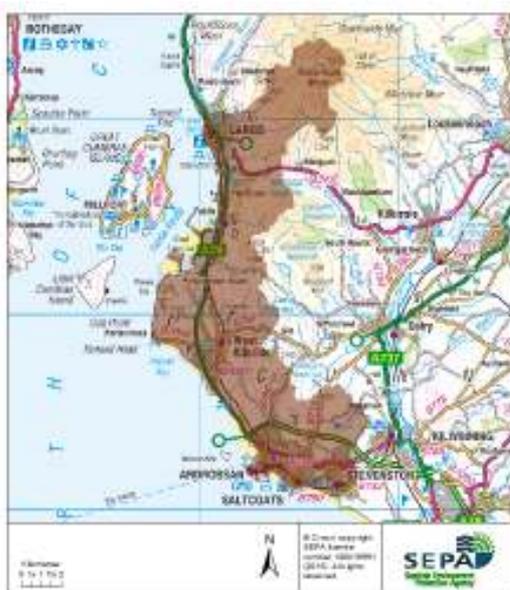


## Largs to Stevenston (Potentially Vulnerable Area 12/03)

Local Plan District	Local authority	Main catchment
Ayrshire	North Ayrshire Council	Saltcoats to Largs coastal

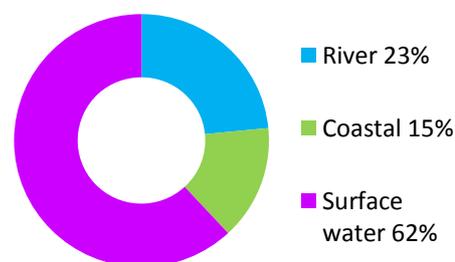
### Background

This Potentially Vulnerable Area is approximately 100km<sup>2</sup>. It is located in the north of the Ayrshire Local Plan District and extends from Stevenston, Saltcoats and Ardrossan in the south, to Waterhead Moor in the north (shown below). It incorporates the towns of Largs and West Kilbride.



The area has a risk of river, coastal and surface water flooding. The majority of damages are caused by surface water flooding.

There are approximately 960 residential properties at risk of flooding. The Annual Average Damages are approximately £1.2 million.



**Figure 1:** Annual Average Damages by flood source

### Summary of flooding impacts

Surface water flooding is likely to impact the Ardrossan, Saltcoats and West Kilbride areas where a large number of residential properties are at risk. There is also potential for flooding of agricultural land in the north west of the area. The areas at highest risk from surface water flooding will require the preparation of surface water management plans.

River flooding occurs throughout the area but is primarily attributed to the Gogo Water. Largs has the potential to be affected by river flooding, which is most likely to occur to the west of the A78 Irvine Road and to the main rail link south of Largs station. West Kilbride is another area where there is a notable risk of river flooding. The Kilbride Burn, which flows south towards West Kilbride, passes beneath the B781 and the main rail link north of West Kilbride rail station. There are a number of constrictions within this area that are likely to cause the water within the Kilbride Burn to overflow. A study on the Kilbride Burn, West Kilbride was undertaken to assess the local impact of river flooding. The study identified Cubrieshaw Bridge as a constraint to river flows. Areas at risk are primarily agricultural land, although residential areas are also at risk. River flooding to land and properties is also likely to occur within Ardrossan from the Master Gott Burn, which is largely culverted.

Coastal flooding is not widespread in this area however there are a number of residential and non-residential properties at risk, particularly near Saltcoats. Three other areas at risk include the north side of West Kilbride, the vicinity of Ardrossan Harbour and a residential area adjacent to Auchendarvie Golf Course.

It should be noted that along the coastline there may be an additional level of risk due to wave overtopping which was not taken into account at the modelling stage of this assessment. As a consequence areas at risk of flooding may not have been identified.

There is the potential for interaction between sources of flooding within the area which may affect the A78 and land adjacent to the RSPB reserve.

Residential properties affected by surface water flooding experience the highest economic impact at approximately 40% of the damages. Non-residential properties also provide a substantial portion of the damages.

Within this Potentially Vulnerable Area it is estimated that climate change will increase the number of residential properties at risk of flooding from approximately 960 to 2,000 and the number of non-residential properties from approximately 380 to 710.

Most of the impacts are within Largs, Ardrossan, Saltcoats and Stevenston with a number of different receptors impacted. The A78 is at risk of flooding at various locations including Fairlie and Ardrossan.

Further details of the risk of flooding to people and property, as well as to community facilities, utilities, the transport network, designated sites and agricultural land is available in the Flood Risk Management Strategy for Ayrshire, Largs to Stevenston Potentially Vulnerable Area 12/03.

[http://apps.sepa.org.uk/FRMStrategies/pdf/pva/PVA\\_12\\_03\\_Full.pdf](http://apps.sepa.org.uk/FRMStrategies/pdf/pva/PVA_12_03_Full.pdf)

### **Objectives to reduce flooding in the Potentially Vulnerable Area 12/03**

Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. The objectives below have been set for Largs to Stevenston Potentially Vulnerable Area:

- Reduce the physical or disruption risk related to the transport network for rail (ID 12300)
- Reduce the economic damages and risk to people from surface water flooding in Kilwinning, Saltcoats, Ardrossan and Stevenston (ID 12041)
- Avoid an overall increase in flood risk (ID 12039)
- Reduce overall flood risk (ID 12082)
- Organisations such as Scottish Water, energy companies and Historic Environment Scotland actively maintain and manage their own assets, including the risk of flooding. These actions are not detailed further in the Flood Risk Management Strategies.

## Summary of flooding actions

Actions describe where and how flood risk will be managed. These actions have been set by SEPA and agreed with flood risk management authorities following consultation.

Selection of actions to deliver the agreed objectives was based on a detailed assessment and comparison of economic, social and environmental criteria. The actions shaded and then described below have been selected as the most appropriate for Largs to Stevenston Potentially Vulnerable Area.

### Selected actions

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

The delivery of selected actions by year over the six-year plan cycle is summarised below.

### Delivery of selected actions

Year 1 (2016/17)	Year 2 (2017/18)	Year 3 (2018/19)	Year 4 (2019/20)	Year 5 (2020/21)	Year 6 (2021/22)
Fairlie Keppen Burn Flood Protection Works					
Gogo Flood Protection Study					
Shoreline Management Plan					
Surface Water Management Plan					
Integrated Catchment Study					

The Maintain flood warning, Maintain flood protection scheme, Strategic mapping and modelling, Awareness Raising, Emergency Plans/response, Flood Forecasting, Self help, Maintenance and Planning policies will be delivered continuously throughout the 6 year cycle between 2016 and 2021.

### Actions to manage flooding in Potentially Vulnerable Area 12/03

<b>Action (ID):</b>	<b>FLOOD PROTECTION SCHEME/WORKS (120060006)</b>
<b>Objective (ID):</b>	Reduce the risk of river flooding to residential properties and non-residential properties in Fairlie (12006)
<b>Delivery lead:</b>	Transport Scotland and Network Rail
<b>Action Description:</b>	North Ayrshire Council, Transport Scotland and Network Rail are all working in partnership on the Keppen Burn Culvert upgrade. All three organisations have an approved prioritised worklist for the next 3-5 years based on the organisations own objectives and funding availability. The Keppen Burn Culvert upgrade will be assessed by all three organisations separately and will fit into the already prioritised worklist. The sequence of construction also depends on technical principles therefore close coordination of the three organisations and sufficient commitment for the construction by all parties are essential to progress on site.
<b>Timing and status:</b>	Detailed design is in the final stage, depends on the three organisations funding availability, construction will commence between 2016-2021
<b>Funding:</b>	The project will be funded through each organisations capital and/or revenue budgets provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will coordinate with Network Rail and Transport Scotland, SEPA, Scottish Water, local residents, utility providers and other stakeholders identified through the development of the scheme.
<b>Potential Environmental Impacts:</b>	Flood protection schemes can have both positive and negative impacts on the ecological quality of the environment depending on how they are designed. Further impacts will be assessed by the local authority.

<b>Action (ID):</b>	<b>FLOOD PROTECTION SCHEME/WORKS (12300021)</b>
<b>Objective (ID):</b>	Reduce the physical or disruption risk related to the transport network for rail. (12300)
<b>Delivery lead:</b>	Network Rail
<b>Action Description:</b>	Network Rail will carry out civil engineering work which will reduce flood risk to identified sections of the rail network within this area.
<b>Timing and status:</b>	2019 -2024
<b>Funding:</b>	The Network Rail Initial Industry Plan will include a bid to carry out drainage work associated with FRMS actions for the period 2019 to 2024. Delivery of FRMS actions will be prioritised in accordance with allocated funding.
<b>Coordination:</b>	Delivery of Actions during CP6 (Control Period 6) 2019 to 2014 will be coordinated with appropriate Responsible Authorities and project

<b>Coordination:</b>	partners.
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<b>Action (ID):</b>	<b>FLOOD PROTECTION STUDY (121030005)</b>
<b>Objective (ID):</b>	Reduce the risk of river and coastal flooding to residential properties in Largs (12004)
<b>Delivery lead:</b>	North Ayrshire Council
<b>Action Description:</b>	The Ayrshire Shoreline Management Plan is currently under development by North and South Ayrshire Councils who are working in partnership to complete this study by 2021. The objective of this study is to provide North and South Ayrshire Council with a document to outline the long term 100 years management of the Ayrshire Coastline and inform Planning and policy makers on the coastal change processes. It will be used when setting priorities for coastal defence management. It will take into account the issues of public safety, the preservation of property and infrastructure, the preservation (and where possible the enhancement) of the environment and the likely costs of defence management along a coastline. This report will provide an understanding of the processes shaping the coast, based on a mixture of geomorphological analysis, interpretation of available data in waves, tides, movements of beach sediment and past shoreline changes. This study is not limited to Potentially Vulnerable Areas but should cover the whole of the Ayrshire coastline and any areas beyond this which may be influenced by changes in coastal processes.
<b>Timing and status:</b>	The Ayrshire Shoreline Management Plan is started in the of 2015 and expected to be developed by mid 2018. As part of the Ayrshire SMP, which is currently underway, a gap study for the North Ayrshire Mainland is currently progressing, which will assess the Coastal processes and sediment movement along the shore. The recommendation of the report will be considered in the wider SMP study.
<b>Funding:</b>	This study will be funded through North Ayrshire Council's revenue budget provided by Scottish Government.
<b>Coordination:</b>	The list of statutory bodies and key stakeholders are identified through the scoping stage of the process approved by the Steering Group, led by North Ayrshire Council.
<b>Potential Environmental Impacts:</b>	Flood protection studies will consider the positive and negative impacts of proposed actions on the ecological quality of the environment. This study is proposed for the coastline. Irvine Bay (water body ID 200021), within this study area, is identified by river basin management planning to be at less than good status. Opportunities to improve the condition of the estuary will be considered by coordinating with river basin management planning.

<b>Action (ID):</b>	<b>FLOOD PROTECTION STUDY (120040005)</b>
<b>Objective (ID):</b>	Reduce the risk of river and coastal flooding to residential properties in Largs (12004)
<b>Delivery lead:</b>	North Ayrshire Council

<b>Action Description:</b>	<p>A study is planned to further investigate the river and coastal flood risk in Largs and if there is significant interaction between the two. The study will look at updating the existing modelling on the Gogo Water, and further investigate enhancing and extending the existing coastal defences.</p> <p>The Ayrshire Shoreline Management Plan (SMP) (action 12103005) will also cover Largs and will be used to provide background information for this study. As part of the Gogo Water Flood Risk Assessment, the opportunities to explore the natural flood management aspect will be looked at. As part of the Ayrshire SMP, which is currently underway, a gap analysis for the North Ayrshire Mainland is currently progressing which will assess the coastal processes and sediment movement along the shore. The recommendation of the report will be considered in the wider SMP study.</p>
<b>Timing and status:</b>	The Gogo Water hydraulic model update is underway. Information from the Shoreline Management Plan will feed into this study, which will not be expected to commence before 2017.
<b>Funding:</b>	This study will be funded through North Ayrshire Council's revenue budget provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will coordinate with SEPA, Scottish Water, Scottish Natural Heritage, landowners and other stakeholders identified through the development of the various studies related to this area.
<b>Potential Environmental Impacts:</b>	Flood protection studies will consider the positive and negative impacts of proposed actions on the ecological quality of the environment. There are no international, national or local level environmental designations that are likely to be impacted by this action. There is likely to be a loss of natural and semi-natural habitat in the footprint and vicinity of the defences. There is the potential for negative impacts on local water quality and disturbance to flora and fauna in Largs Bay and at the downstream end of the Gogo Water during the construction period. There is the potential for negative impacts to the numerous listed buildings in the area, and their setting, in particular the public fountain, the War Memorial and the harbour.

<b>Action (ID):</b>	<b>SURFACE WATER PLAN/STUDY (120411018)</b>
<b>Objective (ID):</b>	Reduce the economic damages and risk to people from surface water flooding in Kilwinning, Saltcoats, Ardrossan and Stevenston (12041)
<b>Delivery lead:</b>	North Ayrshire Council
<b>Action Description:</b>	<p>North Ayrshire Council will develop a surface water management plan or plans to cover Kilwinning, Saltcoats, Ardrossan and Stevenston which set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives.</p> <p>Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data (as applicable) and outputs of the Stevenston Point integrated catchment study and Section 16 modelling, to assist with the surface water management planning process.</p>

<b>Timing and status:</b>	A surface water management plan for these areas will be developed between 2016 and 2021.
<b>Funding:</b>	This study will be funded through North Ayrshire Council's revenue budget provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will co-ordinate the preparation of a surface water management plan in partnership with other responsible authorities. Scottish Water will work with local authorities and support surface water management planning through ensuring that best available knowledge and data is used to input into the surface water management plans.

<b>Action (ID):</b>	<b>SURFACE WATER PLAN/STUDY (120411019)</b>
<b>Objective (ID):</b>	Reduce the economic damages and risk to people from surface water flooding in Kilwinning, Saltcoats, Ardrossan and Stevenston (12041)
<b>Delivery lead:</b>	Scottish Water in partnership with North Ayrshire Council
<b>Action Description:</b>	An integrated catchment study covering the Stevenston Point catchment will be carried out to support the surface water management planning process in Kilwinning, Saltcoats, Ardrossan and Stevenston. The study 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 the sea. To date, all timescale, agreements and funding between Scottish Water and the Local Authorities will take the studies through the Scoping and Modelling phases which culminates in defining the flooding issues in the catchment. It is expected that the integrated catchment study partnerships will remain and anticipated that the Optioneering phase will be initiated directly after the preceding phases.
<b>Timing and status:</b>	Scoping for the Stevenston Point integrated catchment study began in 2016 and the report of the modelling phase will be completed by 2019.
<b>Funding:</b>	This project is being funded by Scottish Water in partnership with North Ayrshire Council. Scottish Water funding is committed in its capital programme through Q&S 4a (2015-2021) which is approved by its regulators and customers. North Ayrshire Council is funding this project from their revenue budget provided by Scottish Government.
<b>Coordination:</b>	Scottish Water will work collaboratively with project partners throughout the studies. Scottish Water will provide project partners with the outputs of the integrated catchment study which, where relevant, may be used to inform surface water management plans.

<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (120820016)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	SEPA

<b>Action Description:</b>	SEPA will seek to develop flood mapping in the Ayr to Ardrossan area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping and data availability. Where this work coincides with local authority studies, SEPA will work collaboratively to ensure consistent modelling approaches are applied. The coastal mapping and modelling process will start in 2016, with early work focussing on methodology development and data collection. Once this stage has been completed a thorough review will be carried out to identify the final mapping improvements that can be made in the area.
<b>Timing and status:</b>	The coastal strategic mapping and modelling will begin in 2016 and will be completed by 2019.
<b>Funding:</b>	SEPA's strategic mapping and modelling activities are funded by Scottish Government through SEPA's grant in aid settlement.
<b>Coordination:</b>	SEPA's strategic mapping activities will be co-ordinated with the activities of other responsible authorities as required.

<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (120820019)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	Scottish Water
<b>Action Description:</b>	Scottish Water will undertake further investigation and modelling in the Largs and Stevenston Point sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.
<b>Timing and status:</b>	This project will commence in 2018 and will be completed in 2020.
<b>Funding:</b>	Scottish Water funding is committed in its capital programme through Q&S 4a (2015-2021) which is approved by its regulators and customers.
<b>Coordination:</b>	Scottish Water will work with responsible authorities to incorporate relevant information into these studies and by regularly keeping the responsible authorities informed of their progress. Scottish Water will provide responsible authorities with the outputs of the Section 16 assessment which, where relevant, may be used to inform surface water management plans and SEPA flood hazard and risk maps.

<b>Action (ID):</b>	<b>MAINTAIN FLOOD PROTECTION SCHEME (120040017)</b>
<b>Objective (ID):</b>	Reduce the risk of river and coastal flooding to residential properties in Largs (12004)
<b>Delivery lead:</b>	North Ayrshire Council
<b>Action Description:</b>	Largs Flood Protection Scheme was constructed in 2002 and consists of a concrete seawall from Old Fish Quay to Gogo Water. This scheme provides protection to the area up to a 200 year flood. The Gogo Street Flood Protection Scheme was completed in 2013 to

	mitigate flooding from the Gogo Water to a standard of protection of a 1 in 75 year flood. North Ayrshire Council will continue to inspect and maintain these schemes, which will continue to manage flooding according to the design standard at the time of construction. The Largs Flood Protection Scheme has an annual inspection regime and in every 6 years a principal inspection will be carried out to ensure integrity and peak efficiency. The sea defences will be maintained as part of the Council's coastal asset management programme. The inspection works for the Gogo Street Flood Protection scheme will be scheduled as part of the Council's duties in accordance with Sections 18 of the Flood Risk Management (Scotland) Act 2009. If the defences remain the same, levels of flood risk are likely to increase over time as a consequence of climate change.
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	The maintenance of flood protection scheme will be funded through North Ayrshire Council's Revenue Budget provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will work in coordination with all appropriate stakeholders identified through the inspection and maintenance process.

<b>Action (ID):</b>	<b>MAINTAIN FLOOD PROTECTION SCHEME (120090017)</b>
<b>Objective (ID):</b>	Reduce the risk of coastal flooding to residential properties in Ardrossan, Saltcoats and Stevenston (12009)
<b>Delivery lead:</b>	North Ayrshire Council
<b>Action Description:</b>	Saltcoats Flood Protection Scheme was constructed in 2006 and consists of breakwaters, seawalls and flood banks at Outer Nebbock. This scheme provides protection to the area up to a 200 year flood. North Ayrshire Council will continue to inspect and maintain the Saltcoats coastal flood defences, which will continue to manage flooding according to the design standard at the time of construction. The Saltcoats Flood Protection Scheme has an annual inspection regime and in every 6 years a principal inspection will be carried out to ensure integrity and peak efficiency. The sea defences will be maintained as part of the Council's coastal asset management programme. If the defences remain the same, levels of flood risk are likely to increase over time as a consequence of climate change.
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	The maintenance of flood protection scheme will be funded through North Ayrshire Council's Revenue Budget provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will work in coordination with all appropriate stakeholders identified through the inspection and maintenance process.

<b>Action (ID):</b>	<b>MAINTAIN FLOOD WARNING (120820030)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	SEPA
<b>Action Description:</b>	SEPA will continue to maintain the Largs Fort Street, Largs Seafront and Saltcoats Harbour flood warning areas, which are part of the Firth of Clyde coastal flood warning scheme. When flood events occur in an area with a flood warning service, SEPA will seek to verify and validate the warning service. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	The maintenance of SEPA's flood warning service is funded by Scottish Government through SEPA's grant in aid settlement.
<b>Coordination:</b>	A flood protection scheme for Fairlie and a flood protection study for Largs are proposed in this PVA. SEPA will work with the local authority to ensure that changes to hydrology and flood risk as a result of the proposed flood protection scheme and any new information about flood risk resulting from the proposed flood protection study are fully considered in the existing flood warning system.

<b>Action (ID):</b>	<b>FLOOD FORECASTING (120820009)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	SEPA
<b>Action Description:</b>	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA's website.
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	SEPA's flood forecasting service is funded through Scottish Government's grant in aid allocation. The Met Office receives funding from the UK Government.
<b>Coordination:</b>	SEPA / Met Office joint initiative. Hydrological information is provided by SEPA and meteorological information is provided by the Met Office. SEPA uses the information to predict the likelihood and timing of river, coastal and surface water flooding.

<b>Action (ID):</b>	<b>SELF HELP (120820011)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	—
<b>Action Description:</b>	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage. The Councils, SEPA and Scottish Water will continue to engage with responsible authorities and all other stakeholders, including community groups and the public to raise awareness of flood risk and how those affected can be better prepared. Further detail can be found in the Councils and Scottish Flood Forum websites.
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	Individual property owners have a responsibility to prevent flooding to their properties, therefore there is no fund allocated to this task in the Council's budget.
<b>Coordination:</b>	The Councils, SEPA and Scottish Water will continue to engage with responsible authorities and all other stakeholders, including community groups and the public to raise awareness of flood risk and how those affected can be better prepared.

<b>Action (ID):</b>	<b>AWARENESS RAISING (120820013)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	Responsible authorities
<b>Action Description:</b>	<p>North Ayrshire Council, SEPA and Scottish Water collectively work to raise awareness of flood risk and how those affected can be better prepared. Most recently in April /May 2015, as part of the Draft Flood Risk Management Strategy Public Consultation, the Council and SEPA gave residents in 7 towns, including Saltcoats, the opportunity to meet and discuss the Strategy and raise awareness of the SEPA Coastal Flood Warning Scheme.</p> <p>Across Scotland, SEPA will create and share communication and education resources with other responsible authorities. These resources will include awareness campaigns, media and marketing activity and promotion of SEPA's flood forecasting and warning services (Floodline). For the new flood protection scheme, SEPA will support the local authority's communications and engagement activities with media activity, local public awareness events and education engagement with schools. SEPA will also deliver joint communications with local authorities for Floodline customers in any newly protected flood warning area.</p>

	<p>Scottish Water will provide targeted flooding communications for Scottish Water specific activities and raise awareness by producing and supplying targeted information to the public on large capital projects and detailed local studies.</p> <p>Further Information is provided on North Ayrshire Council, SEPA and Scottish Water websites.</p>
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	<p>North Ayrshire Council's awareness raising activities will continue to be funded from the revenue budget provided by Scottish Government.</p> <p>SEPA's awareness raising activities are funded by Scottish Government through SEPA's grant in aid settlement. Scottish Water is funded by customer charges as set by our economic regulator. All business activities required under this action by Scottish Water are accounted for in their capital or operational expenditure.</p>
<b>Coordination:</b>	A flood protection scheme is proposed for Fairlie. North Ayrshire Council, SEPA and Scottish Water will continue to engage with responsible authorities and all other stakeholders, including community groups and the public to raise awareness of flood risk and how those affected can be better prepared.

<b>Action (ID):</b>	<b>MAINTENANCE (120820007)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	North Ayrshire Council, asset / land managers
<b>Action Description:</b>	<p>North Ayrshire Council in accordance with Section 18 of the Flood Risk Management (Scotland) Act 2009 undertake assessment of water bodies to determine whether works of clearance and repair would substantially reduce the risk of flooding. This information is used to produce a schedule of works which is available for the public to inspect.</p> <p>High risk locations such as those with screens and some smaller culverts are inspected on a scheduled basis. The majority of inspections tend to be undertaken in the winter months when flows are higher, and leaves and other waterborne debris can be an issue. Works of clearance are carried out during these inspections which are not specifically "scheduled". The main water bodies, and other water bodies, within urban areas are subject to an annual visual inspection and any works identified are scheduled in accordance with Section 59 of the Act.</p> <p>North Ayrshire Council reviews the locations at which visual inspections are undertaken based on changing circumstances. For example a new flooding issue or concern raised by a member of the public at a location will lead to officers undertaking further inspection works at that location. North Ayrshire Council also works with</p>

	<p>riparian landowners to ensure that, within the constraints of the legal obligations, they manage their responsibilities in a manner which reduces flood risk.</p> <p>Scottish Water undertake risk based inspection, maintenance and repair on the public sewer network.</p>
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	The maintenance work will be funded through North Ayrshire Council's Revenue Budget provided by Scottish Government.
<b>Coordination:</b>	North Ayrshire Council will work in coordination with all appropriate stakeholders identified through the inspection and maintenance process. Scottish Water will keep responsible authorities informed of large scale capital maintenance work to identify opportunities for co-ordination.

<b>Action (ID):</b>	<b>EMERGENCY PLANS/RESPONSE (120820014)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082)
<b>Delivery lead:</b>	Category 1 and 2 Responders
<b>Action Description:</b>	<p>The Civil Contingencies Team ensures that the Council will be able to respond speedily and effectively in a major emergency. North, South and East Ayrshire teams are a shared service team known as the Ayrshire Civil Contingencies Team. If disaster strikes, or if emergencies develop in Ayrshire, communities will look to the Council for support and advice. The Ayrshire Civil Contingencies Team ensures that the Council will be able to respond speedily and effectively in a major emergency in accordance with the Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Regulations 2005. Our responsibilities include preparing comprehensive and robust contingency plans and procedures irrespective of the nature of the emergency. The main aim is to preserve life and property. Every emergency plan also sets out to: Mitigate the harmful effects of the emergency on the environment; bring about a swift return to normal life in the communities and environment affected; and encourage all agencies and organisations to prepare for their role.</p>
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	Funding is allocated to category 1 and 2 responders by the Scottish Government for dealing with emergency response and in extreme cases may reimburse responders after an extreme event.
<b>Coordination:</b>	<p>Category 1 and 2 responders will coordinate in the development of the Emergency Response Plan and actions during a flood event.</p> <p>When civil contingencies come into force Police Scotland co-ordinate category 1 and 2 responders in severe flood events.</p>

<b>Action (ID):</b>	<b>PLANNING POLICIES (120390001)</b>
<b>Objective (ID):</b>	Reduce overall flood risk (12082) Avoid an overall increase in flood risk (12039)
<b>Delivery lead:</b>	Planning authority
<b>Action Description:</b>	<p>North Ayrshire Council adopted its first and current Local Development Plan (LDP) on 20 May 2014. The plan plays an important part in reducing the vulnerability of existing and future development to flooding. Through Policy PI8: Drainage, SUDS and Flooding and in accordance with the Scottish Government's Scottish Planning Policy, we apply the Flood Risk Framework, or a sequential approach, to guide certain types of development to appropriate locations in terms of flood risk. We have a presumption against new development in areas of significant flood risk unless the stringent criteria in Policy PI8 can be satisfied. Planning applications received by us are individually reviewed and, if flooding is a potential and significant concern, further information is sought by consultation with the applicant, SEPA and/or the Council's Flooding &amp; Structure Design Team and, where appropriate, by submission of a flood risk assessment. Through both Policy PI8 and appropriate planning conditions, we also seek to minimise the impact of new developments on flood flow through the use of sustainable urban drainage systems. We are now reviewing the current LDP and moving toward preparation of a replacement plan or LDP2. The key stage in preparing the new plan is the Main Issues Report, anticipated for publication in January 2017. To help us prepare the MIR, we are undertaking a 'Call for Sites' exercise to identify sites within North Ayrshire that may have potential for development. We will apply the Flood Risk Framework to site selection so that development is, as far as reasonably possible, located where the risk of flooding is acceptable, taking account of climate change and the vulnerability of future uses to flood risk. We also will use the strategic flood risk assessment process to inform choices about the location of development and planning policies for flood risk management. SEPA's flood risk plans and approved Flood Risk Management Strategies and Plans will also influence choices. LDP2 will cover a 10 year period, starting from 2019 when the new plan is likely to be adopted.</p> <p>Scottish Water is a statutory consultee within the planning legislation and is required to comment on all outline or full planning applications which are referred by a local authority.</p> <p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the application of national planning policies see SEPA's Strategy.</p>

	<p>SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 72 of the FRM Act, 2009. SEPA also has a duty to co-operate with planning authorities in the preparation of development plans. When consulted in relation to planning applications for development or site allocations in development plans, and where the planning authority considers there may be a risk of flooding, SEPA will provide advice. The advice provided by SEPA will be with respect to the risk of flooding and on the basis of the relevant information it holds which is suitable for planning purposes. It will also be in line with the principles and duties set out in the FRM Act. Further information about how SEPA engage in the planning system, including guidance on flood risk and planning is available on SEPA's website <a href="http://www.sepa.org.uk/environment/land/planning/">http://www.sepa.org.uk/environment/land/planning/</a>.</p>
<b>Timing and status:</b>	Ongoing
<b>Funding:</b>	<p>The development and review of three Council's Planning Policies and Guidance notes will be funded through North Ayrshire Council's revenue budget provided by Scottish Government. SEPA's land use planning activities are funded by Scottish Government through SEPA's grant in aid settlement.</p>
<b>Coordination:</b>	<p>North Ayrshire Council's and SEPA's land use planning activities will be co-ordinated with the activities of other responsible authorities as required.</p>