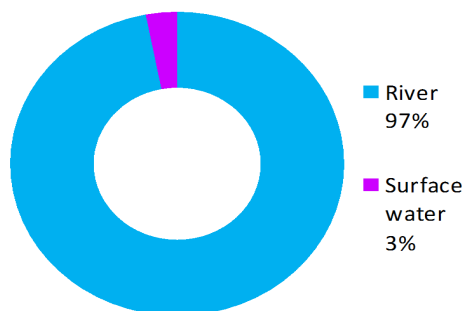


## New Cumnock (Candidate Potentially Vulnerable Area 14/26c)

Local Plan District	Local authority	Main catchment
Solway	Dumfries and Galloway Council, East Ayrshire Council	River Nith

### Summary of flooding impacts



#### At risk of flooding

- 240 residential properties
- 60 non-residential properties
- £520,000 Annual Average Damages

(damages by flood source shown left)

Summary of flooding impacts

### Summary of objectives to manage flooding

Objectives have been set by SEPA and agreed with flood risk management authorities. These are the aims for managing local flood risk. The objectives have been grouped in three main ways: by reducing risk, avoiding increasing risk or accepting risk by maintaining current levels of management.

Many organisations, such as Scottish Water and energy companies, actively maintain and manage their own assets including their risk from flooding. Where known, these actions are described here. Scottish Natural Heritage and Historic Environment Scotland work with site owners to manage flooding where appropriate at designated environmental and/or cultural heritage sites. These actions are not detailed further in the Flood Risk Management Strategies.

Objectives

### Summary of actions to manage flooding

The actions below have been selected to manage flood risk.

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

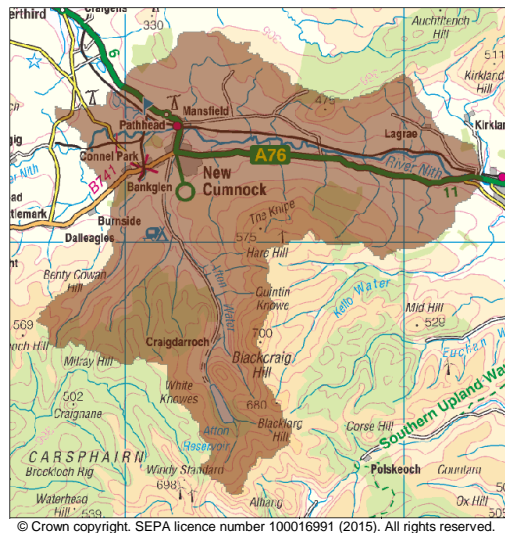
Actions

# New Cumnock (Candidate Potentially Vulnerable Area 14/26c)

Local Plan District	Local authority	Main catchment
Solway	Dumfries and Galloway Council, East Ayrshire Council	River Nith

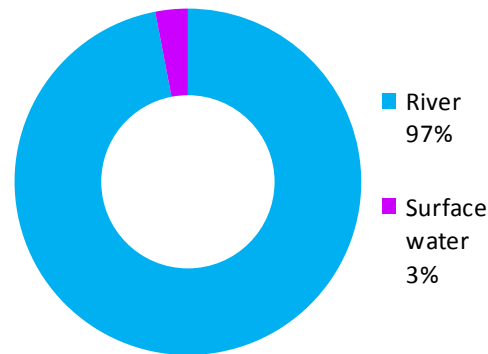
## Background

This candidate Potentially Vulnerable Area covers an area in the River Nith catchment. It is approximately 120km<sup>2</sup> and includes the town of New Cumnock (shown below).



There are approximately 240 residential properties and 60 non-residential properties at risk of flooding.

The Annual Average Damages are £520,000.



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

## Summary of flooding impacts

This area was not originally identified as a Potentially Vulnerable Area in 2011. However, updated information on flood risk from the new hazard maps identified that this area should be regarded as a candidate Potentially Vulnerable Area due to the risk to people and properties.

River flooding presents the greatest risk to residential properties in New Cumnock as well as to transport links, notably the A76 and B741. The River Nith flows from the west of the area through New Cumnock before flowing east toward Kirconnel. The Afton Water and Connel Burn both flow from the south of the area toward New Cumnock where they join the River Nith. These are generally steep catchments which flatten out close to New Cumnock where there is a risk of flooding to residential properties.

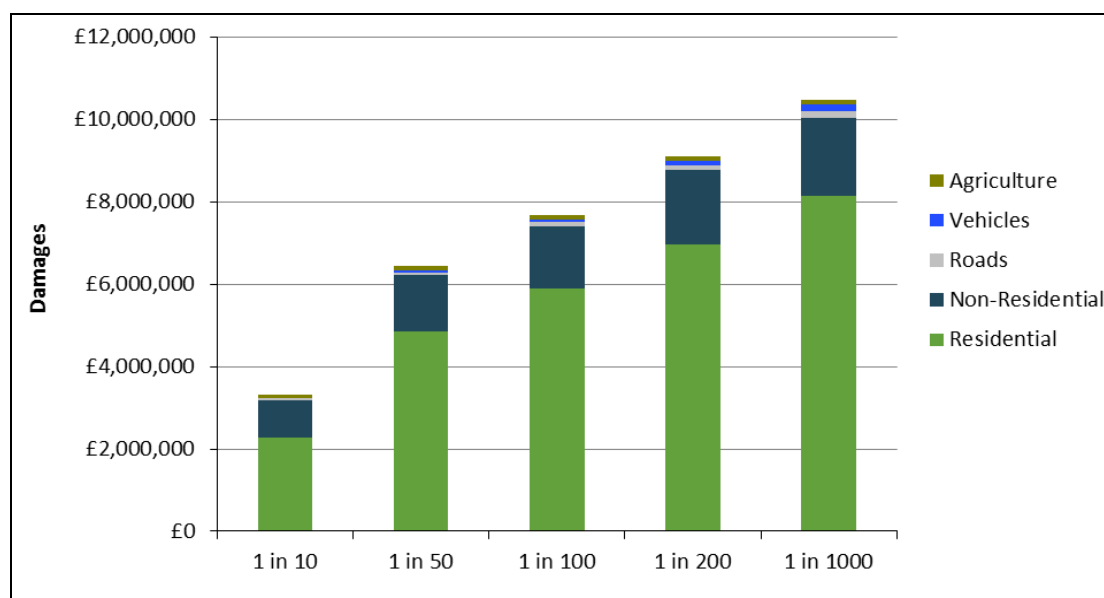
Within this Potentially Vulnerable Area it is estimated that climate change will increase the number of residential properties at risk of flooding from approximately 240 to 290 and the number of non-residential properties from approximately 60 to 70.

The risk of flooding to people and property, as well as to community facilities, utilities, the transport network, designated sites and agricultural land is summarised in Table 1. The damages associated with floods of different likelihood are shown in Figure 2. Residential properties affected by river flooding experience the highest economic impact at approximately 85% of the damages.

The location of the impacts of flooding is shown in Figure 3. Most of the receptors at risk of flooding lie within New Cumnock.

	1 in 10	1 in 200	1 in 1000
	High likelihood	Medium likelihood	Low likelihood
Residential properties (total 1,800)	80	240	270
Non-residential properties (total 230)	20	60	70
People	180	530	600
Community facilities	<10 Healthcare facilities	<10 Healthcare facilities	<10 Healthcare facilities
Utilities assets	0	<10	<10
Transport links - roads (km)	0.7 (of which 0.3 is A road)	1.3 (of which 0.8 is A road)	1.6 (of which 1.0 is A road)
Transport links - rail (km)	2.0	2.6	3.1
Environmental designated areas (km <sup>2</sup> )	0	0	0
Designated cultural heritage sites	0	0	0
Agricultural land (km <sup>2</sup> )	4.7	5.5	5.7

**Table 1:** Summary of flood impacts<sup>1</sup>



**Figure 2:** Damage by flood likelihood

<sup>1</sup> Some receptors are counted more than once if flooded from multiple sources

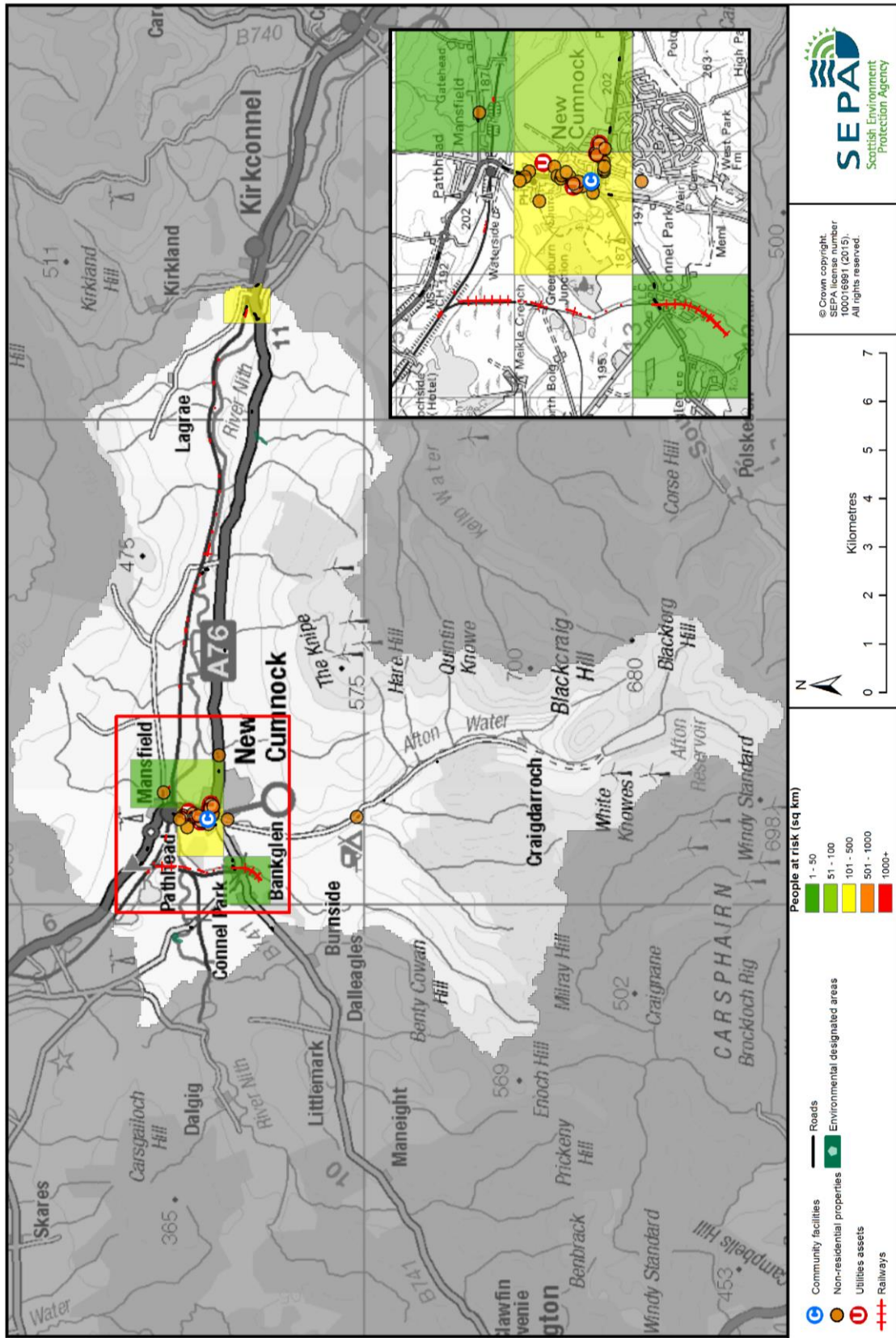


Figure 3: Impacts of flooding

## History of flooding

There are several incidents of flooding reported in the area and the majority of these are from river flooding.

The most notable floods were in December 2013 and January 2014 when the River Nith caused flooding to land around the football grounds within New Cumnock and the A76. The Afton Water caused flooding in December 2013 where it overtopped its banks at Afton Bridge, inundating residential and non-residential properties, flowing down the A76 and ponding at Dalhanna Drive. The same flood also affected community facilities. The Connel Burn flooded in December 2013 when waters overtopped both banks onto the adjacent disused railway line and flowed onto Knock Shinnock Road. This effectively cut off New Cumnock.

Flooding from the Connel Burn in January 2010 resulted in residential properties and gardens being inundated and the B741 was closed. New Cumnock was flooded in December 1994 from the River Nith due to a blocked culvert.



## Objectives to manage flooding in Potentially Vulnerable Area 14/26c

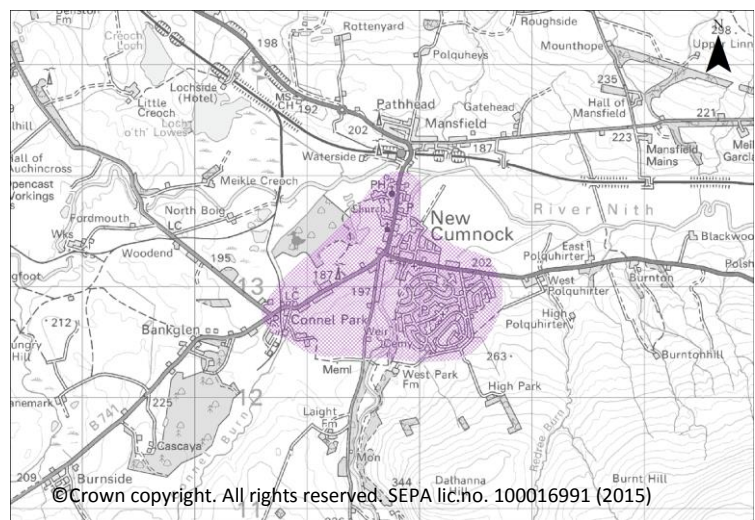
Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. They were identified through an assessment of the underlying evidence of the causes and impacts of flooding. Target areas have been set to focus actions; they do not necessarily correspond to areas at risk in SEPA's flood map. The objectives below have been set for New Cumnock Candidate Potentially Vulnerable Area.

### Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock

Indicators:

Target area:

- 240 residential properties
- 60 non-residential properties
- £460,000 Annual Average Damages



Objective ID: 14039

Target area	Objective	ID	Indicators within PVA
Applies across Solway Local Plan District	Avoid an overall increase in flood risk	14033	<ul style="list-style-type: none"> <li>• 240 residential properties</li> <li>• £520,000 Annual Average Damages</li> </ul>
Applies across Solway Local Plan District	Reduce overall flood risk	14040	<ul style="list-style-type: none"> <li>• 240 residential properties</li> <li>• £520,000 Annual Average Damages</li> </ul>
Applies across Solway Local Plan District	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.		

## Actions to manage flooding in Potentially Vulnerable Area 14/26c

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 New Cumnock Candidate Potentially Vulnerable Area.

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

<b>Action (ID):</b>	<b>FLOOD PROTECTION SCHEME/WORKS (140390006)</b>				
<b>Objective (ID):</b>	Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock (14039)				
<b>Delivery lead:</b>	East Ayrshire Council				
<b>Priority:</b>	National:		Within local authority:		
	<b>27 of 42</b>		<b>1 of 1</b>		
<b>Status:</b>	<b>Under development</b>	Indicative delivery:	<b>2016-2021</b>		
<b>Description:</b>	It is recommended that the council progress work on the proposed flood protection scheme in New Cumnock. Previous flooding and the New Cumnock Flood Study have shown a risk of flooding in the area and identified actions that would help mitigate the risk, including construction of flood defences along the Afton Water and Connel Burn and sediment management along the Afton Water.				
<b>Potential impacts</b>					
<b>Economic:</b>	The proposed scheme may benefit 95 residential and non-residential properties at risk of flooding in this location, damages avoided are estimated to be £4 million. The flood protection scheme has an estimated benefit cost ratio of 1.2.				
<b>Social:</b>	A reduction in flood risk would have a positive benefit to the health and wellbeing of the community. In addition there are three utilities which have been identified as potentially benefitting from this action. There may be changes in visual amenity and land use as a result of this action.				
<b>Environmental:</b>	Flood protection schemes can have both positive and negative impacts on the ecological quality of the environment depending on how they are designed. There are no international or national level environmental designations that are likely to be directly impacted by				

<b>Environmental:</b>	<p>this action. There is likely to be a loss of natural and semi-natural habitat in the footprint and vicinity of the direct defences. Downstream of the areas where conveyance is modified there may be slight negative impacts on water quality through increased erosion and sedimentation on the Afton Water and River Nith. There will be a loss of habitat and displacement of species where engineering works are undertaken; however, these habitats may re-establish and species return following works.</p>
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<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (140400016)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Not started</b>	<b>Indicative delivery:</b>	<b>2016-2021</b>
<b>Description:</b>	SEPA will seek to develop flood mapping in the Upper River Nith to improve understanding of 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.		

<b>Action (ID):</b>	<b>MAINTAIN FLOOD WARNING (140390020)</b>		
<b>Objective (ID):</b>	Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock (14039)		
<b>Delivery lead:</b>	East Ayrshire Council		
<b>Status:</b>	<b>Existing</b>	<b>Indicative delivery:</b>	<b>Ongoing</b>
<b>Description:</b>	East Ayrshire Council have a flood warning system for New Cumnock which monitors levels on the River Nith, Afton water and Connel Burn.		

<b>Action (ID):</b>	<b>FLOOD FORECASTING (140400009)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Existing</b>	<b>Indicative delivery:</b>	<b>Ongoing</b>
<b>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>Action (ID):</b>	<b>PROPERTY LEVEL PROTECTION SCHEME (140390008)</b>		
<b>Objective (ID):</b>	Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock (14039)		
<b>Delivery lead:</b>	East Ayrshire Council		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	East Ayrshire Council have implemented a property level protection scheme in New Cumnock. The council have provided the property level protection (including the installation of fixed elements) and have provided training on the use of this equipment in conjunction with the flood warning levels and appropriate actions. A flood warning system has been installed by East Ayrshire Council to support this action.		

<b>Action (ID):</b>	<b>COMMUNITY FLOOD ACTION GROUPS (140390012)</b>		
<b>Objective (ID):</b>	Reduce risk of river flooding to residential properties and non-residential properties in New Cumnock (14039)		
<b>Delivery lead:</b>	Community		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	The community has formed the New Cumnock Flood Working Party, to help raise awareness of flood risk in the area.		

<b>Action (ID):</b>	<b>SELF HELP (140400011)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	—		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>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.		

<b>Action (ID):</b>	<b>AWARENESS RAISING (140400013)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Responsible authorities		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.</p> <p>SEPA will undertake flood risk education and awareness raising activities. In addition, SEPA will engage with community resilience groups and participate in property level protection events delivered by the Scottish Flood Forum where possible.</p> <p>Local authorities will be undertaking additional awareness raising activities. Further details will be set out in the Local FRM Plan.</p>		

<b>Action (ID):</b>	<b>MAINTENANCE (140400007)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	East Ayrshire Council, asset / land managers		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules of clearance and repair works and make these available for public inspection. Scottish Water undertake inspection 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.</p>		

<b>Action (ID):</b>	<b>EMERGENCY PLANS/RESPONSE (140400014)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Category 1 and 2 Responders		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is co-ordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>		

<b>Action (ID):</b>	<b>PLANNING POLICIES (140330001)</b>		
<b>Objective (ID):</b>	Avoid an overall increase in flood risk (14033) Reduce overall flood risk (14040)		
<b>Delivery lead:</b>	Planning authority		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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 Annex 2.		