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# 1. Flood Risk Management in Ayrshire Local Plan District

## 1.1.1 *What is a Local Flood Risk Management Plan?*

The Local Flood Risk Management Plan has been developed to detail the actions adopted to reduce the devastating and costly impact of flooding in the Ayrshire Local Plan District. This plan supplements the Flood Risk Management Strategy (FRM Strategy) as published by the Scottish Environment Protection Agency on the 22 December 2015. This Strategy coordinates the efforts of all organisations involved in flood risk management actions. The Strategy identifies where the risk of flooding and benefits of investment are greatest. The Plan details the prioritised actions that will be delivered within this investment period. There are 13 other Strategies and Plans for the other Local Plan Districts in Scotland.

By publishing this plan, individuals and communities have the information to better manage their own responsibilities. Everyone can take action with the confidence of what others are doing and with the clear knowledge when they are doing it.

This plan details how and when the actions to deliver the goals set in the FRM Strategy are to be delivered in the first six-year planning cycle, from 2016 to 2022. They describe the short-term direction of flood risk management in the Ayrshire Local Plan District, which is expanded upon in the FRM Strategy. The actions in this plan are based on agreed objectives for managing flood in high risk areas. They rely on the best evidence available on the causes and consequences of flooding and make clear the priorities of responsible authorities, including local authorities and Scottish Water.

It is through this risk-based and plan-led approach that that management of flood risk will improve for all in the Ayrshire Local Plan District.

The contents of the Plan have been agreed with the lead authority and every other responsible authority which has flood risk related functions.

The Plan is published by North Ayrshire Council, lead authority for the Ayrshire Local Plan District. The Plan has been prepared in close collaboration with East Ayrshire Council, South Ayrshire Council and any other organisations with a responsibility or interest in managing flooding. This plan is a requirement under the Flood Risk Management (Scotland) Act 2009 and fulfils requirements within the European Commission's Floods Directive.

## 1.1.2 *How to read this plan*

The Local Flood Risk Management Plan has three sections:

Section 1 contains background information on the approach taken in Scotland to manage flood risk. It explains the duties and aims of relevant organisations, including

how they work together and how flood risk management planning is linked to other government policies and initiatives. Most importantly, how flood risk management planning is delivered locally to each Local Plan District through a Local Flood Risk Management Plan.

Section 2 is the most important section for those individuals and communities seeking to understand their flood risk and its management. For priority communities (called Potentially Vulnerable Areas) there is a short description of the causes and consequences of flooding. The agreed goals or objectives are clearly defined. Actions that will deliver progress against these goals are explained in more in detail, focusing on responsibility, coordination, timing and funding.

Annexes to the Plan provide supporting documents and references, and present more detailed information in various formats. A glossary of terms is also available.

The Plan should be read alongside the FRM Strategy for the Ayrshire Local Plan District. The FRM Strategy has been developed in parallel and provides additional background information and national context. The publication date of the FRM Strategy was December 2015. Both the FRM Plan and the FRM Strategy will be updated every six years – see chapter 1.5.

### 1.3 *How we have developed the FRM Plan?*

#### 1.3.1 Coordination, collaboration and partnership working

Many organisations and individuals are involved in helping to improve flood management in Scotland. A coordinated approach to manage flood risk is essential because flooding disregards local authority boundaries and similarly cuts across the responsibilities of organisations such as SEPA, Scottish Water and emergency responders.

The Ayrshire Local Flood Risk Management Plan has been developed in partnership. It has provided the evidence through data sharing and improved understanding of each organisations objectives to allow informed joint decisions.

The FRM Plan has been developed by:  
North Ayrshire Council (lead authority);  
East Ayrshire Council,  
South Ayrshire Council,  
Scottish Water;  
SEPA; and  
Any other responsible authority

#### 1.3.2 Roles and responsibilities for flood risk management planning

**Individuals** have responsibilities to protect themselves and their property from flooding. Being prepared by knowing what to do and who to contact in relation to flooding can help you reduce the damage and disruption flooding can have on your life.

**Local Authorities** work together for flood risk management planning purposes through a single lead authority which has the responsibility to produce a Local Flood Risk Management Plan. It is the responsibility of your local authority to implement any identified actions within the FRM Plan. During severe flooding, local authorities will work with the emergency services and coordinate action.

**SEPA** is Scotland's national flood forecasting, flood warning and strategic flood risk management authority. SEPA has a statutory duty to produce Scotland's Flood Risk Management Strategies. They work closely with other organisations responsible for managing flood risk through a network of partnerships and stakeholder groups to ensure that a nationally consistent approach to flood risk management is adopted. SEPA also has a responsibility to identify where in Scotland there is the potential for natural flood management techniques to be introduced.

In running Floodline, SEPA provides direct warnings, live flooding information and advice on how to prepare for or cope with the impacts of flooding 24 hours a day, seven days a week. To help forecast for flooding SEPA works in partnership with the [Met Office through the Scottish Flood Forecasting Service](#). SEPA has piloted surface water flood forecasting to help urban areas improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.

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

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

Other organisations

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

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

**Forestry Commission Scotland** was designated in 2012 as a responsible authority for flood risk management planning purposes and has engaged in the development of the Flood Risk Management Strategies through national and local advisory groups. This reflects the widely held view that forestry can play a significant role in managing flooding.

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

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

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

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

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

### 1.3.3 Consultation, engagement and advice

Local authorities and SEPA have been keen to hear from the people and communities that live under the threat of flooding, to ensure that our technical analysis of the risks is accurate and that efforts to manage flooding are targeted appropriately. Two statutory public consultations were held during the development of the FRM Strategies and FRM Plans. The first, by SEPA, was on the general approach to flood risk management planning and the identification of priority areas (2011); the second, held jointly with SEPA and local authorities, was on the understanding of flooding in these priority areas and on the objectives and actions to manage flooding (2015). The views and representations of the respondents to the

second consultation were taken account of in developing and finalising the FRM Plan. Details of further consultations and other communication and engagement activities for this plan are described below.

Further advice has been sought from relevant organisations at key stages. The FRM Strategies (and FRM Plans) have benefitted from input from the Clyde Loch Lomond and Ayrshire Local Advisory Group, providing important local knowledge on both the causes and consequences of flooding and on the appropriate actions for future management. Advice was also taken from a National Flood Management Advisory Group consisting of over 50 member organisations, reflecting the national importance and impact of flooding on our communities, economy, environment and cultural heritage.

Some of the work carried out has been complex and technical in nature for which professional advice was sought from across Scotland and beyond. Working together, SEPA, The Scottish Government, Local Authorities, Scottish Water and other key interested organisations have assisted each other and developed industry best practice guidance for flood risk management planning.

#### 1.3.4 Identification of objectives, appraisal and prioritisation of actions

The identification of objectives and appraisal of actions to reduce flood risk has been led by SEPA with significant local input from Local Authorities and Scottish Water. The setting of objectives and selecting the most sustainable actions to reduce flood risk in each Local Plan District will provide the long-term vision for Flood Risk Management in Scotland. Objectives set focus on the main sources and impacts of flooding identified for each Potentially Vulnerable Area in every Local Plan District. A wide range of actions were appraised, including flood protection works and schemes, flood protection studies, flood warning schemes, surface water management plans, and natural flood management studies and works.

To prioritise future actions across Scotland as required in flood risk management planning, SEPA separated the technical, risk-based assessment of priorities from aspects of local, practical deliverability. In this way the data on the costs and impacts of actions is used alongside information from delivery and funding bodies to jointly agree priorities and identify indicative delivery dates for actions. A National Prioritisation Advisory Group was established to provide guidance to SEPA on the priority of flood risk management actions, having considered both the technical ranking prepared by SEPA and issues of local priority. This group was made up of representatives from SEPA, Local Authorities, CoSLA and Scottish Water.

The FRM Strategy provides the list of prioritised actions for the first six-year flood risk management planning cycle, 2016 to 2022. The FRM Plan identifies who will be responsible for the action, a timetable of when it will be undertaken and the funding arrangements – see Section 3.

The lists of prioritised actions to meet agreed goals and objectives in the first six-year cycle considered what would be achievable assuming a similar level of funding for flood risk management activities from The Scottish Government. However, given the timing of spending reviews and annualised financial settlements for local government, the actual ability to deliver all the actions set in the Strategies in December 2015 and detailed in this Plan will be dependent on the availability of the necessary funding in each year of the six year Plan.

### 1.3.5 Strategic Environmental Assessment and Habitats Regulations Appraisal

North, East and South Ayrshire Councils jointly undertook a strategic environmental assessment to assess the significant environmental effects of the Plan. Our assessment was published in a screening report and we consulted through SEA Gateway with the statutory bodies SEPA, SNH and Historic Scotland. Annex 4 shows the screening decision and scoping report and a post-adoption statement, which describes how we have taken account of the environmental assessment and the consultation responses, and how we will monitor any significant environmental effects of the Plan.

North, East and South Ayrshire Councils also undertook a Habitats Regulations Appraisal to ensure that the FRM Plan will not adversely affect the integrity of Special Areas of Conservation and Special Protection Areas. Scottish Natural Heritage was consulted on our appraisal and their views have been taken into account. Mitigation has been applied where required to ensure that the Plan will not adversely affect the integrity of Special Areas of Conservation and Special Protection Areas.

## 1.4 *Links with other plans, policies, strategies and legislative requirements*

The FRM Plan does not stand in isolation. As far as is practicable, an integrated approach to land and water management has been pursued. When developing the FRM Strategy and FRM Plan, early links were made with other relevant aspects of water and land management including local development plans, river basin management plans and emergency plans. In turn, the responsible authorities will work proactively to ensure the findings from these flood risk management plans and strategies will influence other planning initiatives in an interactive and iterative cycle. Making these links has helped identify opportunities to deliver multiple benefits from flood risk management goals, objectives and actions.

### 1.4.1 River basin management planning

Reducing flood risk in Scotland through the development of Flood Risk Management Strategies has provided an opportunity to connect with plans to improve the quality of Scotland's water environment at the same time. For example, coordination between river basin management and flood risk management can reduce flood risk, whilst improving water quality and biodiversity.

SEPA is leading the delivery of River Basin Management Plans and Flood Risk Management Strategies, and local authorities are leading delivery of Local Flood Risk Management Plans. Both have worked together to ensure that there is integration and coordination between them. This coordination, particularly in regard to consultation and engagement, will be important for stakeholders many of whom have an interest in the objectives of both FRM Plans and FRM Strategies.

#### 1.4.2 Scottish Water Business Plan 2015-2021

Scottish Water's investment programme is set out in their business plan 2015-2021, which can be found in their website <https://www.scottishwater.co.uk/about-us/publications/strategic-projections>

Scottish Waters customers have told them that reducing internal property flooding from sewers is a high priority and this is reflected in Scottish Waters Business Plan commitments for the period 2015-21. Addressing sewer flooding is of the highest importance to Scottish Water, as highlighted by our customers who have helped shape the investment plans for 2015-21.

In recognition of this high priority, within the period 2015-2021, Scottish Water will invest approximately £115m to improve the hydraulic capability of the sewer network so that they can remove all customers from the high risk internal sewer flooding register (greater than 10% chance per annum) as quickly as possible, typically within four years of their problem being confirmed. However Scottish Water has made a commitment to those customers on the register on 31 March 2015 that they will no longer be on the register by 31 March 2021.

Scottish Water customers have also highlighted external flooding is an important issue. As a result, within the period 2015-2021, Scottish Water are investing approximately £40m to develop and to begin to implement solutions to reduce the flood risk for 400 high priority external sewer flooding areas suffering from frequent repeat flooding events.

As a responsible authority under the Flood Risk Management (Scotland) Act 2009, Scottish Water is also working collaboratively with third parties such as SEPA and Local Authorities through the Flood Risk Management Planning process which will assess the risk of flooding into the future.

As part of that work, Scottish Water has allocated investment to undertake further modelling and assessment in sewer catchments within PVA's to improve knowledge and understanding of flood risk from the sewers in these areas, as required under Section 16 of the Flood Risk Management (Scotland) Act 2009. Scottish Water is also working in partnership with SEPA and Local Authorities, to lead on the production of Integrated Catchment Studies across key catchments. Work carried out under these Flood Risk Management (Scotland) Act 2009 duties will continue to inform future investment requirements for Scottish Water.



### 1.4.3 Surface Water Management Planning

Surface water flooding is any flooding which is not originated from a river or the sea. This can include any overland flow which can come from rainfall, ground water, sewer and drain overflow.

Surface water flooding is a key component of this plan. Areas requiring a Surface Water Management Plan are identified in the Ayrshire Local Flood Risk Management Strategy. The initial assessment for the needs for Surface Water Management Plans was based on historic flooding data, the identification of significant surface water flood risk from the SEPA maps and consultation with the Local Plan District group.

The development of the Surface Water Management Plans will be as described in Section 3. The complexity, severity and source of flooding has determined the requirement of a Surface Water Management Plan.

### 1.4.4 Integrated Catchment Studies

Integrated Catchment Studies (ICS) are led by Scottish Water in partnership with local authorities and SEPA. These studies will improve knowledge and understanding of the interactions between the above ground and below ground drainage network e.g. with the sewer network, watercourses and (where appropriate) the sea. This will improve the understanding of contributions these drainage networks play in local surface water flood risk.

Currently there are two ICS being developed within the Ayrshire Local Plan District.

The Meadowhead Catchment ICS was undertaken during SR10 (2010-2015), to modelling and flood risk assessment stage. This study includes Irvine, Kilmarnock, Troon, Prestwick and Ayr towns. This has provided a fuller understanding of the sources and mechanisms of flooding across this catchment. The study is expected to undertake an Optioneering phase between 2015 and 2021. This stage will identify the actions to reduce flood risk across the catchments, with the outputs feeding into the local authority led Surface Water Management Planning process.

The Stevenston Point ICS began in the autumn of 2015 and is now in the Scoping Stage. This study will cover Ardrossan, Stevenston, Saltcoats, Kilwinning, Kilbirnie, Glenarnock, West Kilbride and Beith. This study will go through the Scoping and Modelling phases, which culminates in defining the sources and mechanisms of flooding in the catchment, and provides an understanding of the impacts of that flooding. It is expected that the ICS partnership will remain and it is anticipated that the Optioneering phase for this study will be initiated directly after the preceding phases.

### 1.5 *Next steps and monitoring progress*

The Plan runs for six years from June 2016. Over this period the Ayrshire Local Plan District partnership will continue to meet periodically to monitor progress towards implementing the actions detailed in Section 3 and Annex 1 of this Plan.

Between years 2 and 3 of the FRM cycle (i.e. before June 2019), North Ayrshire Council, as lead authority will publish a report on the conclusions of a review of the Plan, including information on the progress that has been made towards implementing the measures identified in the implementation part of the Plan.

Between years 5 and 6 of the FRM cycle (i.e. before June 2021), North Ayrshire Council, as lead authority will publish a report on the Plan containing an assessment of the progress made towards implementing the current measures, a summary of the current measures which were not implemented, with reasons for their non-implementation, and a description of any other measures implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the objectives summarised in the Plan.

The lead authority will make these reports available for public inspection.

### 1.6 *Licensing acknowledgements*

Full licensing acknowledgements can be found in Annex 5 of this Plan.