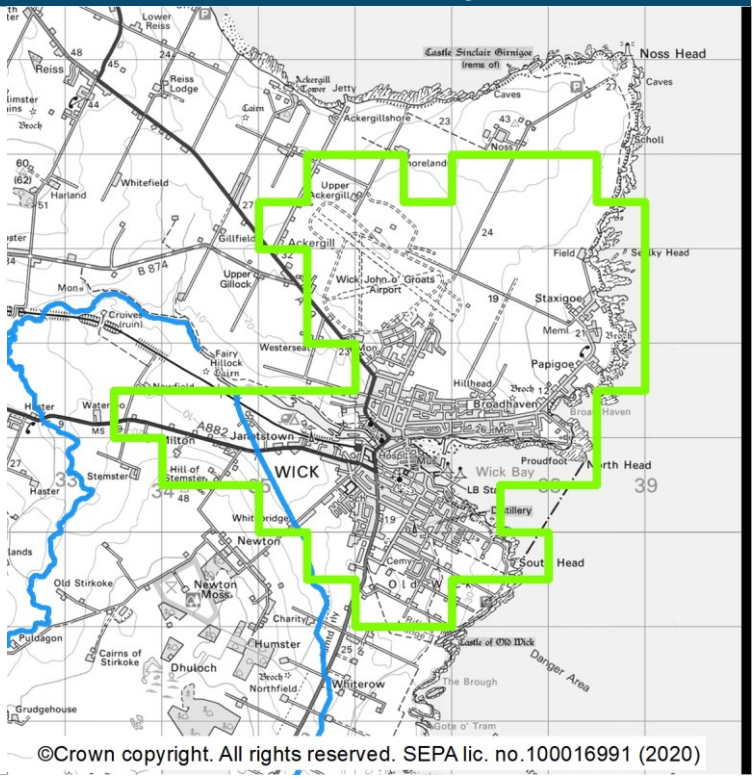
Flood risk management plan datasheet

Wick (target area 386)

Summary

Wick is located in eastern Caithness within the Highland Council area. Wick is at risk from surface water, river and coastal flooding. There are approximately 320 people and 250 homes and businesses currently at risk from flooding. This is likely to increase to 400 people and 330 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 for river flooding has been improved by the flood map improvements for the Burn of Newton and Mill Lade between Loch Hempriggs to the confluence with the River Wick. The understanding of surface water flood risk has improved through a sewer flood risk assessment and for coastal flooding by the development and operation of the Moray flood warning scheme. There is a long history of flooding in Wick. This includes coastal flooding in 2012 and flooding in January 2016 from surface water following heavy rain.

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
3861	Avoid flood risk	Avoid inappropriate development that increases flood risk in Wick.
3862	Improve data and understanding	Improve data and understanding of the risk of coastal flooding in Wick.
3863	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Wick.

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: 38601)
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: 38602)
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.

02/01/03 (Lochinver)

This is designated as a potentially vulnerable area due to the risk of river and coastal flooding to the nursery and primary school in Lochinver from Loch Culag. Coastal and river flooding affecting access to the school is of particular concern.

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

List of target areas

Lochinver (target area 351)

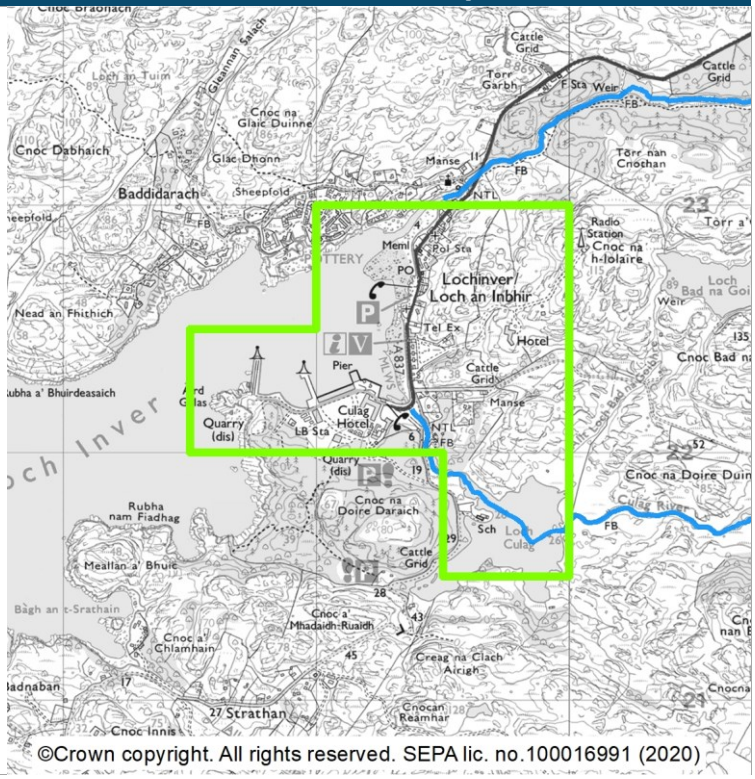
Flood risk management plan datasheet

Lochinver (target area 351)

Summary

Lochinver is located in the north west of Scotland within the Highland Council area. Lochinver is at risk of coastal and river flooding with a school being at risk from river flooding. There are approximately 90 people and 70 homes and businesses currently at risk from flooding which is a significant proportion of the community. This is likely to increase to 120 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, and this national assessment has highlighted the risk of flooding in this target area. There are limited records of flooding in the Lochinver target area. In February 1998 heavy rainfall caused flooding which is understood to have affected Lochinver Primary School.

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
3511	Avoid flood risk	Avoid inappropriate development that increases flood risk in Lochinver.
3512	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Lochinver.

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

	Site protection plan (Ref: 35101)
Action	The plan to protect an individual site from flood risk should be maintained and executed as required by the site owner or operator.
Description	The Highland Council to develop a site protection plan for Lochinver Primary School and nursery.

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.

02/01/04 (Golspie)

This is designated as a potentially vulnerable area due to the risk of coastal and surface water flooding in Golspie. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Coastal flooding has affected Golspie. Coastal erosion is also an issue particularly at the Links.

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

List of target areas

Golspie (target area 333)

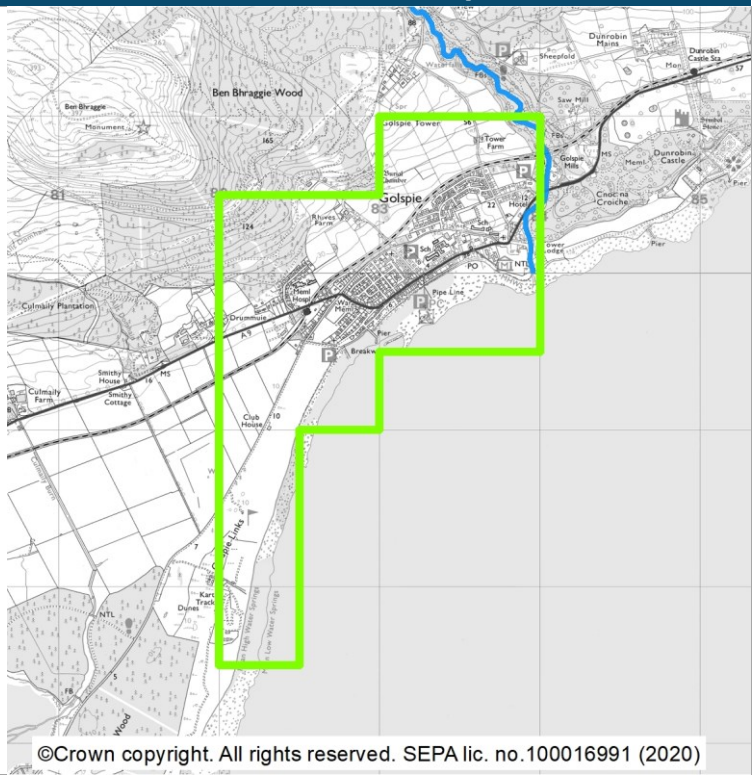
Flood risk management plan datasheet

Golspie (target area 333)

Summary

Golspie is on the north east coast of Scotland within the Highland Council area. Golspie is at risk from coastal flooding and surface water flooding. There are approximately 190 people and 130 homes and businesses currently at risk from flooding. This is likely to increase to 210 people and 150 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 understanding of coastal flood risk has improved due to the completion of the Golspie Flood Protection Study (2019). The understanding of surface water flood risk is improved by a sewer flood risk assessment. There is a long record of flooding in Golspie including notable coastal flooding in October 2014.

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
3331	Avoid flood risk	Avoid inappropriate development that increases flood risk in Golspie.
3332	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Golspie.
3333	Reduce flood risk	Reduce the risk of coastal flooding in Golspie.

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: 33301)
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	Subject to Scottish Government funding and the outcome of national prioritisation of flood protection schemes. The Highland Council should progress with the detailed design for the Golspie Coast Flood Protection Scheme. The preferred option consists of raising existing coastal flood defences. 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 Moray Firth Special Area of Conservation and the Moray Firth Special Protection Area.

	Flood scheme or works implementation (Ref: 33302)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Subject to Scottish Government funding The Highland Council should progress with the Golspie Coast Flood Protection Scheme based on the detailed design.

	Flood scheme or works implementation (Ref: 33303)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Transport Scotland to carry out the planned civil engineering works to reduce flood risk to the A9.

	Strategic mapping improvements (Ref: 33304)
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: 33305)
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.

02/01/05 (Dornoch)

Dornoch is designated as a potentially vulnerable area due to the risk of flooding from surface water and from the Dornoch Burn. Flooding can be affected by blocked culverts. River and surface water flooding has affected Dornoch.

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

List of target areas

Dornoch (target area 334)

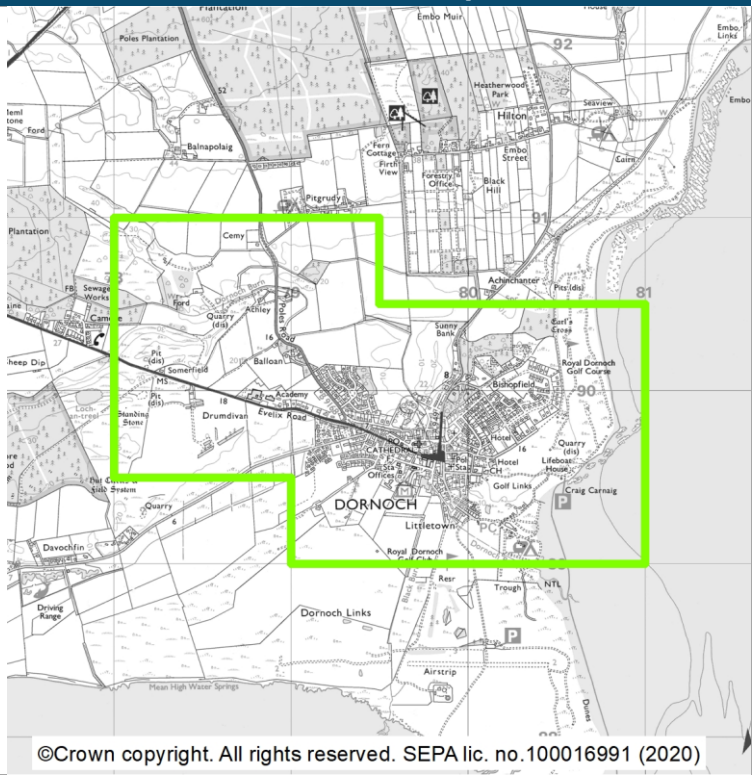
Flood risk management plan datasheet

Dornoch (target area 334)

Summary

The town of Dornoch is in the Highland Council area. Dornoch is at risk from river flooding and surface water flooding. There are approximately 150 people and 100 homes and businesses currently at risk from flooding. This is likely to increase to 200 people and 130 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 in this target area. Periodic flooding from the Dornoch Burn and surface water is recorded in Dornoch.

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
3341	Avoid flood risk	Avoid inappropriate development that increases flood risk in Dornoch.
3342	Improve data and understanding	Improve data and understanding of the risk of flooding from surface water in Dornoch.
3343	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Dornoch.

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: 33401)
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.

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: 33402)
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 Highland Council to develop a flood model of the Dornoch Burn to determine the extent of flood risk to Dornoch from the burn. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

02/01/06 (Aird Point)

This area is designated as a potentially vulnerable area due to the risk of coastal flooding to a large proportion of the community. This is expected to increase significantly due to sea level rise, caused by climate change.

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

List of target areas

Aultbea (target area 431)

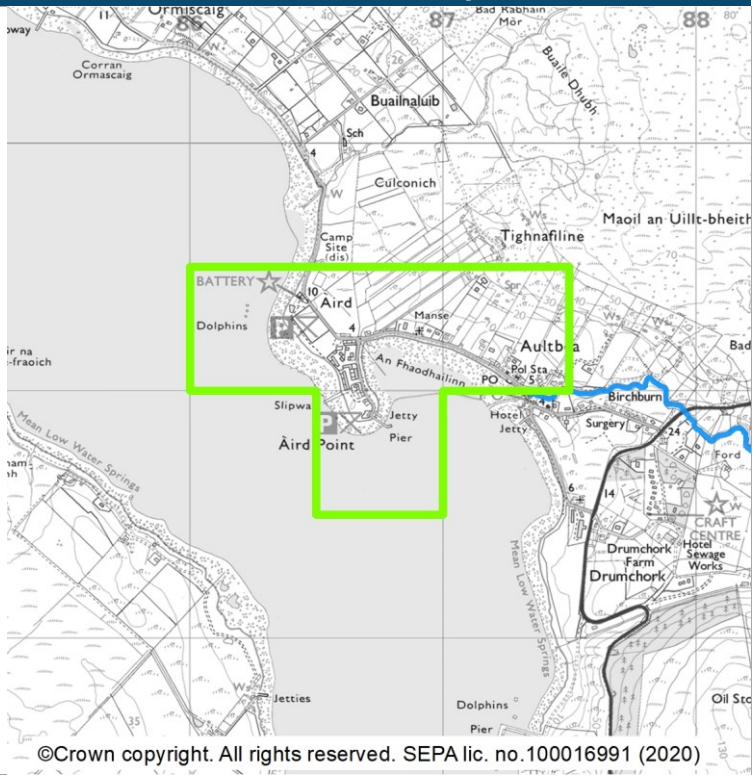
Flood risk management plan datasheet

Aultbea (target area 431)

Summary

Aultbea is located north of Poolewe in the Highland Council area. The main source of flooding that affects the village of Aultbea is coastal flooding. This could worsen due to climate change and sea level rise, possibly leading to tide locking of the Allt Beithe. There are approximately 70 people and 40 homes and businesses currently at risk of flooding, which is a significant proportion of the community. This is likely to increase to 90 people and 50 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 information has highlighted the risk of flooding, (principally associated with coastal flood risk) in this area. The risk is expected to increase due to climate change, as sea levels are expected to rise and winter storms become more frequent. Aultbea has therefore been identified as a new target area for the 2021 flood risk management plans. There are no records of flooding in the Aultbea target area but this does not confirm that there is no flood risk.

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
4311	Avoid flood risk	Avoid inappropriate development that increases flood risk in Aultbea.
4312	Improve data and understanding	Improve data and understanding of coastal flood risk and the impacts of climate change on Aultbea.
4313	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Aultbea.

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 scoping (Ref: 43101)
Action	The potential to provide a new flood warning scheme is to be considered 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	Scoping for a coastal flood warning scheme will be carried out in Aultbea.

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: 43102)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Aultbea from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

02/01/07 (Gairloch)

Gairloch is designated as a potentially vulnerable area due to the risk of coastal flooding, and risk of frequent river and surface water flooding to roads in the area. There is a history of flooding. When the local road network is affected by flooding it can lead to long diversions.

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

List of target areas

Gairloch	(target area 354)
Kerrysdale	(target area 457)

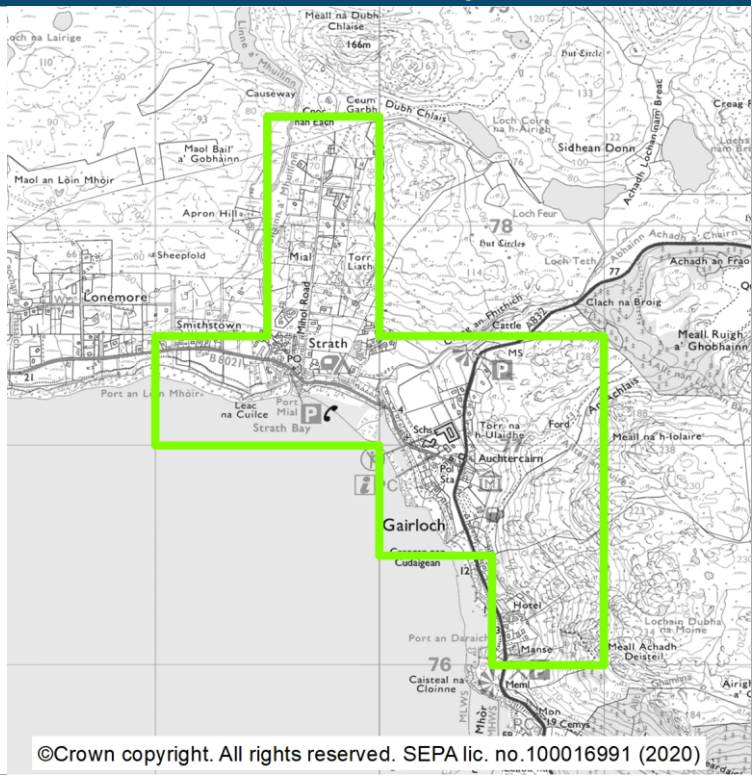
Flood risk management plan datasheet

Gairloch (target area 354)

Summary

The Gairloch target area includes the villages of Strath and Gairloch, which are located south west of Poolewe. The target area is included in the Highland Council area. The main source of flooding in Gairloch is from coastal flooding. There are approximately 70 people at risk from flooding and approximately 40 homes and businesses. This is estimated to increase to 80 people and 50 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 in this target area. Gairloch has therefore been identified as a new target area for the 2021 flood risk management plans. There are limited records of flooding in the Gairloch 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
3541	Avoid flood risk	Avoid inappropriate development that increases flood risk in Gairloch.
3542	Improve data and understanding	Improve understanding of the risk of coastal flooding and the impacts of climate change in Gairloch.
3543	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Gairloch.

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: 35401)
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.

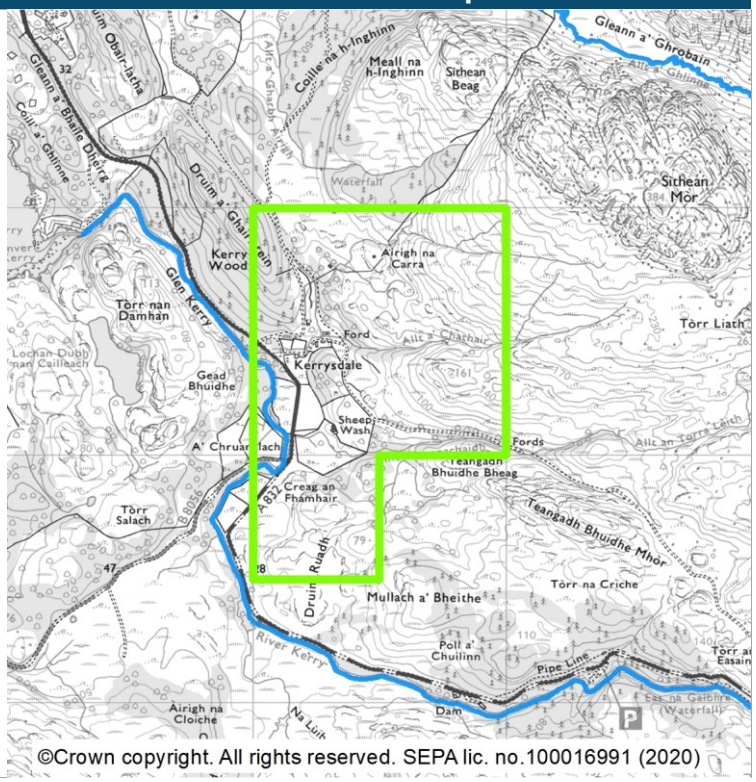
Flood risk management plan datasheet

Kerrysdale (target area 457)

Summary

Kerrysdale is a small community in the Highland Council area. The main source of flooding is the River Kerry, which affects the junction of the A832 and B8056. The road flooding can affect a large number of communities along the B8056, cutting them off from essential services. This may occur more frequently in future due to climate change. There are less than 10 people, 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 information and flood history has highlighted the risk of flooding, (principally to vital roads) in this target area. Kerrysdale has therefore been identified as a new target area for the 2021 flood risk management plans. There is a history of flooding to the road and communities are known to be affected by the road closure. Flooding at the junction of the A832 and B8056 cuts off road access to the communities of Shieldaig, Badachro, Opinan, Port Henderson, South Erradale and Redpoint which are all accessed by the B8056.

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
4571	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change to the A832 and B8056 road junction.
4572	Reduce flood risk	Reduce the risk of flooding from the River Kerry to the A832 and B8056 road junction, which cuts off communities along the B8056 road.

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: 45701)
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.

02/01/08 (Tarbat Ness)

Tarbat Ness is designated as a potentially vulnerable area due to the risk of coastal flooding in Balintore, Inver, Portmahomack and Rockfield. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Coastal flooding has previously occurred in the area.

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

List of target areas

Portmahomack	(target area 338)
Inver	(target area 339)
Balintore	(target area 438)
Rockfield	(target area 439)

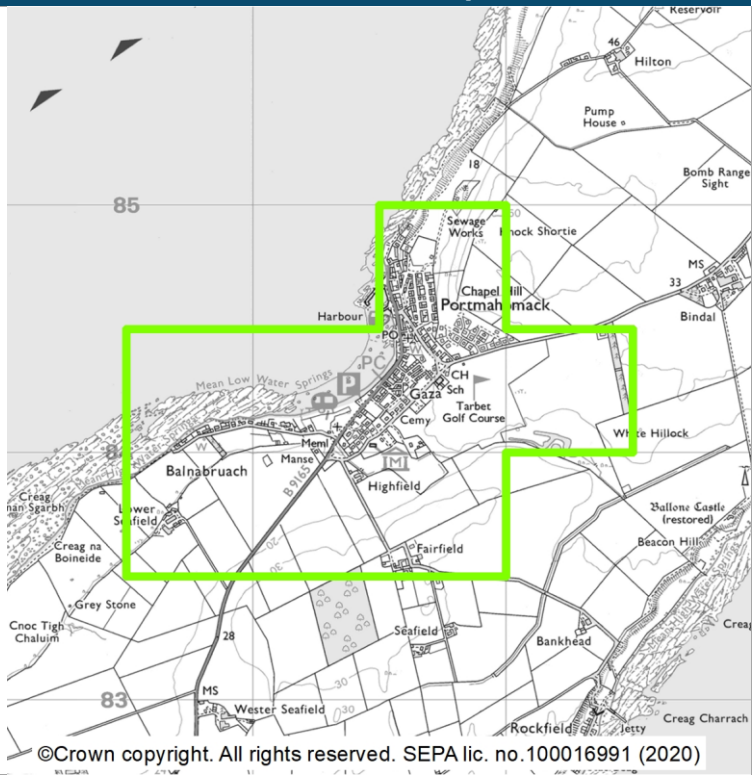
Flood risk management plan datasheet

Portmahomack (target area 338)

Summary

Portmahomack is on the Tarbat Ness Peninsula, in the Highland Council area. The main source of flooding in Portmahomack is from coastal flooding. There are approximately 100 people at risk from flooding and approximately 50 homes and businesses. This is not expected 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. The national flood risk assessment is improved for coastal flood risk through the development and operation of the Moray Firth coastal flood warning scheme. There are limited records of flooding in the Portmahomack 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
3381	Avoid flood risk	Avoid inappropriate development that increases flood risk in Portmahomack.
3382	Improve data and understanding	Improve understanding of the risk of coastal flooding and the impacts of climate change in Portmahomack.
3383	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Portmahomack.

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: 33801)
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 study (Ref: 33802)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Portmahomack from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option. This work will be carried out after SEPA have published the latest revision of their strategic coastal flood mapping.

	Flood warning maintenance (Ref: 33803)
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.

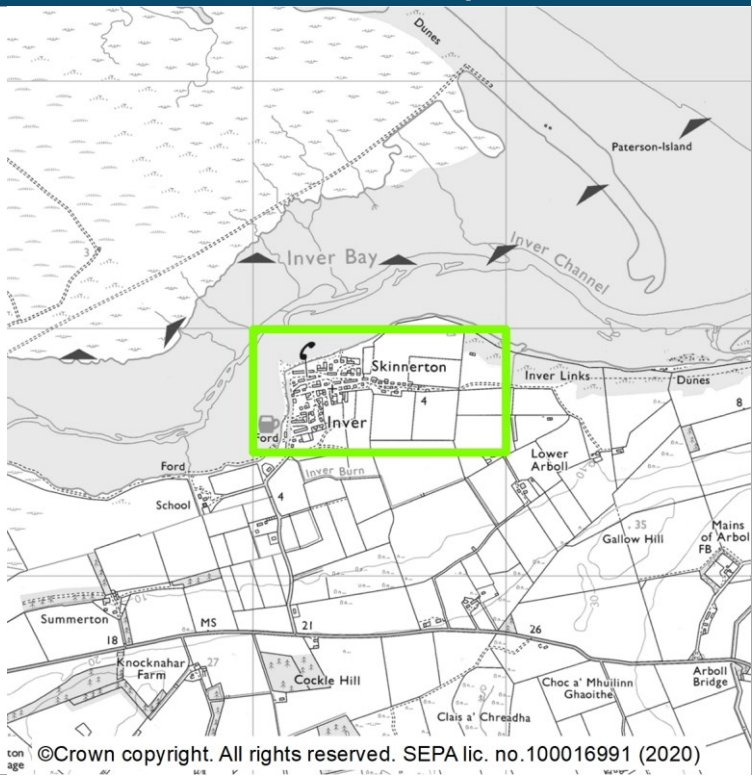
Flood risk management plan datasheet

Inver (target area 339)

Summary

Inver and Skinnerton are on the south shore of Inver Bay in the Highland Council area. The main source of flooding is coastal flooding. There are approximately 110 people and 80 homes and businesses at risk from flooding, which is a significant proportion of the community. This is estimated to increase significantly to 200 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. The national flood risk assessment is improved for coastal flood risk through the development and operation of the Moray Firth coastal flood warning scheme. There are no records of flooding in the Inver target area but this does not confirm that there is no flood risk.

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
3391	Avoid flood risk	Avoid inappropriate development that increases flood risk in Inver.
3392	Improve data and understanding	Improve understanding of the risk of coastal flooding and the impacts of climate change in Inver.
3393	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Inver.

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: 33901)
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 study (Ref: 33902)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Inver from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option. This work will be carried out after SEPA have published the latest revision of their strategic coastal flood mapping.

	Flood warning maintenance (Ref: 33903)
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.

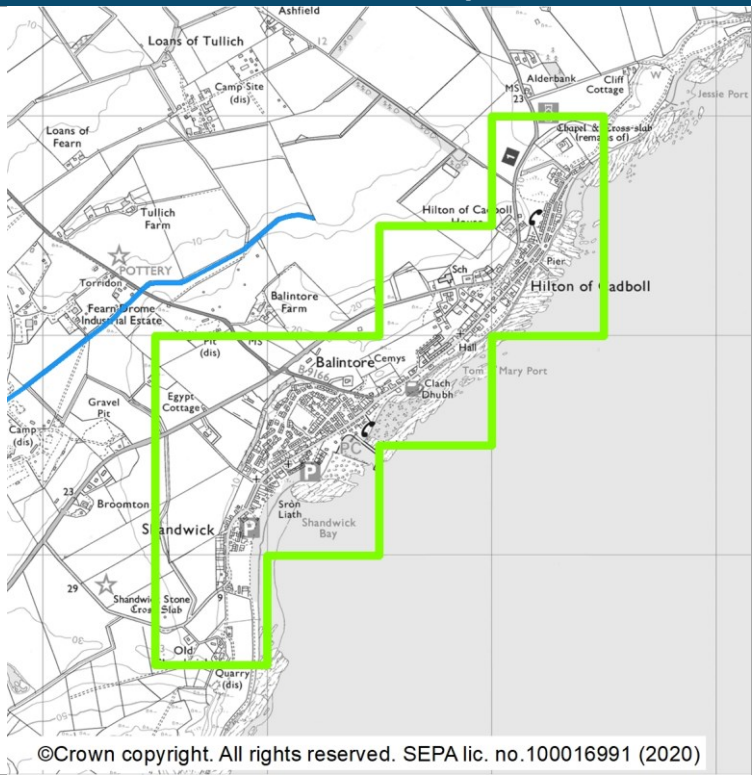
Flood risk management plan datasheet

Balintore (target area 438)

Summary

Balintore is located along the northern shore of the Moray Firth. There are 2 other villages located close by, Hilton of Cadboll and Shandwick which are also included in the Balintore target area. These are known as the Seaboard Villages. This area is in the Highland Council area. The main flood source in the Balintore area is coastal flooding. There are approximately 90 people and 60 homes and businesses currently at risk of 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. The national flood risk assessment is improved for coastal flood risk through the development and operation of the Moray Firth coastal flood warning scheme. There are limited records of flooding in the Balintore 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
4381	Avoid flood risk	Avoid inappropriate development that increases flood risk in Balintore.
4382	Improve data and understanding	Improve data and understanding of coastal flood risk and the impacts of climate change to Balintore.
4383	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Balintore.

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: 43801)
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 study (Ref: 43802)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Balintore from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option. This work will be carried out after SEPA have published the latest revision of their strategic coastal flood mapping.

	Flood warning maintenance (Ref: 43803)
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.

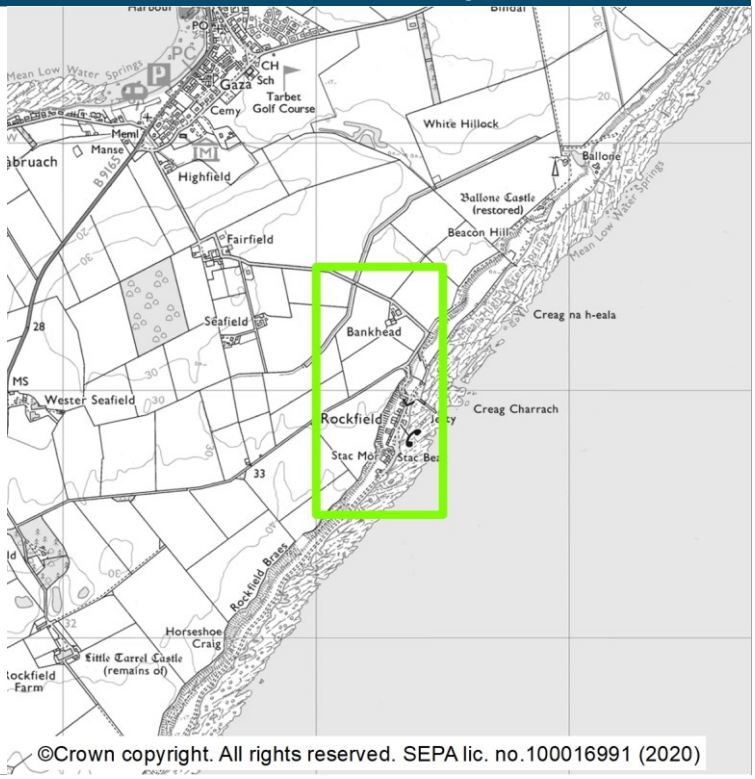
Flood risk management plan datasheet

Rockfield (target area 439)

Summary

Rockfield is on the Tarbat Ness Peninsula, in the Highland Council area. The main source of flooding in Rockfield is coastal flooding, however this is not reflected currently in our understanding as wave overtopping is not accounted for in the SEPA strategic mapping.

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 flood risk assessment is improved for coastal flood risk through the development and operation of the Moray Firth coastal flood warning scheme. There is a record of coastal flooding caused by wave overtopping in 2012.

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
4391	Avoid flood risk	Avoid inappropriate development that increases flood risk in Rockfield.
4392	Improve data and understanding	Improve data and understanding of coastal flood risk and the impacts of climate change to Rockfield.
4393	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Rockfield.

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: 43901)
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 study (Ref: 43902)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Rockfield from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option. This work will be carried out after SEPA have published the latest revision of their strategic coastal flood mapping.

	Flood warning maintenance (Ref: 43903)
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.

02/01/09 (Invergordon)

Invergordon is designated as a potentially vulnerable area due to the risk of surface water flooding.

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

List of target areas

Invergordon (target area 362)

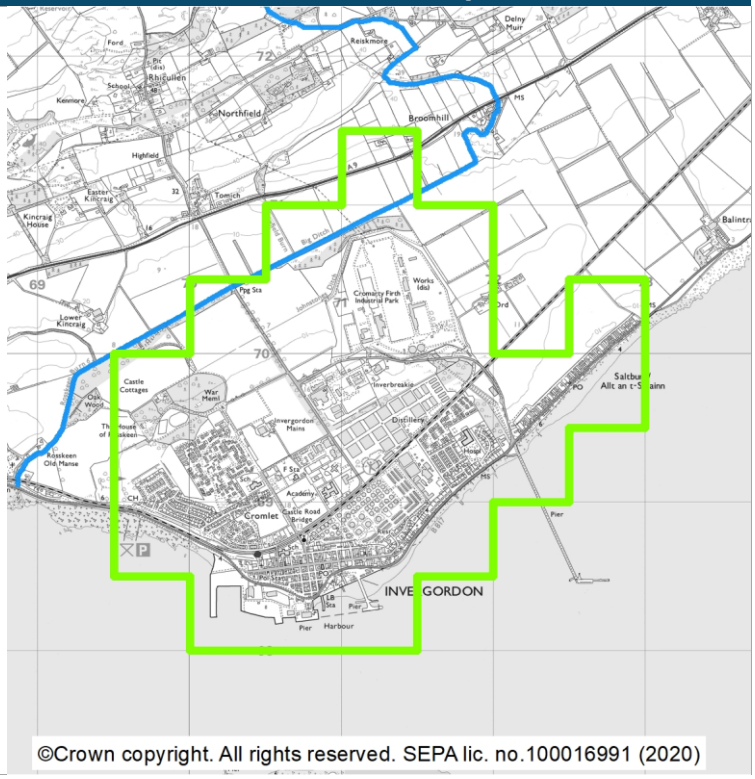
Flood risk management plan datasheet

Invergordon (target area 362)

Summary

Invergordon is located in Easter Ross in the north of Scotland within the Highland Council area. The main source of flooding in Invergordon is surface water flooding. There are approximately 290 people and 210 homes and businesses currently at risk of flooding. This is likely to increase to 480 people and 330 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 for surface water flooding is improved by a sewer flood risk assessment. There are limited records of flooding in the Invergordon 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
3621	Avoid flood risk	Avoid inappropriate development that increases flood risk in Invergordon.
3622	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Invergordon.
3623	Reduce flood risk	Reduce the risk of surface water flooding in Invergordon.

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: 36201)
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.

02/01/10 (Alness)

This area is designated as a potentially vulnerable area due to river flood risk from the River Averon and Contullich Burns, and surface water flood risk. There is a history of flooding in Alness 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. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Alness (target area 337)

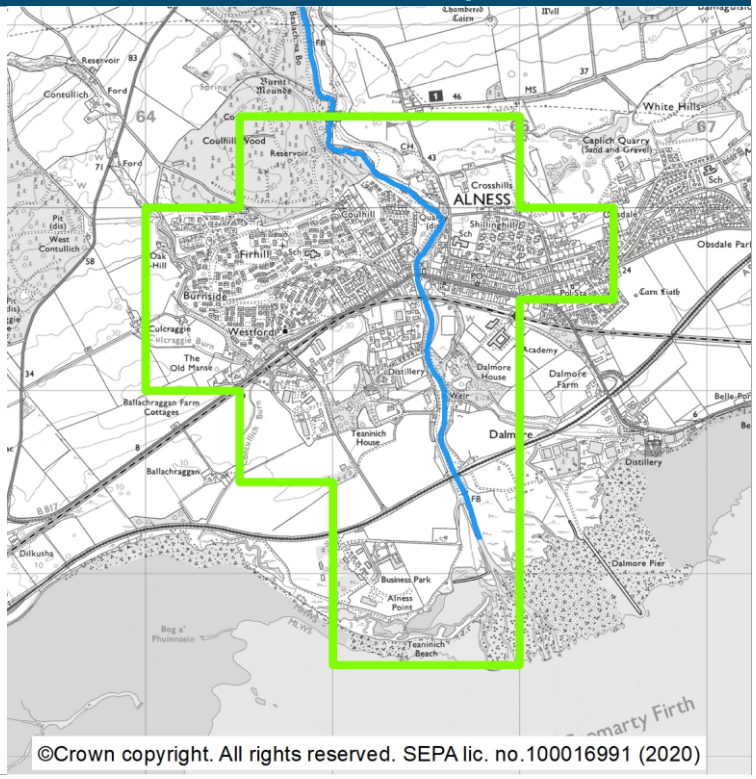
Flood risk management plan datasheet

Alness (target area 337)

Summary

Alness is located on the northern bank of the Cromarty Firth in the Highland Council area. Alness is at risk from river flooding and surface water flooding. There are approximately 310 people and 200 homes and businesses currently at risk from flooding. This is likely to increase to 420 people and 280 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 flood risk assessment is improved for river flooding by the flood map update of the River Averon and Contullich Burn in 2018. The understanding of surface water flood risk is improved by a sewer flood risk assessment. There are limited records of flooding in the Alness 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
3371	Avoid flood risk	Avoid inappropriate development that increases flood risk in Alness.
3372	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Alness.

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: 33701)
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.

02/01/11 (Kinlochewe)

Kinlochewe is designated as a potentially vulnerable area due to the risk of river flooding from the A'Ghairbhe.

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

List of target areas

Kinlochewe (target area 350)

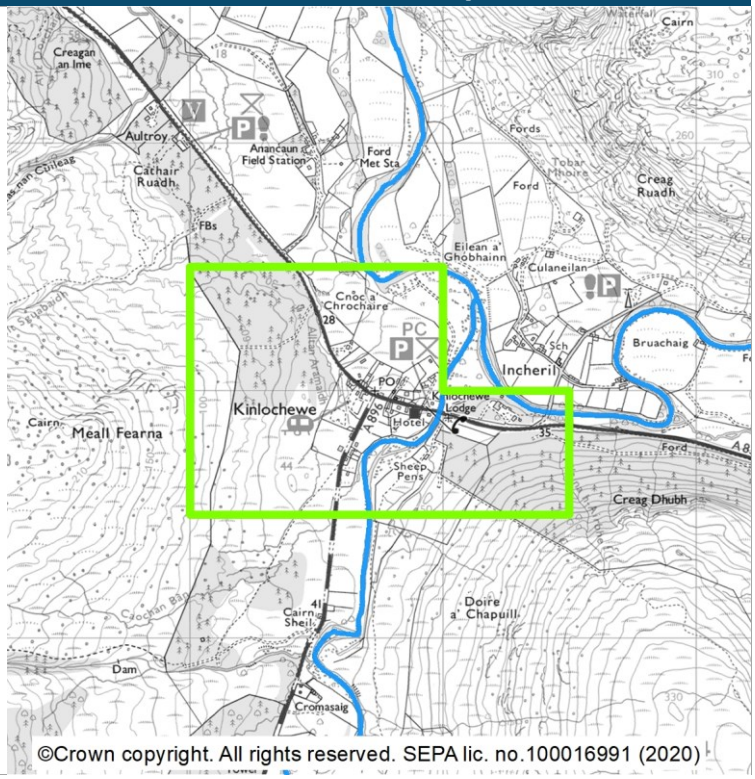
Flood risk management plan datasheet

Kinlochewe (target area 350)

Summary

Kinlochewe is a village located on the eastern edge of Loch Maree in the Highland Council area. The main source of flooding in Kinlochewe is the A' Ghairbhe. There are approximately 30 people and 30 homes and businesses currently at risk from flooding, which is a significant proportion of the community. This is not estimated to change 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 in this target area. There are no records of flooding in the Kinlochewe 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
3501	Avoid flood risk	Avoid inappropriate development that increases flood risk in Kinlochewe.
3502	Improve data and understanding	Improve understanding of the risk of flooding from the A'Ghairbhe in Kinlochewe.
3503	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Kinlochewe.

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: 35001)
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.

02/01/12 (Garve)

Garve is designated as a potentially vulnerable area due to river flood risk. The main source of flood risk is the Black Water.

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

List of target areas

Garve (target area 341)

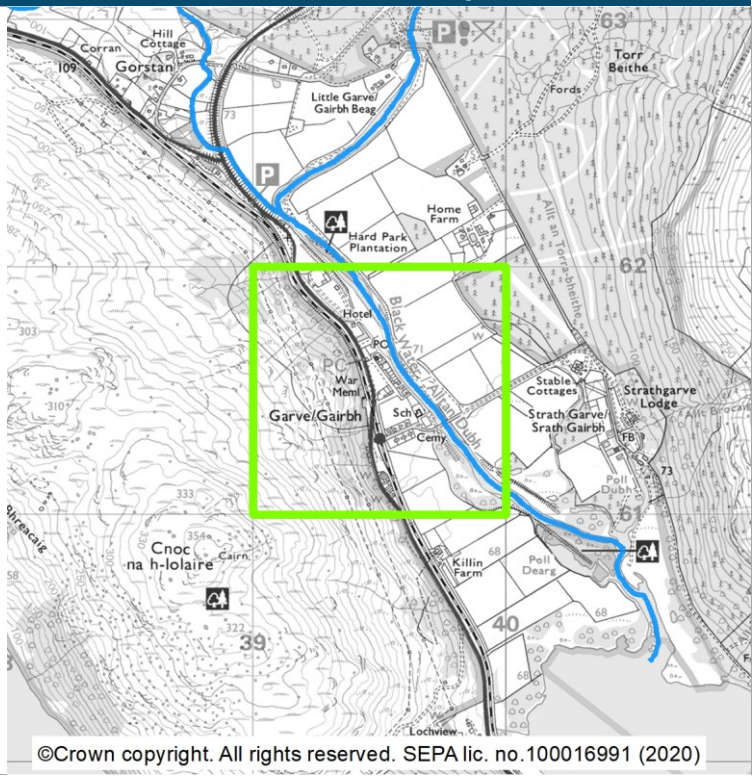
Flood risk management plan datasheet

Garve (target area 341)

Summary

Garve is a small village in the Highland Council area, located on the banks of the Black Water. The main source of flooding in Garve is river flooding. There are approximately 30 people and 20 homes and businesses currently at risk from flooding, which is a significant proportion of the community. This is likely to increase to 50 people and 30 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 flood risk assessment is improved by the development and operation of the Conon Valley flood warning scheme. There are periodic records of flooding in Garve, including records of flooding from the Black Water affecting the school in 1966, 1983 and 1989.

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
3411	Avoid flood risk	Avoid inappropriate development that increases flood risk in Garve.
3412	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Garve.

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

	Site protection plan (Ref: 34101)
Action	The plan to protect an individual site from flood risk should be maintained and executed as required by the site owner or operator.
Description	The Highland Council to develop a site protection plan for Strathgarve School.

	Flood warning maintenance (Ref: 34102)
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 Conon Valley 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.

02/01/13 (Dingwall and Strathpeffer)

Dingwall and Strathpeffer is designated as a potentially vulnerable area due to the risk of river, coastal and surface water flooding to Dingwall, river flood risk to Blairninich and surface water flood risk to Strathpeffer. These areas flood frequently. Recently the areas were all affected by surface water flooding during intense summer rainfall.

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

List of target areas

Blairninich	(target area 335)
Dingwall	(target area 336)
Strathpeffer	(target area 436)

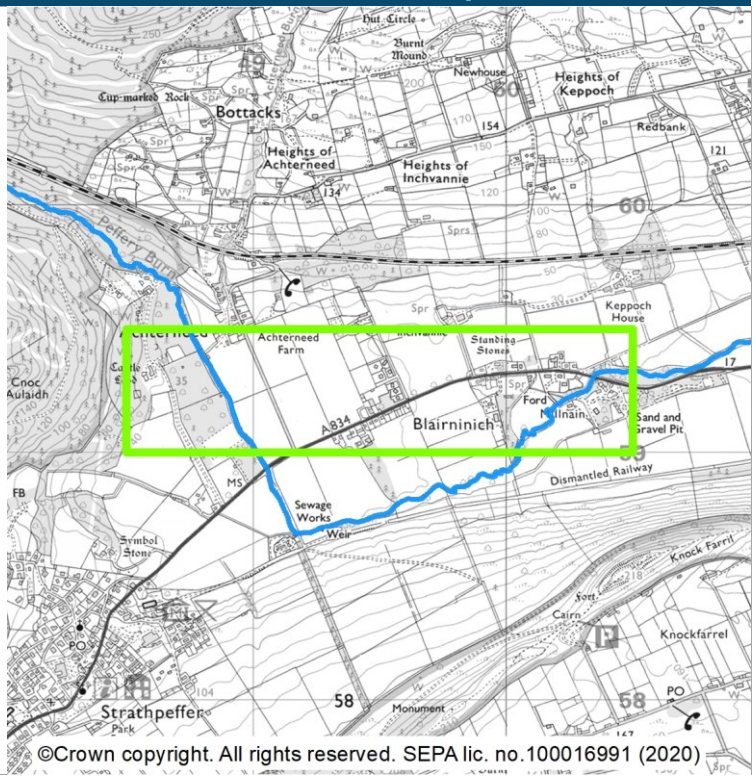
Flood risk management plan datasheet

Blairninich (target area 335)

Summary

Blairninich is a village within the Highland Council area. The main source of flooding in Blairninich is river flooding. There are approximately 40 people and 30 homes and businesses currently at risk from flooding. This is expected 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. The understanding of river flood risk has improved due to the completion of the River Peffery Flood Study (2019). There is a long record of flooding from the River Peffery in Blairninich including floods in October 2012 and December 2013.

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
3351	Avoid flood risk	Avoid inappropriate development that increases flood risk in Blairninich.
3352	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Blairninich.
3353	Reduce flood risk	Reduce the risk of flooding from the River Peffery in Blairninich.

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: 33501)
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	Subject to Scottish Government funding and the outcome of national prioritisation of flood protection schemes. The Highland Council should progress with the detailed design for the River Peffery Flood Protection Scheme. The preferred option consists of meandering of existing channels, channel widening, a flood wall and new culverts. Detailed design will be coordinated with SEPA's Water Environment Fund.

	Flood scheme or works implementation (Ref: 33502)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Subject to Scottish Government funding The Highland Council should progress with the River Peffery Flood Protection Scheme. Construction will be coordinated with SEPA's Water Environment Fund.

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.

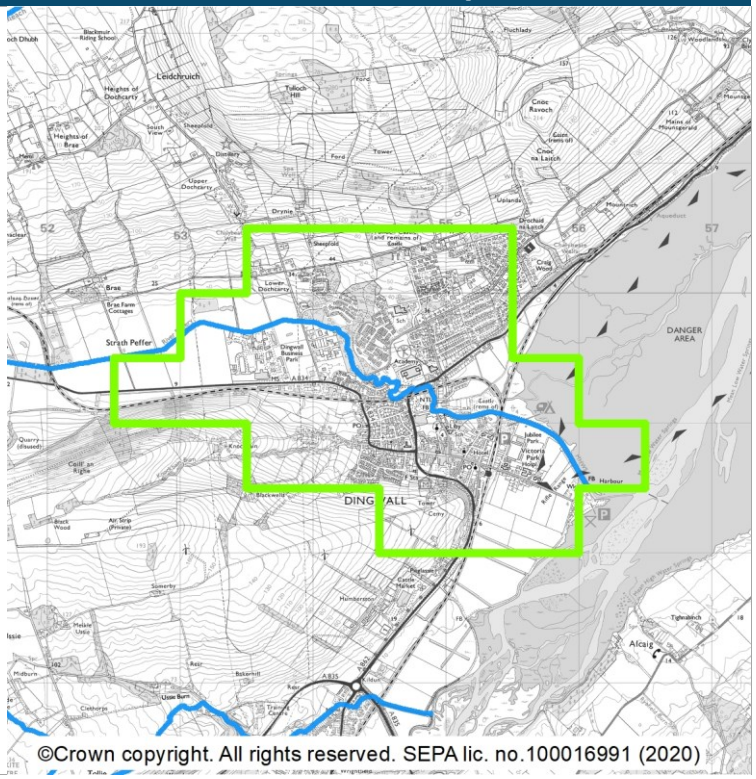
Flood risk management plan datasheet

Dingwall (target area 336)

Summary

Dingwall is located in the inner Cromarty Firth and is within the Highland Council area. Dingwall is at risk from surface water, river and coastal flooding. There are approximately 640 people and 460 homes and businesses currently at risk from flooding. This is likely to increase to 950 people and 660 homes and businesses by the 2080s due to climate change. Areas of Dingwall are protected from river and coastal flooding by the Dingwall 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 understanding of river flood risk has improved due to the completion of the River Peffery Flood Study (2019) and for coastal flooding by the development and operation of the Moray Firth coastal flood warning scheme. The understanding of surface water flood risk is improving through the development of the Highland wide surface water management plan which includes Dingwall as a priority area. A sewer flood risk assessment has also been completed. There are frequent records of flooding in Dingwall, including notable floods in October 2006 and July 2019.

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
3361	Avoid flood risk	Avoid an increase in river and coastal flood risk by the appropriate management and maintenance of the Dingwall Flood Prevention Scheme.
3362	Avoid flood risk	Avoid inappropriate development that increases flood risk in Dingwall.
3363	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Dingwall.
3364	Reduce flood risk	Reduce the risk of surface water flooding in Dingwall.
3365	Reduce flood risk	Reduce the risk of flooding from the River Peffery in Dingwall.

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: 33601)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to continue to maintain the existing Dingwall Flood Protection Scheme.

	Flood scheme or works design (Ref: 33602)
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	Subject to Scottish Government funding and the outcome of national prioritisation of flood protection schemes. The Highland Council should progress with the detailed design for the River Peffery Flood Protection Scheme. The preferred option consists of meandering of existing channels, channel widening, a flood wall and new culverts. Detailed design will be coordinated with SEPA's Water Environment Fund.

	Flood scheme or works implementation (Ref: 33603)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Subject to Scottish Government funding The Highland Council should progress with the River Peffery Flood Protection Scheme. Construction will be coordinated with SEPA's Water Environment Fund.

	Strategic mapping improvements (Ref: 33604)
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: 33605)
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.

	Sewer flood risk assessment (Ref: 33606)
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 Dingwall 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: 33607)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan, which includes Dingwall as a priority area. The surface water management plan identifies areas most at risk from surface water flooding in Dingwall and identifies options that could alleviate this 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.

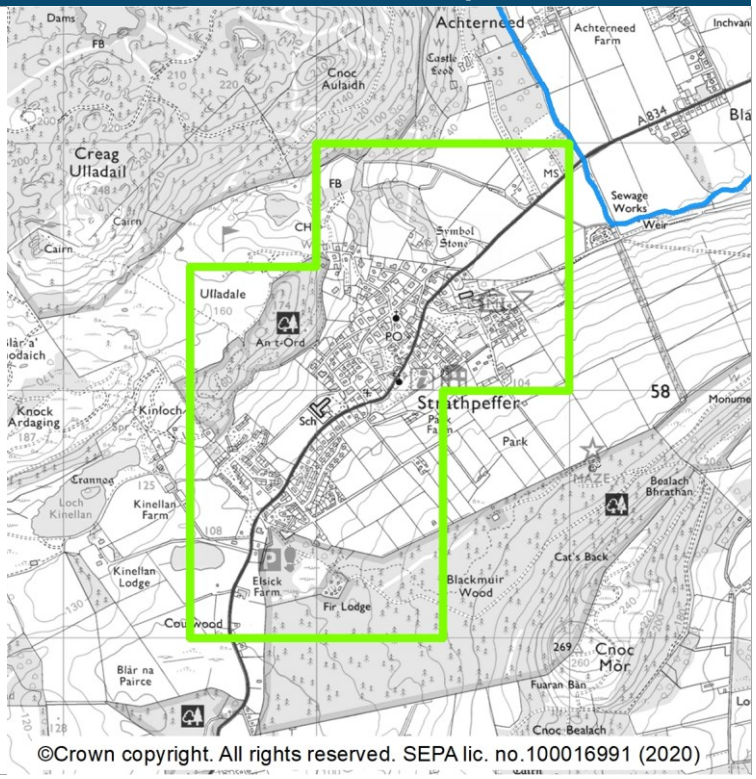
Flood risk management plan datasheet

Strathpeffer (target area 436)

Summary

Strathpeffer is in the Highland Council area. The main source of flooding in Strathpeffer is surface water. There are approximately 90 people and 60 homes and businesses currently at risk of flooding. This is likely to increase to 140 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 understanding of surface water flood risk is improving due to the ongoing development of a Highland wide surface wide management plan which includes Strathpeffer as a priority area. A sewer flood risk assessment has also been completed. There are periodic records of surface water flooding in Strathpeffer including recent flooding in August 2019.

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
4361	Avoid flood risk	Avoid inappropriate development that increases flood risk in Strathpeffer.
4362	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Strathpeffer.
4363	Reduce flood risk	Reduce the risk of surface water flooding in Strathpeffer.

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: 43601)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan which includes Strathpeffer as a priority area. The surface water mangement plan identifies areas most at risk from surface water flooding in Strathpeffer and identifies options that could alleivate this 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.

02/01/14 (Conon Bridge, Muir of Ord and Maryburgh)

This potentially vulnerable area includes Conon Bridge, Muir of Ord and Maryburgh, which are at risk of river and surface water flooding. Conon Bridge benefits from a flood protection scheme on the River Conon. Muir of Ord has a risk of river flooding from the Allt Fionnaidh, Logie Burn and Ord Loch. In Maryburgh a large number of properties are at risk from river and surface water flooding. Flooding has occurred frequently, recently caused by surface water.

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

List of target areas

Conon Bridge	(target area 340)
Maryburgh	(target area 363)
Muir of Ord	(target area 435)

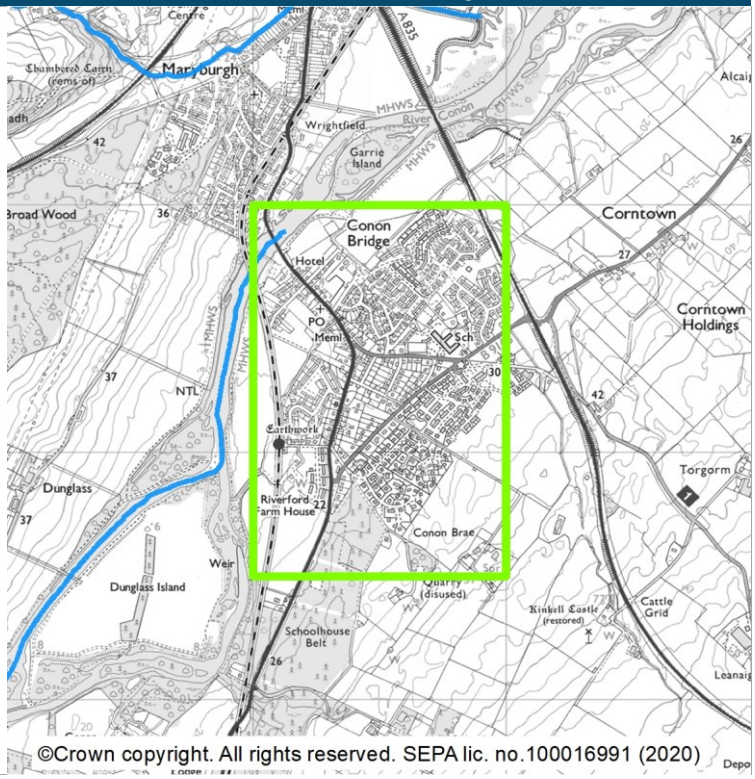
Flood risk management plan datasheet

Conon Bridge (target area 340)

Summary

Conon Bridge is located on the banks of the River Conon in the Highland Council area. Conon Bridge is at risk of surface water and river flooding. This can be affected by high sea levels, which may slow discharge of the River Conon into the sea at high tide. There are approximately 180 people and 100 homes and businesses currently at risk from flooding. This is likely to increase to 220 people and 130 homes and businesses by the 2080s due to climate change. Areas of Conon Bridge are protected from river and coastal flooding by the Conon Bridge 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 flood risk assessment is underpinned for river flooding through the development and maintenance of the Conon Bridge Flood Protection Scheme which was completed in 1990. The understanding of surface water flooding is improved by a sewer flood risk assessment. Prior to the completion of the flood protection scheme, there was a long history of periodic flooding recorded in Conon Bridge. Since scheme completion, there are records of surface water flooding (from the Eil Burn).

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
3401	Avoid flood risk	Avoid inappropriate development that increases flood risk in Conon Bridge.
3402	Avoid flood risk	Avoid an increase in river flood risk by the appropriate management and maintenance of the Conon Bridge Village Flood Prevention Scheme 1990.
3403	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Conon Bridge.
3404	Reduce flood risk	Reduce the risk of surface water flooding in Conon Bridge.

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: 34001)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to continue to maintain the Conon Bridge Flood Protection Scheme.

	Flood warning maintenance (Ref: 34002)
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 Conon Valley 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: 34003)
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 Highland Council to develop a flood model of the Eil Burn to determine the extent of flood risk to Conon Bridge from the burn. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

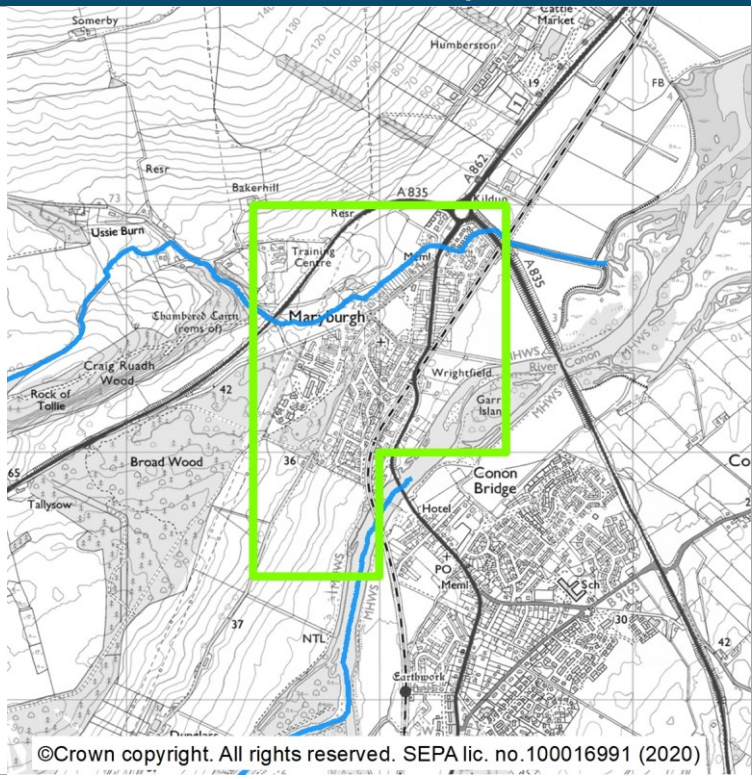
Flood risk management plan datasheet

Maryburgh (target area 363)

Summary

Maryburgh is a village on the northern banks of River Conon, within the Highland Council area. Maryburgh is at risk from surface water and river flooding. There are approximately 150 people and 80 homes and businesses currently at risk from flooding. This is likely to increase to 160 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, and this national assessment has highlighted the risk of flooding, in this target area. A significant number of homes and businesses in Maryburgh are at risk of surface water and river flooding. Maryburgh has therefore been identified as a new target area for the 2021 flood risk management plans. There are limited records of flooding in the Maryburgh 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
3631	Avoid flood risk	Avoid inappropriate development that increases flood risk in Maryburgh.
3632	Improve data and understanding	Improve data and understanding of the risk of flooding from surface water and the Ussie Burn in Maryburgh.
3633	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Maryburgh.

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: 36301)
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 Highland Council to develop a flood model of the Ussie Burn to determine the extent of flood risk to Maryburgh from the burn. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

	Flood warning maintenance (Ref: 36302)
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 Conon Valley 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.

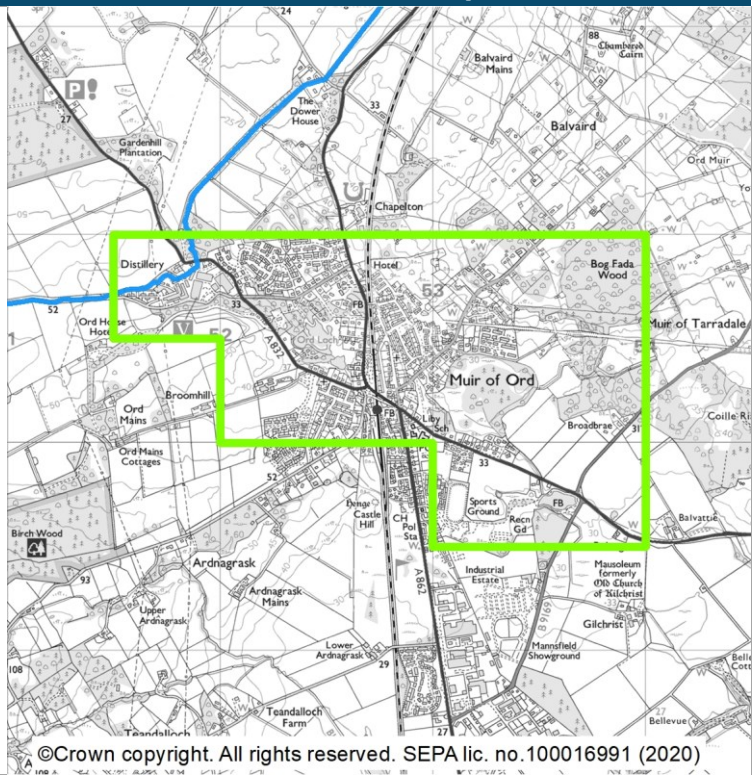
Flood risk management plan datasheet

Muir of Ord (target area 435)

Summary

Muir of Ord is in the Highland Council area. Muir of Ord is at risk from river and surface water flooding. There are approximately 220 people and 120 properties currently at risk of flooding. This is likely to increase to 250 people and 140 homes and businesses by the 2080s due to climate change. There is reason to suggest flood risk may currently 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 for surface water is improved by a sewer flood risk assessment. There are limited records of flooding in the Muir of Ord 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
4351	Avoid flood risk	Avoid inappropriate development that increases flood risk in Muir of Ord.
4352	Improve data and understanding	Improve data and understanding of the risk of flooding from the Allt Fionnaidh, the Logie Burn, Ord Loch and surface water in Muir of Ord.
4353	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Muir of Ord.

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: 43501)
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.

02/01/15 (Ardersier)

This area is designated as a potentially vulnerable area due to the risk of coastal flooding to Ardersier. Coastal flood risk is likely to increase due to sea level rise caused by climate change.

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

List of target areas

Ardersier	(target area 345)

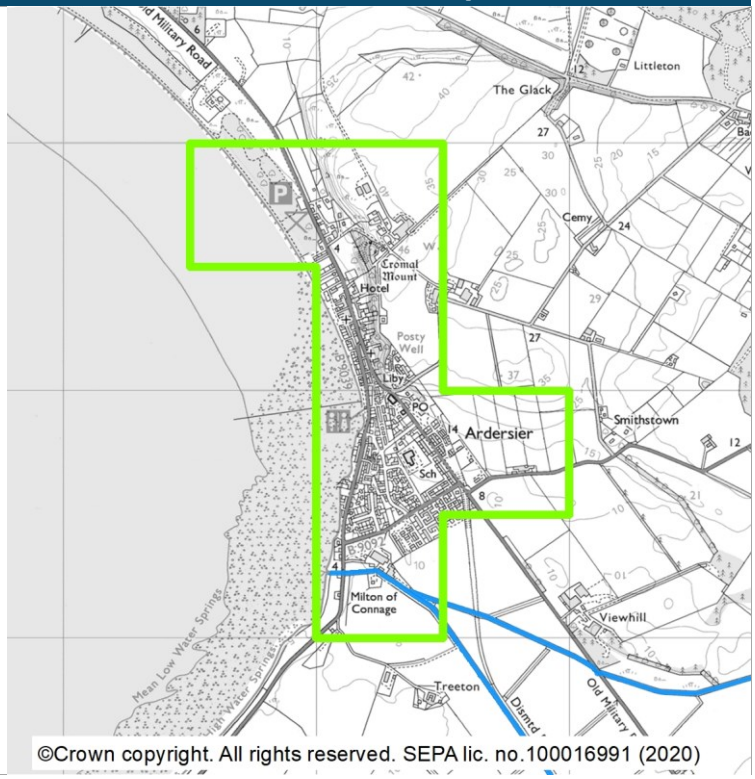
Flood risk management plan datasheet

Ardersier (target area 345)

Summary

The former fishing village of Ardersier is located on the eastern shore of the Moray Firth, near Inverness Airport. It is in the Highland Council area. The main flooding concern is from the impact of climate change on coastal flooding. There are approximately 160 people and 110 homes and businesses at risk from flooding. This is estimated to increase to 320 people and 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 flood risk assessment is improved for coastal flooding by the development and operation of the Moray Firth coastal flood warning scheme. There are limited records of flooding in the Ardersier 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
3451	Avoid flood risk	Avoid inappropriate development that increases flood risk in Ardersier.
3452	Improve data and understanding	Improve data and understanding of the risk of coastal flooding in Ardersier.
3453	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Ardersier.

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: 34501)
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: 34502)
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.

02/01/16 (Smithton and Culloden)

This area is designated as a potentially vulnerable area due to the risk of surface water flooding in the Smithton and Culloden area. There is a history of flooding from rainfall and small water courses. Smithton and Culloden benefit from a flood scheme which manages the risk of flooding from surface water and small water courses.

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

List of target areas

Smithton and Culloden (target area 342)

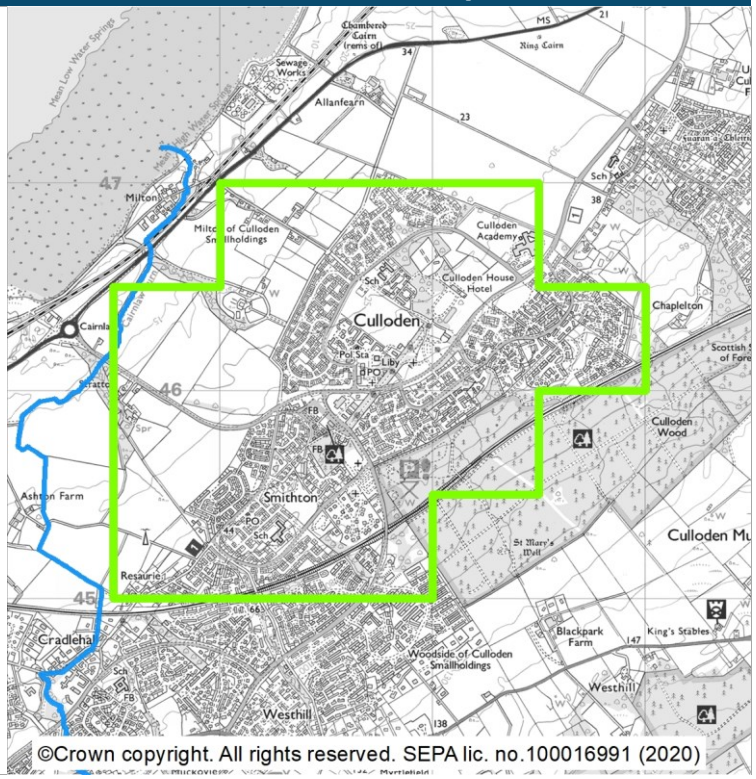
Flood risk management plan datasheet

Smithton and Culloden (target area 342)

Summary

Smithton and Culloden are on the outskirts of Inverness within the Highland Council area. The main source of flooding in the area is surface water flooding which includes small watercourses. There are approximately 470 people and 250 homes and businesses currently at risk from flooding. This is estimated to increase to 680 people and 350 homes and businesses by the 2080s due to climate change. Areas of Smithton and Culloden are protected from surface water flooding from small water courses from the Smithton and Culloden 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 understanding of surface water flooding from small watercourses has improved due to the completion of the Smithton and Culloden Flood Protection Scheme which was completed in 2020. The understanding of surface water flood risk is improving through the ongoing development of a Highland wide surface water management plan which includes Smithton and Culloden as a priority area. The integrated catchment study and sewer flood risk assessment has also improved understanding of flood risk. Prior to scheme completion there had been a long record of flooding in Smithton and Culloden including notable floods in July and August 2011 when persistent rainfall caused extensive flooding from the Smithton Burn and Culloden Burn West.

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
3421	Avoid flood risk	Avoid inappropriate development that increases flood risk in Smithton and Culloden.
3422	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Smithton and Culloden Flood Protection Scheme.
3423	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Smithton and Culloden.
3424	Reduce flood risk	Reduce the risk of flooding from surface water and small water courses in Smithton and Culloden.

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: 34201)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to continue to maintain the Smithton and Culloden Flood Protection Scheme.

	Sewer flood risk assessment (Ref: 34202)
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 Inverness 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: 34203)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan which includes Smithton and Culloden as a priority area. The surface water management plan identifies areas most at risk from surface water flooding in Smithton and Culloden and identifies options that could alleviate this 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.

02/01/17 (Inverness)

This area is designated as a potentially vulnerable area due to the risk of river, coastal and surface water flooding to Inverness. Recent floods were caused by river flooding and surface water. The River Ness Flood Protection Scheme benefits 800 homes and 200 businesses.

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

List of target areas

Inverness (target area 387)

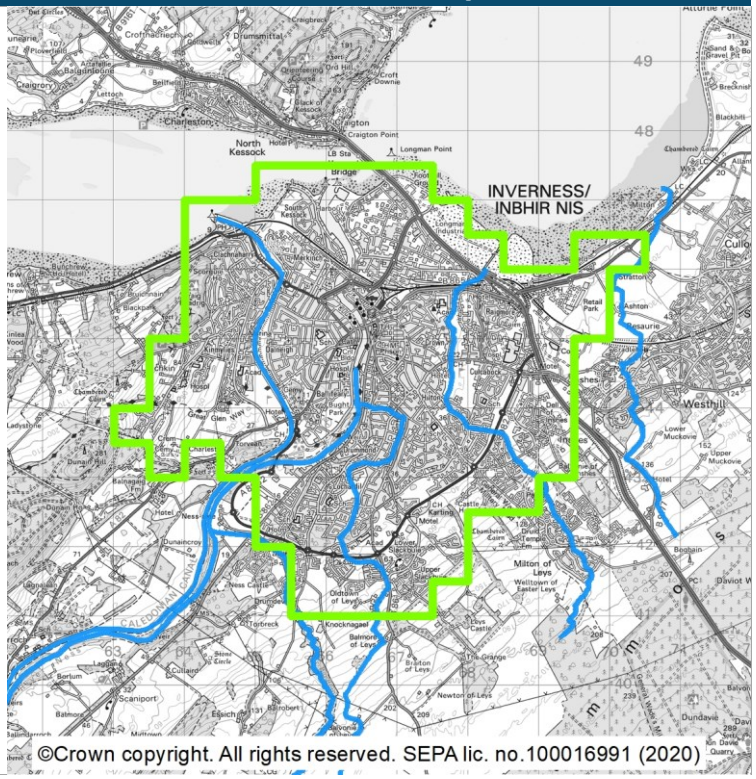
Flood risk management plan datasheet

Inverness (target area 387)

Summary

Inverness is located on the Beauly Firth, within the Highland Council area. There is a risk from coastal, river and surface water flooding in Inverness. There are approximately 4,800 people and 2,800 homes and businesses currently at risk from flooding. This is likely to increase to 12,000 people and 6,600 homes and businesses by the 2080s due to climate change. Areas of Inverness are protected by river and coastal flooding by either the River Ness (Tidal) Flood Protection Scheme or the Inverness South West Relief Channel.

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 understanding of river and coastal flooding has been improved by various studies including the Mill Burn Flood Study (2019) and the studies to develop The River Ness (Tidal) Flood Protection Scheme and the Inverness South West Relief Channel. The understanding of surface water flooding is improving due to the ongoing development of a Highland wide surface water management plan which includes Inverness as a priority area. The understanding of flood risk has also been improved by the integrated catchment study and the development and operation of the Moray Firth and Ness River flood warning schemes.

Prior to the construction of the flood protection schemes there was a long history of flooding from the River Ness and the small watercourses in the south west of the city. In areas not protected by schemes there is frequent flooding recorded, including from the Mill Burn, the Dell Burn and from surface water.

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
3871	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the South West Inverness Flood Protection Scheme.
3872	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the River Ness (Tidal) Flood Protection Scheme.
3873	Avoid flood risk	Avoid inappropriate development that increases flood risk in Inverness.
3874	Improve data and understanding	Improve data and understanding of the performance of the flood protection assets in Inverness.
3875	Improve data and understanding	Improve data and understanding of the risk of coastal flooding and the role of existing assets in the South Kessock area of Inverness.
3876	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Inverness.
3877	Reduce flood risk	Reduce the risk of surface water flooding in Inverness.
3878	Reduce flood risk	Reduce the risk of flooding from the Mill Burn in Inverness.

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: 38701)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to continue to maintain the existing flood defences in Inverness including the Inverness South West Relief Channel and the River Ness (Tidal) Flood Protection Scheme.

	Flood scheme or works design (Ref: 38702)
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	Subject to Scottish Government funding and the outcome of national prioritisation of flood protection schemes. The Highland Council should progress with the detailed design for the Mill Burn Flood Protection Scheme. The preferred option consists of direct defences, headwall modifications, pipe removal under Harbour Road Bridge and natural flood managmement in the upstream catchment. The option to also include channel widening is being considered. 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 Moray Firth Special Area of Conservation and Special Protection Area, and the Inner Moray Firth Special Protection Area and Ramsar Site.

	Flood scheme or works implementation (Ref: 38703)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Subject to Scottish Government funding The Highland Council should progress with the Mill Burn Flood Protection Scheme based on the detailed design.

	Flood study (Ref: 38704)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to the South Kessock area from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

	Sewer flood risk assessment (Ref: 38705)
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 Inverness 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: 38706)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan which includes Inverness as a priority area. The surface water mangement plan identifies areas most at risk from surface water flooding in Inverness and identifies options that could alleivate this risk.

	Strategic mapping improvements (Ref: 38707)
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: 38708)
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 Ness and the Moray Firth coastal flood warning schemes.

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 warning maintenance (Ref: 38709)
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 investigate improvements to the River Ness 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.

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.

02/01/18 (Drumnadrochit)

This area is designated as a potentially vulnerable area due to river flood risk to Drumnadrochit. The main source of flooding is the River Enrick. Recent flooding was caused by surface water and rivers.

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

List of target areas

Drumnadrochit	(target area 343)

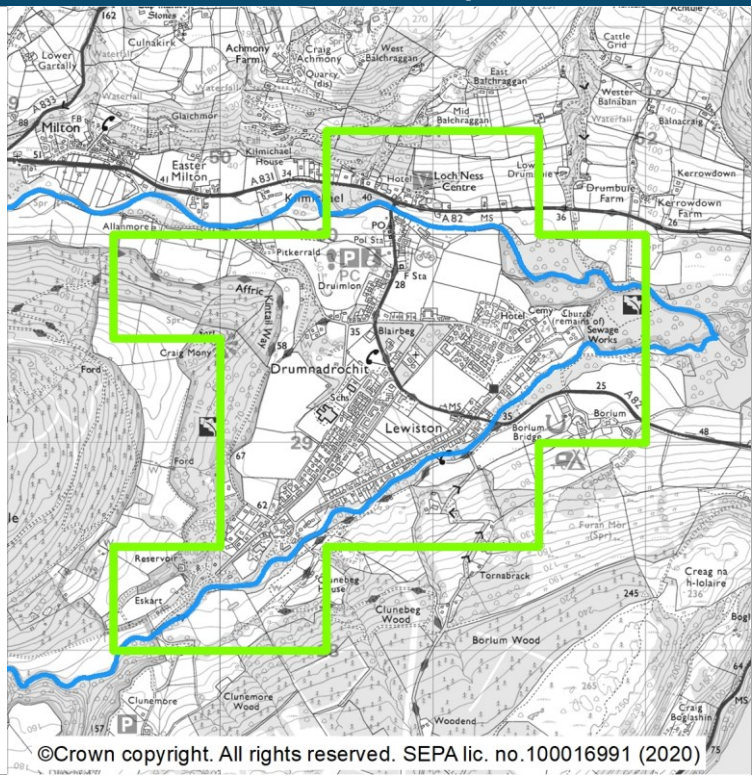
Flood risk management plan datasheet

Drumnadrochit (target area 343)

Summary

Drumnadrochit is located on the western banks of Loch Ness within the Highland Council area. The main source of flooding in Drumnadrochit is river flooding. There are approximately 250 people and 180 homes and businesses currently at risk from flooding. This is likely to increase to 310 people and 230 homes and businesses by the 2080s due to climate change. The Drumnadrochit Flood Protection Scheme, which will provide protection to properties at risk of flooding from the River Enrick, has started construction.

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 understanding of flooding from the River Enrick has improved by the various studies used to develop the Drumnadrochit Flood Protection Scheme. There is a long history of periodic flooding from the River Enrick and the River Coiltie recorded in Drumnadrochit.

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
3431	Avoid flood risk	Avoid inappropriate development that increases flood risk in Drumnadrochit.
3432	Improve data and understanding	Improve data and understanding of the flood risk of the River Coiltie.
3433	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Drumnadrochit.
3434	Reduce flood risk	Reduce the risk of flooding from the River Enrick in Drumnadrochit

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: 34301)
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 Highland Council to develop a flood model of the River Coiltie to determine the extent of flood risk to Lewiston from the river. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

	Flood scheme or works implementation (Ref: 34302)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	The Highland Council has undertaken the detailed design and obtained permission and has commenced construction of the Drumnadrochit Flood Protection Scheme. Completion of the scheme will occur in cycle 2.

	Flood defence maintenance (Ref: 34303)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to continue to maintain the Drumnadrochit Flood Protection Scheme once completed.

	Flood warning maintenance (Ref: 34304)
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 Ness 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.

02/01/19 (Fort Augustus)

This area is designated as a potentially vulnerable area due to a risk of river flooding to Fort Augustus. This is managed by the Fort Augustus Flood Protection Scheme. Recent flooding in March 2015 from the River Oich, was in an area not protected by the scheme.

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

List of target areas

Fort Augustus (target area 359)

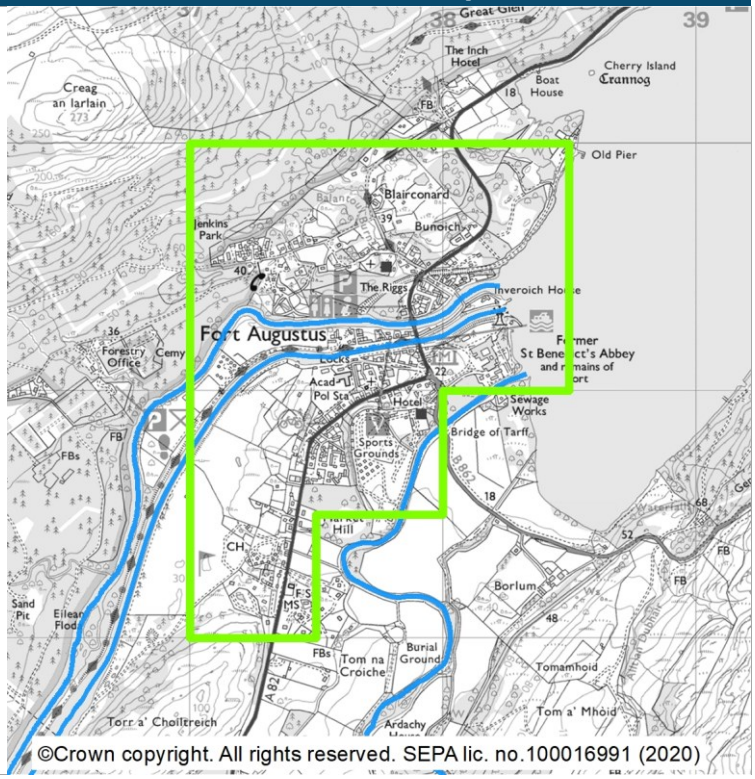
Flood risk management plan datasheet

Fort Augustus (target area 359)

Summary

Fort Augustus is located within the Highland Council area at the south west end of Loch Ness. Fort Augustus is at risk from river and surface water flooding. Areas of Fort Augustus are protected against flooding from the River Oich by the Fort Augustus Flood Protection Scheme. There are approximately 150 people and 120 homes and businesses currently at risk from flooding. This is unlikely to change 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. The national level assessment for river flooding is underpinned by the studies used to develop The Riggs, Fort Augustus Flood Protection Scheme (1994). Understanding is also improved for river flooding by the development and operation of the River Oich flood warning scheme. Prior to the development of the flood protection scheme there had been several records of flooding from the River Oich, primarily in the Riggs estate, including notable floods in 1989 and 1990.

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
3591	Avoid flood risk	Avoid an increase in flood risk by the appropriate management and maintenance of the Fort Augustus flood protection scheme.
3592	Avoid flood risk	Avoid inappropriate development that increases flood risk in Fort Augustus.
3593	Improve data and understanding	Improve data and understanding of the performance of the Fort Augustus flood protection scheme.
3594	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Fort Augustus.

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: 35901)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council should continue to maintain the Fort Augustus Flood Protection Scheme.

	Flood warning maintenance (Ref: 35902)
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 Oich 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 (existing flood defences) (Ref: 35903)
Action	The performance and condition of the existing flood defences are to be evaluated, including consideration of the likely impacts of climate change. This should guide adaptive planning to allow for the impacts of climate change to be monitored, understood and managed.
Description	Assess the performance of the Fort Augustus Flood Protection 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.

02/01/20 (Fort William to Corpach)

This area is designated as a potentially vulnerable area due to river, coastal and surface water flood risk to Fort William, Corpach and Caol. River flood risk is largely caused by the River Nevis and the River Lochy. Historically these areas have flooded frequently, with recent flooding being caused by coastal flooding and surface water.

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

List of target areas

Corpach and Caol	(target area 330)
Fort William	(target area 332)

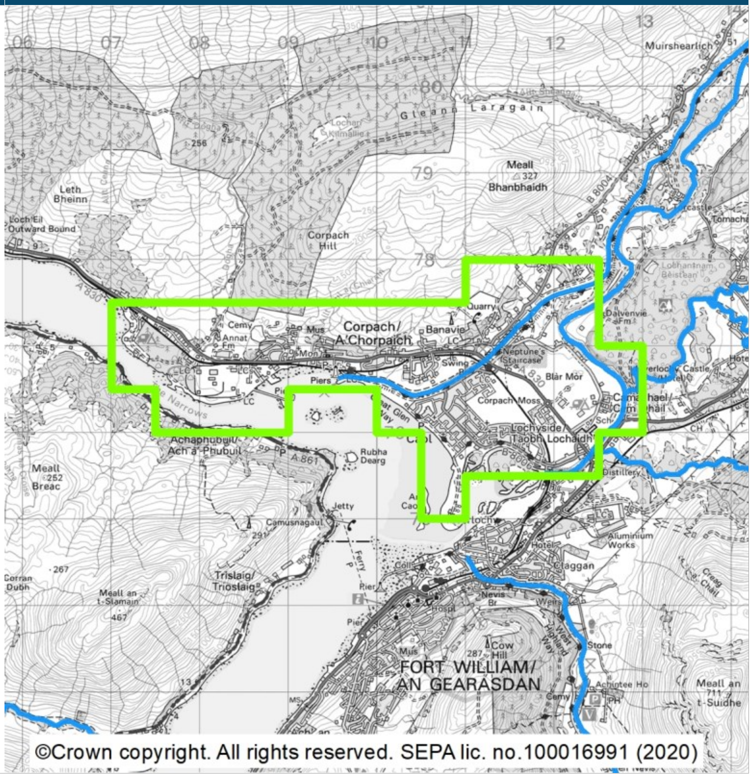
Flood risk management plan datasheet

Corpach and Caol (target area 330)

Summary

The villages of Caol and Corpach are near Fort William, on the northern shore of Loch Linnhe, within the Highland Council area. Caol and Corpach are at risk from surface water, coastal and river flooding. There are approximately 750 people at risk from flooding and approximately 440 homes and businesses. This is estimated to increase to 1,400 people and 790 homes and businesses by the 2080s due to climate change. The Caol and Lochyside Flood Protection Scheme has started construction.

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 understanding of surface water flood risk is improving due to the ongoing development of a Highland wide surface wide management plan which includes Caol and Corpach as priority areas. A sewer flood risk assessment has also been completed. Understanding of river and coastal flood risk has improved by the studies supporting the development of the Caol and Lochyside Flood Protection Scheme. There is a long record of flooding in this target area with notable flooding in January 2005 when a coastal storm surge combined with high flows in the River Lochy.

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

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
3301	Avoid flood risk	Avoid inappropriate development that increases flood risk in Corpach and Caol.
3302	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Corpach and Caol.
3303	Reduce flood risk	Reduce the risk of surface water flooding in Corpach and Caol.
3304	Reduce flood risk	Reduce the risk of coastal flooding and flooding from the River Lochy in Caol.

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: 33001)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	The Highland Council has undertaken the detailed design and obtained permission and has commenced construction of the Caol and Lochyside Scheme. Completion of the scheme will occur in cycle 2.

	Flood defence maintenance (Ref: 33002)
Action	The existing flood defences are to be maintained by the asset owner to ensure they are in good condition.
Description	The Highland Council to maintain the Caol and Lochyside Flood Protection Scheme once completed.

	Flood warning maintenance (Ref: 33003)
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 Lochy and Loch Linnhe coastal flood warning schemes.

	Sewer flood risk assessment (Ref: 33004)
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 Corpach and Fort William 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: 33005)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan which includes Caol and Corpach as a priority area. The surface water management plan identifies areas most at risk from surface water flooding and identifies options that could alleviate this 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.

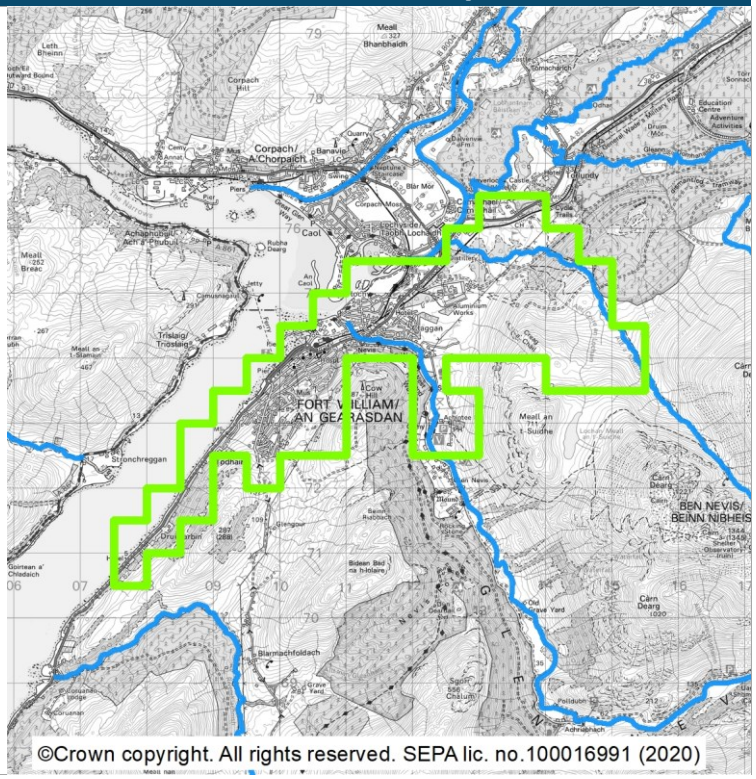
Flood risk management plan datasheet

Fort William (target area 332)

Summary

Fort William is a town in the Scottish Highlands, located on the shore of Loch Linnhe within the Highland Council area. Fort William is at risk from surface water, coastal and river flooding. There are approximately 730 people and 500 homes and businesses currently at risk from flooding. This is likely to increase to 1,100 people and 730 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 understanding of surface water flood risk is improving due to the ongoing development of a Highland wide surface wide management plan which includes Fort William as a priority area. A sewer flood risk assessment has also been completed. The understanding of river and coastal flood warning is improved by the operation and development of the Nevis and Lochy river flood warning schemes and the Loch Linnhe coastal flood warning scheme. There are frequent records of flooding in the Fort William target area including recent coastal flooding in January 2020 during Storm Brendan.

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
3321	Avoid flood risk	Avoid inappropriate development that increases flood risk in Fort William.
3322	Improve data and understanding	Improve data and understanding of the risk of coastal flooding from Loch Linnhe and flooding from the River Nevis in Fort William.
3323	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Fort William.
3324	Reduce flood risk	Reduce the risk of surface water flooding in Fort William.

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: 33201)
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 Fort William 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: 33202)
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 Highland Council to continue to develop and implement the Highland wide surface water management plan, which includes Fort William as a priority area. The surface water management plan identifies areas most at risk from surface water flooding in Fort William and identifies options that could alleviate this risk.

	Flood warning maintenance (Ref: 33203)
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 Nevis, River Lochy and coastal Loch Linnhe flood warning schemes.

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: 33204)
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 Highland Council to develop a coastal flood model and a flood model of the River Nevis to determine the extent of flood risk to Fort William. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

02/01/21 (Ballachulish and Glencoe)

This area is designated as a potentially vulnerable area due to a risk of river, coastal and surface water flooding to Ballachulish and Glencoe. The main sources of flood risk in this area are the River Laroch and Loch Leven. This flood risk may increase significantly due to climate change. Recent flooding occurred in December 2015 as a result of Storm Desmond.

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

List of target areas

Glencoe	(target area 348)
Ballachulish	(target area 349)

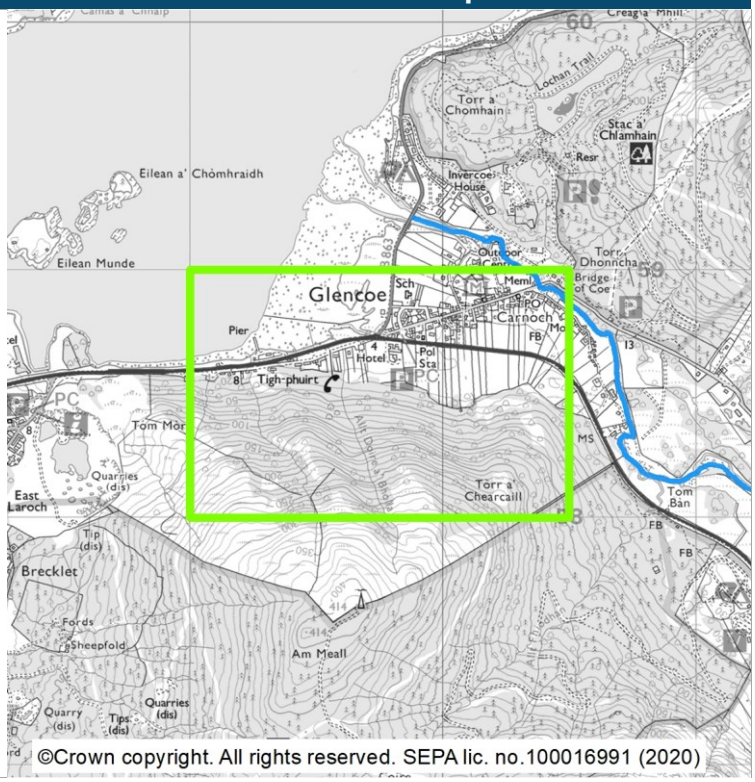
Flood risk management plan datasheet

Glencoe (target area 348)

Summary

The village of Glencoe is located on the coast of Loch Leven within the Highland Council area. Glencoe is at risk from coastal, river and surface water flooding. There are approximately 90 people and 60 homes and businesses currently at risk from flooding. This is estimated to increase to 110 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 flooding in this target area. There are periodic records of flooding in Glencoe in recent years, including flooding during Storm Desmond 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
3481	Avoid flood risk	Avoid inappropriate development that increases flood risk in Glencoe.
3482	Improve data and understanding	Improve data and understanding of the risk of flooding from Loch Leven in Glencoe.
3483	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Glencoe.

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: 34801)
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.

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: 34802)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Glencoe from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

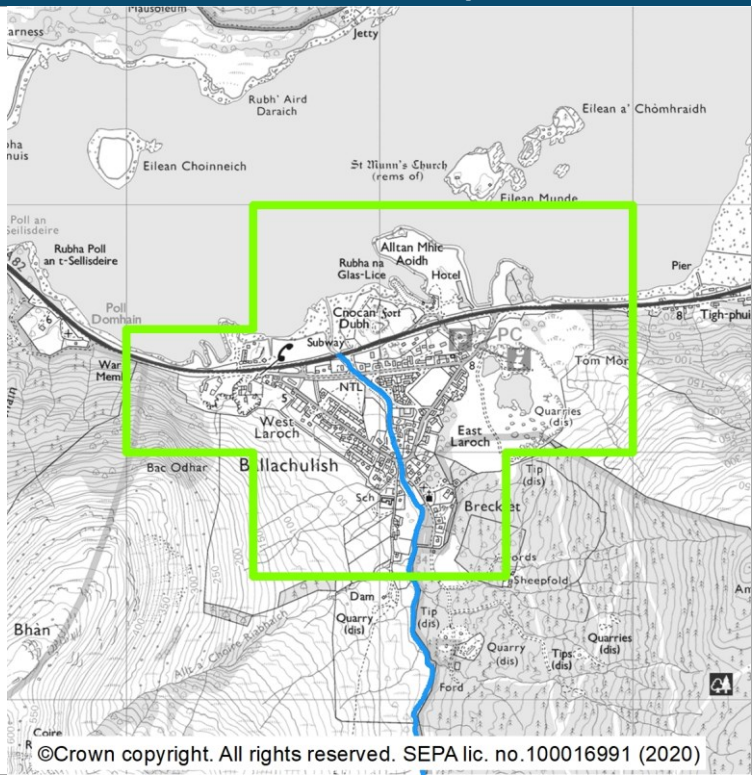
Flood risk management plan datasheet

Ballachulish (target area 349)

Summary

The village of Ballachulish is located on the southern shore of Loch Leven within the Highland Council area. Ballachulish is at risk from river and surface water flooding. There are approximately 150 people and 100 homes and businesses at risk from flooding. This is estimated to increase to 220 people and 130 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 in this target area. There are periodic records of flooding in Ballachulish in recent years, including floods in February 1998 as a result of heavy rainfall and blocked culverts and flooding during Storm Desmond in December 2015.

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
3491	Avoid flood risk	Avoid inappropriate development that increases flood risk in Ballachulish.
3492	Improve data and understanding	Improve understanding of the risk of flooding from the River Laroch in Ballachulish.
3493	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Ballachulish.

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: 34901)
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.

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: 34902)
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 Highland Council to develop a flood model of the River Laroch to determine the extent of flood risk to Ballachulish from the river. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option.

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.

02/01/22 (Oban)

Oban is designated as a potentially vulnerable area due to the risk of river, coastal and surface water flooding. Recent flooding has been caused by surface water and river flooding.

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

List of target areas

Oban (target area 366)

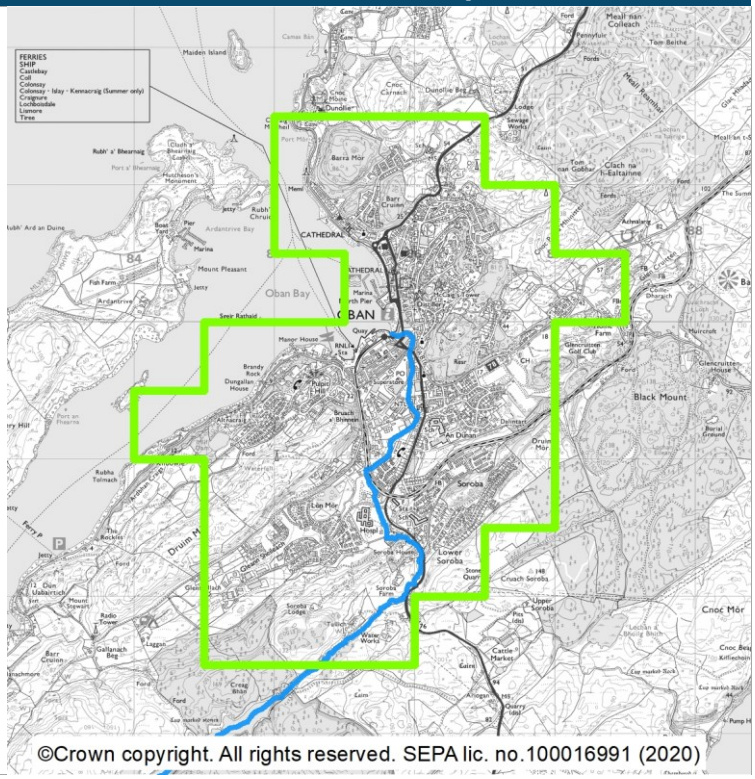
Flood risk management plan datasheet

Oban (target area 366)

Summary

Oban is located on the west coast of Scotland and is within the Argyll and Bute Council area. The main source of flooding in Oban is river flooding from the Black Lynn Burn, however there is also a risk of coastal and surface water flooding. There are approximately 1,200 people and 940 homes and businesses currently at risk from flooding. This is likely to increase to 1,500 people and 1,200 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 improved for coastal, river and surface water by the Oban Flood Study (2019) and a surface water management plan. There is a long history of flooding recorded in the Oban target area including notable coastal flooding in December 2005 and December 2013. A recent record from October 2018 describes flooding after the Black Lynn Burn burst its banks.

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
3661	Avoid flood risk	Avoid inappropriate development that increases flood risk in Oban.
3662	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Oban.
3663	Reduce flood risk	Reduce the risk of surface water flooding in Oban.
3664	Reduce flood risk	Reduce the risk of flooding from Black Lynn Burn in Oban.
3665	Reduce flood risk	Reduce the risk of coastal flooding in Oban.

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: 36601)
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	Develop the detailed design of the Oban Flood Protection Scheme based on the preferred option from the flood study. The preferred option consists of a combined flood storage and direct defence solution to protect against flooding from the Black Lynn and property flood resilience to protect against coastal flooding. Some more work is required on the surface water element. 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 Inner Hebrides and the Minches Special Area of Conservation.

	Flood scheme or works implementation (Ref: 36602)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Progress the Oban 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: 36603)
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 flood protection scheme.

	Surface water management plan (Ref: 36604)
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. The plan should be reviewed and updated regularly.

	Flood warning maintenance (Ref: 36605)
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 Loch Linnhe 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.

02/01/23 (Inveraray)

Inveraray is designated as a potentially vulnerable area due to the risk of coastal flooding. Coastal flood risk is likely to increase due to sea level rise caused by climate change.

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

List of target areas

Inveraray (target area 364)

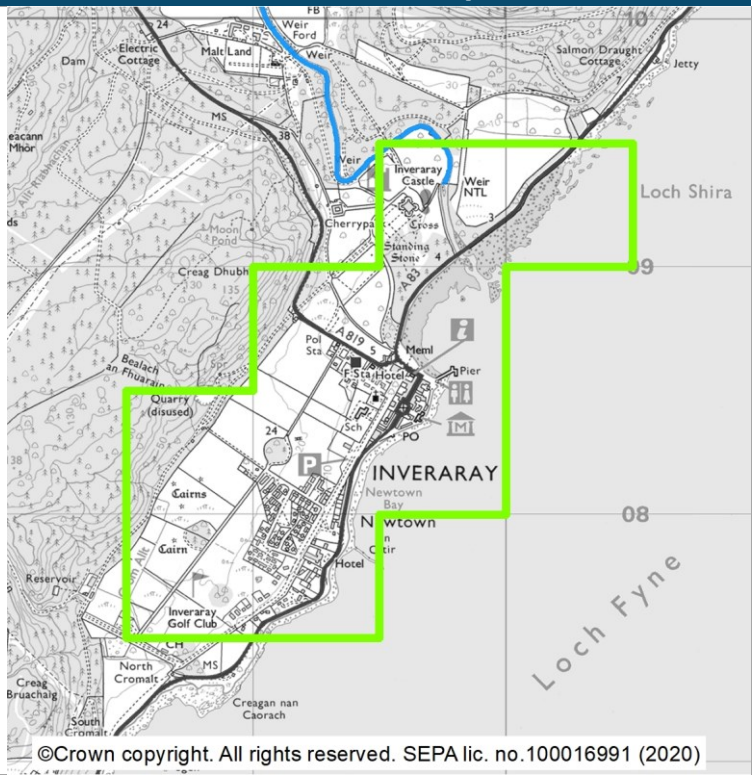
Flood risk management plan datasheet

Inveraray (target area 364)

Summary

The town of Inveraray is located on the western shore of Loch Fyne. It is in the Argyll and Bute Council area. The main source of flooding in Inveraray is coastal flooding. There are approximately 130 people and 110 homes and businesses at risk from flooding. This is estimated to increase to 140 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. The national level assessment is improved for coastal flooding by the revised modelling for the flood maps in Inveraray. There are limited records of flooding in the Inveraray target area. The records include recent coastal flooding during Storm Brendan in January 2020.

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
3641	Avoid flood risk	Avoid inappropriate development that increases flood risk in Inveraray.
3642	Improve data and understanding	Improve data and understanding of the risk of coastal flooding from Loch Fyne in Inveraray.
3643	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Inveraray.

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: 36401)
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.

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: 36402)
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	Progress the shoreline management plan. This should consider the impacts of sea level rise on future flood risk. 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.

02/01/24 (Lochgilphead)

Lochgilphead is designated as a potentially vulnerable area due to the risk of surface water, coastal (Loch Fyne) and river (Badden Burn and Crinan Canal) flooding. The road network has suffered from flooding in the past.

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

List of target areas

Lochgilphead	(target area 365)

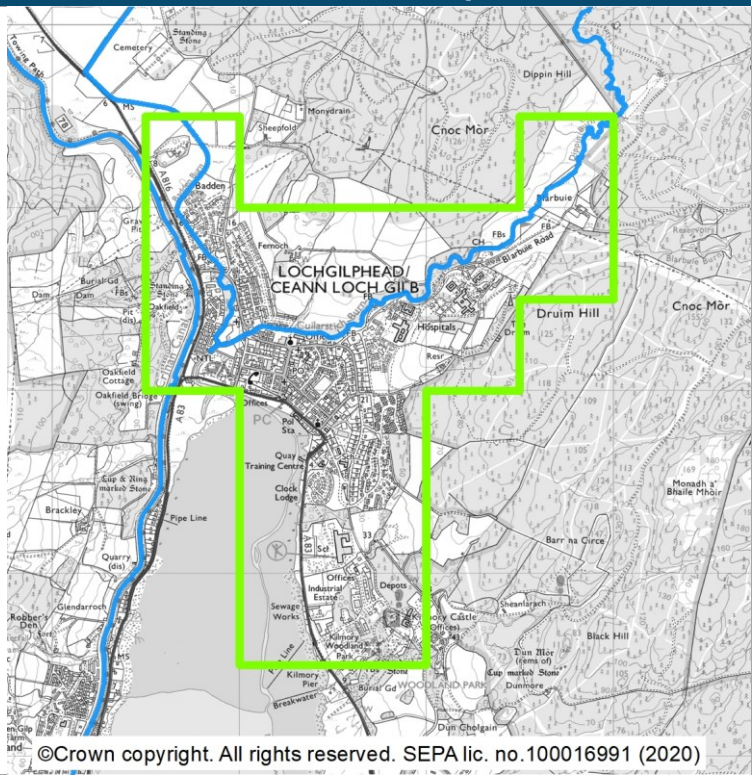
Flood risk management plan datasheet

Lochgilphead (target area 365)

Summary

Lochgilphead is to the north of Loch Gilp in the Argyll and Bute Council area. The main source of flooding in Lochgilphead is from surface water, however there is also a risk of river and coastal flooding. There are approximately 240 people and 220 homes and businesses currently at risk from flooding. This is likely to increase to 400 people and 330 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 and river flood risk by the Lochgilphead Flood Study (2019). The understanding of surface water flood risk is improving through the sewer flood risk assessment. The Front Green is known to frequently be affected by coastal flooding and there are records of periodic flooding in Lochgilphead from the Badden Burn including flooding in November 2012, November 2015 and July 2018. Records indicate the A816 is frequently flooded by floodwater from the Crinan Canal.

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
3651	Avoid flood risk	Avoid inappropriate development that increases flood risk in Lochgilphead.
3652	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Lochgilphead.
3653	Reduce flood risk	Reduce the risk of flooding from the Badden Burn and Crinan Canal in Lochgilphead.
3654	Reduce flood risk	Reduce the risk of coastal flooding from Loch Fyne in Lochgilphead.

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

	Property flood resilience scheme (Ref: 36501)
Action	The proposed scheme to provide resilience measures against flooding for individual buildings is to be taken forward to help prevent water entering the property and to minimise flood damage.
Description	The Lochgilphead Flood Study (2019) identified property flood resilience as the preferred option for managing the risk of flooding. (There were no economically viable options for river flooding). Argyll and Bute Council presented implementation of a property flood protection scheme on a grant basis with homeowner maintenance. Argyll and Bute Council to progress this in combination with community engagement and promotion of self help. 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 warning maintenance (Ref: 36502)
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 Firth of Clyde 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: 36503)
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	Progress the development of the shoreline management plan for the Argyll and Bute coastline.

	Flood study (Ref: 36504)
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 to further investigate the feasibility of potential options to manage river flood risk in Lochgilphead.

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.

02/01/25 (Tarbert)

Tarbert is designated as a potentially vulnerable area due to the risk of coastal flooding from Loch Fyne. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Recent flooding has been caused by coastal flooding.

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

List of target areas

Tarbert (target area 361)

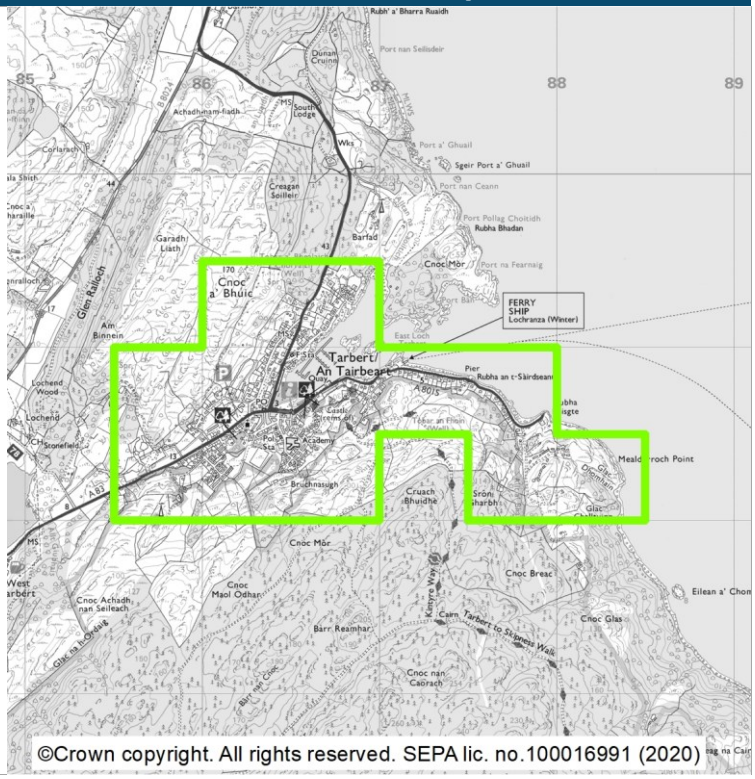
Flood risk management plan datasheet

Tarbert (target area 361)

Summary

Tarbert is located in the west of Scotland within the Argyll and Bute Council area. The main source of flooding in Tarbert is coastal flooding, however there is also a risk of surface water flooding. There are approximately 30 people and 50 homes and businesses at risk from flooding. This is estimated to increase to 70 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. The national level assessment is improved for coastal flooding by the Tarbert Flood Study (2019). The understanding of surface water flood risk is improved through a sewer flood risk assessment. There are records of periodic coastal flooding in Tarbert including a recent flood in December 2015 during Storm Desmond.

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
3611	Avoid flood risk	Avoid inappropriate development that increases flood risk in Tarbert.
3612	Improve data and understanding	Improve data and understanding of the risk of surface water flooding in Tarbert.
3613	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Tarbert.
3614	Reduce flood risk	Reduce the risk of coastal flooding from Loch Fyne in Tarbert.

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: 36101)
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 may be required prior to commencing with the detailed design. Develop the detailed design of the Tarbert Flood Protection Scheme based on the preferred option from the flood study. The preferred option consists of flood defence walls and demountable defences. Property flood resilience is to be provided outwith the scheme extent. 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: 36102)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Progress the Tarbert 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: 36103)
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 flood protection scheme.

	Sewer flood risk assessment (Ref: 36104)
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 Tarbert 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: 36105)
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 and implement a surface water management plan. This should be reviewed and updated regularly. The impacts of climate change on flood risk should be assessed. The results of the sewer flood risk assessment should be considered. Opportunities to disconnect surface water from the sewerage system should be identified. The plan should be reviewed and updated regularly.

	Flood warning maintenance (Ref: 36106)
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 Firth of Clyde 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.

02/01/26 (Clachan)

Clachan is designated as a potentially vulnerable area due to the risk of river flooding. Recent flooding occurred 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. Further information on the objectives and actions to manage flood risk within this area is provided below.

List of target areas

Clachan (target area 353)

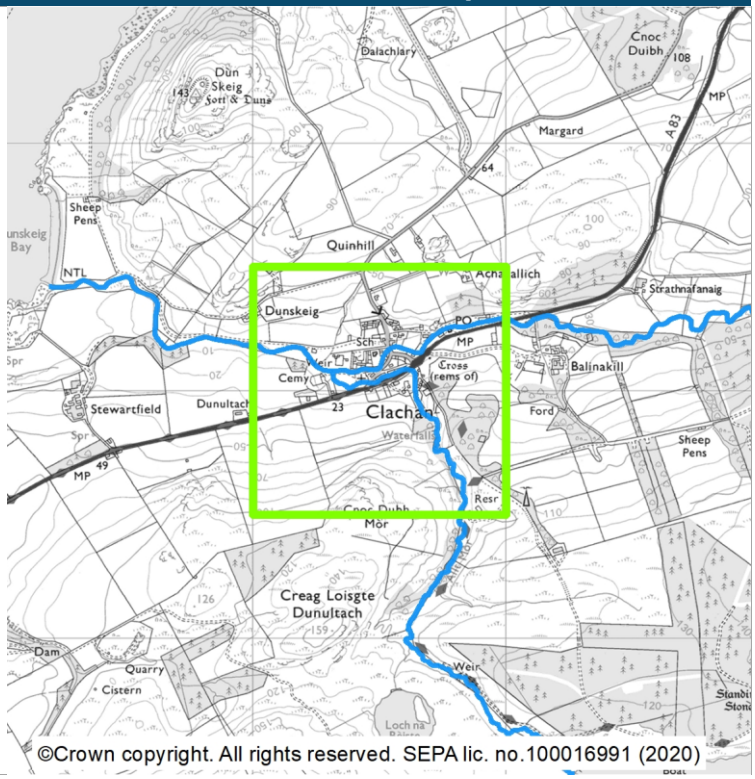
Flood risk management plan datasheet

Clachan (target area 353)

Summary

Clachan is located within the Argyll and Bute Council area. The main source of flooding in Clachan is the Clachan Burn, however there is also a risk of surface water flooding. There are approximately 50 people and 30 homes and businesses currently at risk from flooding, which is a significant proportion of the community. This is likely to increase to 60 people and 40 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 and recent flood records have highlighted the risk of flooding from the Clachan Burn and surface water in this target area. Clachan 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 flood risk and flood risk from the Clachan Burn by the Clachan Flood Study (2019). There are frequent records of flooding from the Clachan Burn and surface water in recent years.

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
3531	Avoid flood risk	Avoid inappropriate development that increases flood risk in Clachan.
3532	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Clachan.
3533	Reduce flood risk	Reduce the risk of flooding from the Clachan Burn, Allt Mor and surface water in Clachan.

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: 35301)
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	Develop the detailed design of the flood protection works in Clachan based on the preferred option from the flood study. The preferred option includes removal of a weir structure from the Clachan Burn and property flood resilience. 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: 35302)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Progress the flood protection works in Clachan 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: 35303)
Action	Community engagement is to continue to be carried out in the area by the responsible authorities to raise awareness of flood risk.
Description	Argyll and Bute Council completed three community consultation events during the flood study and during the appraisal of options. The responsible authorities to continue to engage with the community and the community flood group, with particular focus on the detailed design of the flood protection works.

	Community resilience group (Ref: 35304)
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	A community flood group and flood response plans have been established in partnership with the Scottish Flood Forum.

	Community flood alert (Ref: 35305)
Action	A community river level alerting system is to be installed to provide information on the potential for localised flooding.
Description	A river level alerting system is being installed with the help of the Scottish Flood Forum.

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.

02/01/27 (Campbeltown)

Campbeltown is designated as a potentially vulnerable area as it is at risk from surface water, small water courses in combination with sewerage and coastal flooding. Campbeltown has flooded in the past from a combination of high sea levels and high water levels on small watercourses.

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

List of target areas

Campbeltown (target area 346)

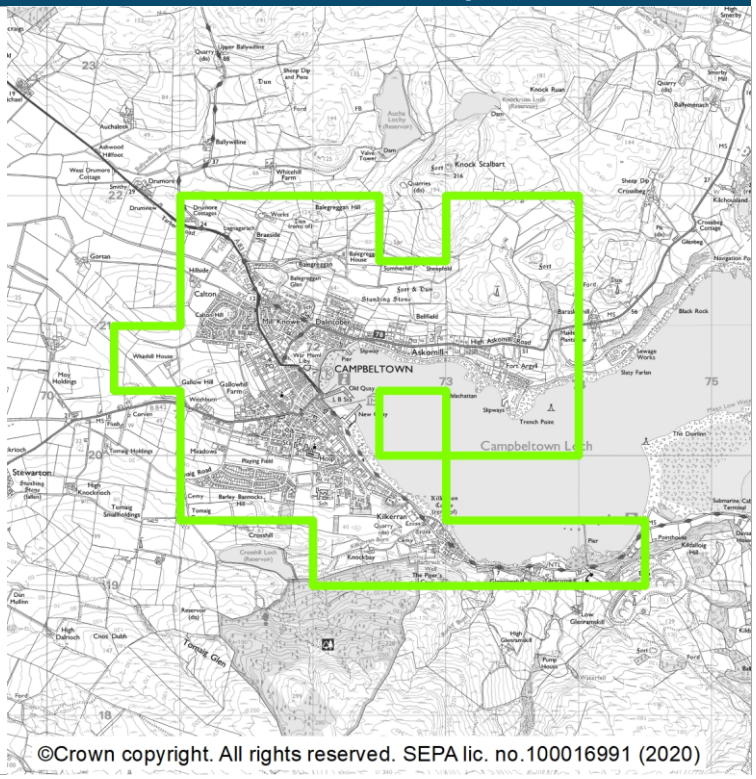
Flood risk management plan datasheet

Campbeltown (target area 346)

Summary

The town of Campbeltown is located at the head of Campbeltown Loch on the Kintyre peninsula in the Argyll and Bute Council area. The main source of flooding is from rivers, however there is also a risk from coastal and surface water flooding. There are approximately 840 people and 650 homes and businesses currently at risk from flooding. This is likely to increase to 970 people and 760 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 surface water flooding by the various studies supporting the development of the Campbeltown Flood Protection Scheme. There are records of frequent flooding in Campbeltown from a combination of river, sewer and surface water sources, with notable flooding recorded in November 2014.

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
3461	Avoid flood risk	Avoid inappropriate development that increases flood risk in Campbeltown.
3462	Improve data and understanding	Improve data and understanding of the risk of coastal flooding in Campbeltown.
3463	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Campbeltown.
3464	Reduce flood risk	Reduce the risk of flooding from surface water and small watercourses in Campbeltown.

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: 34601)
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 Campbeltown 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: 34602)
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 Campbeltown Surface Water Management Plan which will help to manage residual surface water and sewer flood risk. In the Meadows and Burnside Square areas road gullies will be disconnected from the combined sewer network with drainage held in above ground and below ground storage basins, for a controlled release back into the combined system. Additional properties are targeted for property level flood resilience.

	Shoreline management plan (coastal adaptive plan) (Ref: 34603)
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	Progress the shoreline management plan. This should consider the impacts of sea level rise on future flood risk. The need for an adaptation plan should be assessed.

	Flood scheme or works implementation (Ref: 34604)
Action	The flood scheme/works is to be built following agreement of the design, costs and timescales.
Description	Progress the Campbeltown Flood Protection Scheme. As built drawings should be made available to SEPA, for consideration in the Scottish Flood Defence Asset Database, flood map improvements and flood warning scheme updates.

	Flood warning maintenance (Ref: 34605)
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 Firth of Clyde 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.

02/01/28 (Taynuilt)

This area is designated as a potentially vulnerable area due to the risk of river flooding from the River Nant and coastal flooding from Loch Etive to Taynuilt and Brochroy. It is expected that this flood risk will significantly increase as the result of climate change.

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

List of target areas

Taynuilt and Brochroy (target area 347)

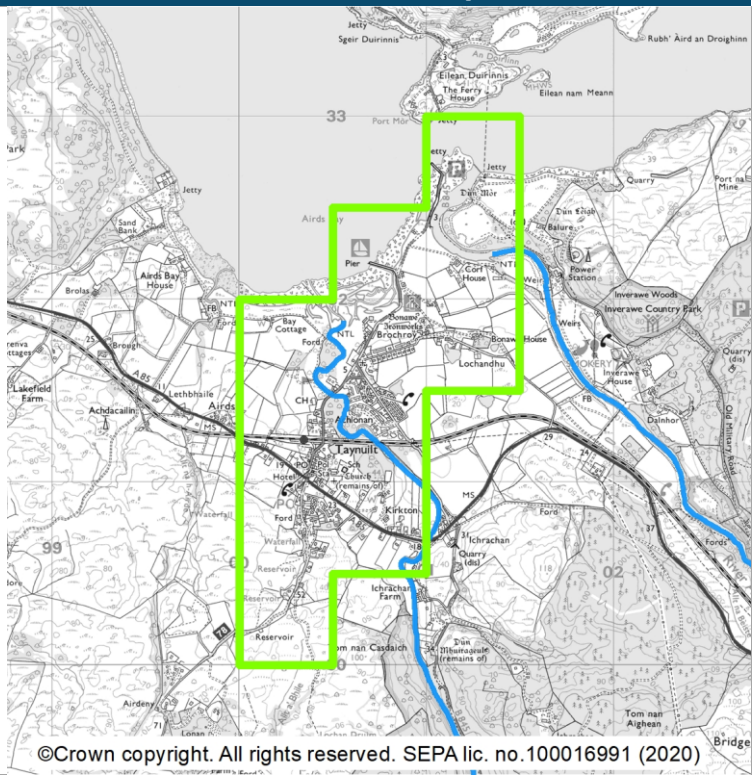
Flood risk management plan datasheet

Taynuilt and Brochroy (target area 347)

Summary

Taynuilt and Brochroy are located the shores of Loch Etive, within the Argyll and Bute Council area. The main source of flooding in Taynuilt and Brochroy is coastal flooding, however there is also risk from river flooding. There are approximately 150 people and 90 homes and businesses currently at risk from flooding. This is likely to increase to 180 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. The national level assessment is improved for river flooding through the revised modelling for the flood maps for the River Nant. There are limited records of flooding in the Taynuilt and Brochroy 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
3471	Avoid flood risk	Avoid inappropriate development that increases flood risk in Taynuilt and Brochroy.
3472	Improve data and understanding	Improve data and understanding of the risk of coastal flooding and the impacts of climate change in Taynuilt and Brochroy.
3473	Improve data and understanding	Improve data and understanding of the risk of flooding from the River Nant in Taynuilt and Brochroy.
3474	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Taynuilt and Brochroy.

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: 34701)
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.

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: 34702)
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	Progress the development of the shoreline management plan for the Argyll and Bute coastline.

	Flood study (Ref: 34703)
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 results of the shoreline management plan and revised flood maps should be reviewed. The influence of high tides and surge on flooding from the River Nant should be assessed. The impacts of sea level rise and 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.

02/01/29 (Avoch)

Avoch is designated as a potentially vulnerable area due to a risk of coastal flooding. Coastal flood risk to Avoch is anticipated to increase significantly due to climate change. Recent floods were caused by coastal flooding.

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

List of target areas

Avoch (target area 358)

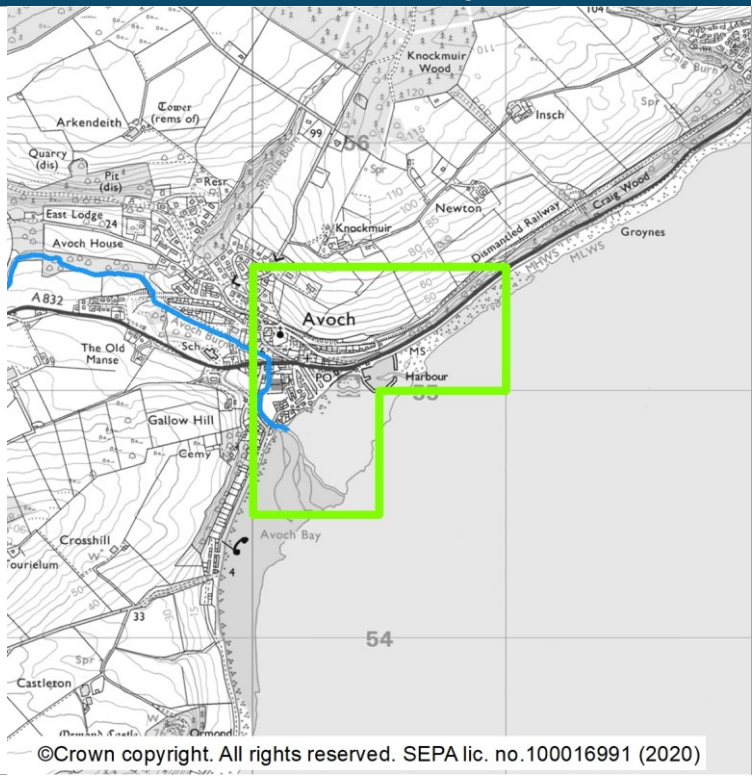
Flood risk management plan datasheet

Avoch (target area 358)

Summary

Avoch is located on the northern coastline of the Moray Firth in the Highland Council area. The main source of flooding is coastal flooding. There are approximately 110 people and 70 homes and businesses at risk from flooding. This is estimated to increase to 200 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 information has highlighted the risk of coastal flooding, (principally associated with climate change) in this target area. Avoch has therefore been identified as a new target area for the 2021 flood risk management plans. The national level 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 Avoch 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
3581	Avoid flood risk	Avoid inappropriate development that increases flood risk in Avoch.
3582	Improve data and understanding	Improve data and understanding of the risk of coastal flooding including the impacts of climate change in Avoch.
3583	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Avoch.

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: 35801)
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 study (Ref: 35802)
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 Highland Council to develop a coastal flood model to determine the extent of flood risk to Avoch from the sea. Subject to the outcome of the modelling an appraisal of options to mitigate flooding will be carried out, determining a preferred option. This work will be carried out after SEPA have published the latest revision of their strategic coastal flood mapping.

	Flood warning maintenance (Ref: 35803)
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.

02/01/30 (Beauly)

Beauly is designated as a potentially vulnerable area due to the risk of flooding from the River Beauly. Recent flooding was caused by surface water and river flooding.

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

List of target areas

Beauly (target area 357)

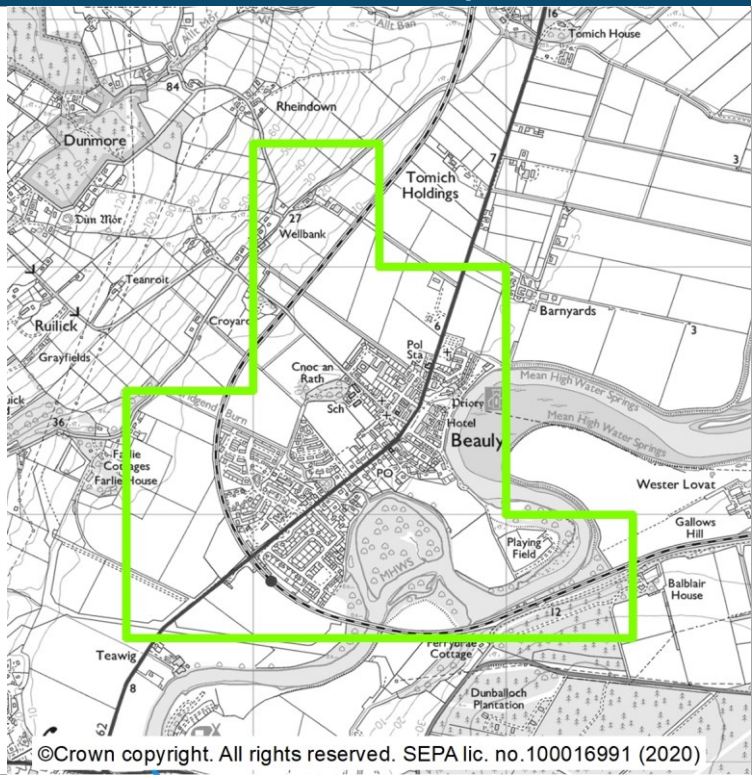
Flood risk management plan datasheet

Beauly (target area 357)

Summary

Beauly is located west of Inverness on the River Beauly within the Highland Council area. Beauly is at risk from surface water, river and coastal flooding. However there is also risk of river and coastal flooding. There are approximately 170 people and 90 homes and businesses currently at risk from flooding. This is likely to increase to 250 people and 130 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 information has highlighted the risk of flooding, (principally associated with the risk of flooding from the River Beauly) in the area. Beauly 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 a sewer flood risk assessment. Understanding for river and coastal flood risk is improved by the development and operation of the river and coastal flood warning schemes. There is a long history of flooding in the Beauly target area including in March 2015 after melting snow and heavy rainfall led to the River Beauly to overtop 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
3571	Avoid flood risk	Avoid inappropriate development that increases flood risk in Beauly.
3572	Prepare for flooding	Prepare for current flood risk and future flooding as a result of climate change in Beauly.

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: 35701)
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 Rivers Beauly and Glass 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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The Centre for Ecology and Hydrology Some of the plan development is based upon digital spatial data licensed from the Centre for Ecology and Hydrology © NERC (CEH) and third party licensors.

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/