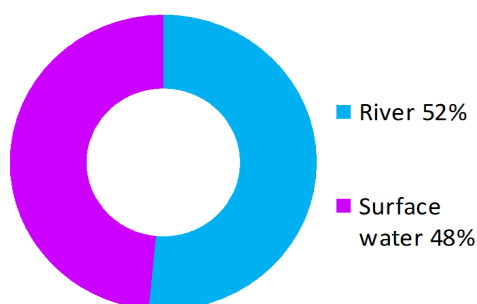


Roths and Aberlour (Potentially Vulnerable Area 05/09)

Local Plan District	Local authority	Main catchment
Findhorn, Nairn and Speyside	The Moray Council	River Spey

Summary of flooding impacts



At risk of flooding

- 350 residential properties
- 100 non-residential properties
- £390,000 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	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 plan/study	Emergency plans/response
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

Actions

Rothes and Aberlour (Potentially Vulnerable Area 05/09)

Local Planning District	Local authority	Main catchment
Findhorn, Nairn and Speyside	The Moray Council	River Spey

Background

This Potentially Vulnerable Area covers Rothes and Charlestown of Aberlour along with the surrounding rural areas (shown below). It is approximately 61km².

The main river in the area is the River Spey. There are also several smaller watercourses including the Burn of Rothes, Back Burn, and Black Burn.

Rothes Flood Protection Scheme was completed in 2011 and benefits an estimated 370 residential and 35 non-residential properties. It provides protection from flooding on the Back Burn, Burn of Rothes and the Black Burn up to a one in 100 year flood plus an allowance for climate change.

There are approximately 350 residential and 100 non-residential properties at risk of flooding. The Annual Average Damages are approximately £390,000, split between river and surface water flooding.

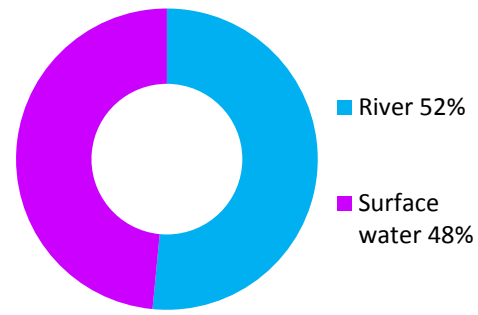
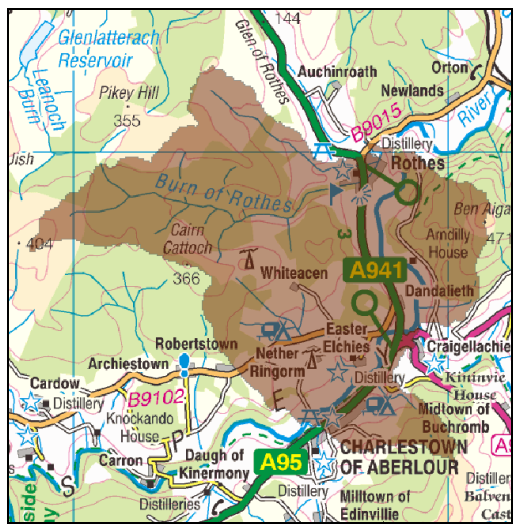


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

The Rothes Flood Protection Scheme is designed for a one in 100 year flood plus an allowance for climate change. The assessment of flood risk presented in this report takes account of the protection provided by the scheme up to and including the one in 100 year flood. No allowance is made for the residual benefits that the flood protection scheme provides for events which exceed this standard of protection. As a result the number of residential properties, non-residential properties and people reported to be at risk of river flooding in this area is considered to be overestimated. The Annual Average Damages from river flooding are also considered to be overestimated.

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 risk of flooding to utilities in Table 1 does not include Scottish Water data. Scottish Water undertook a national assessment of above ground assets at medium likelihood of flooding (including water treatment works, wastewater treatment works,

and pumping stations). Within this Potentially Vulnerable Area there is one asset identified as being at risk of flooding.

Roads potentially affected by flooding include the A941, A95 and B9102. Six designated cultural heritage sites and areas of environmental importance are at risk. These include Special Areas of Conservation and Sites of Special Scientific Interest along the River Spey.

The damages associated with floods of different likelihood are shown in Figure 2. The highest damages are to residential properties followed by non-residential properties. The location of the impacts is shown in Figure 3.

	1 in 10 High likelihood	1 in 200 Medium likelihood	1 in 1000 Low likelihood
Residential properties (total 1,200)	30	350	380
Non-residential properties (total 240)	30	100	100
People	70	780	830
Community facilities	0	0	0
Utilities assets	<10	<10	10
Transport links (excluding minor roads)	Roads at 50 locations	Roads at 80 locations	Roads at 80 locations
Environmental designated areas (km ²)	2	2	3
Designated cultural heritage sites	5	6	6
Agricultural land (km ²)	2	3	3

Table 1: Summary of flooding impacts¹

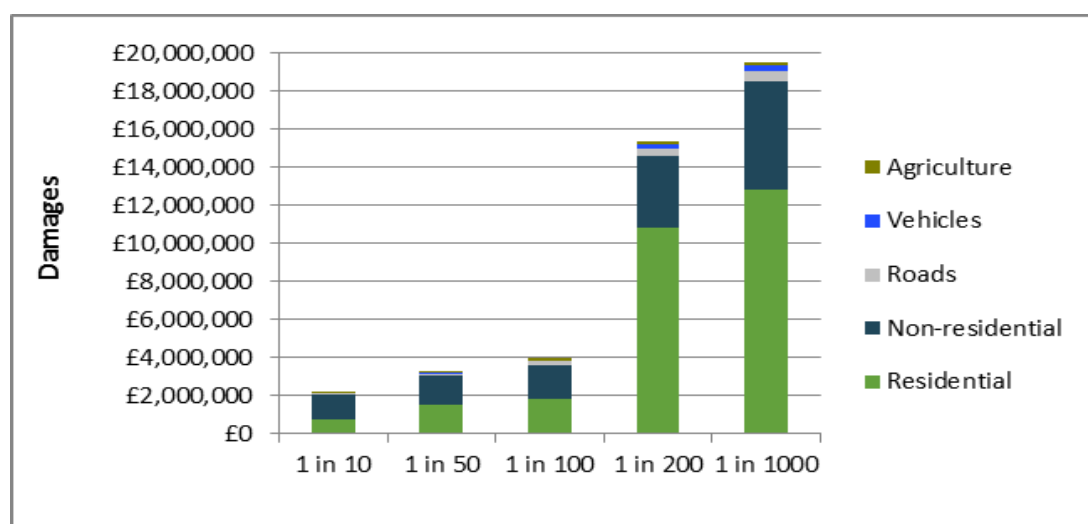


Figure 2: Damages by flood likelihood

¹ Some receptors are counted more than once if flooded from multiple sources

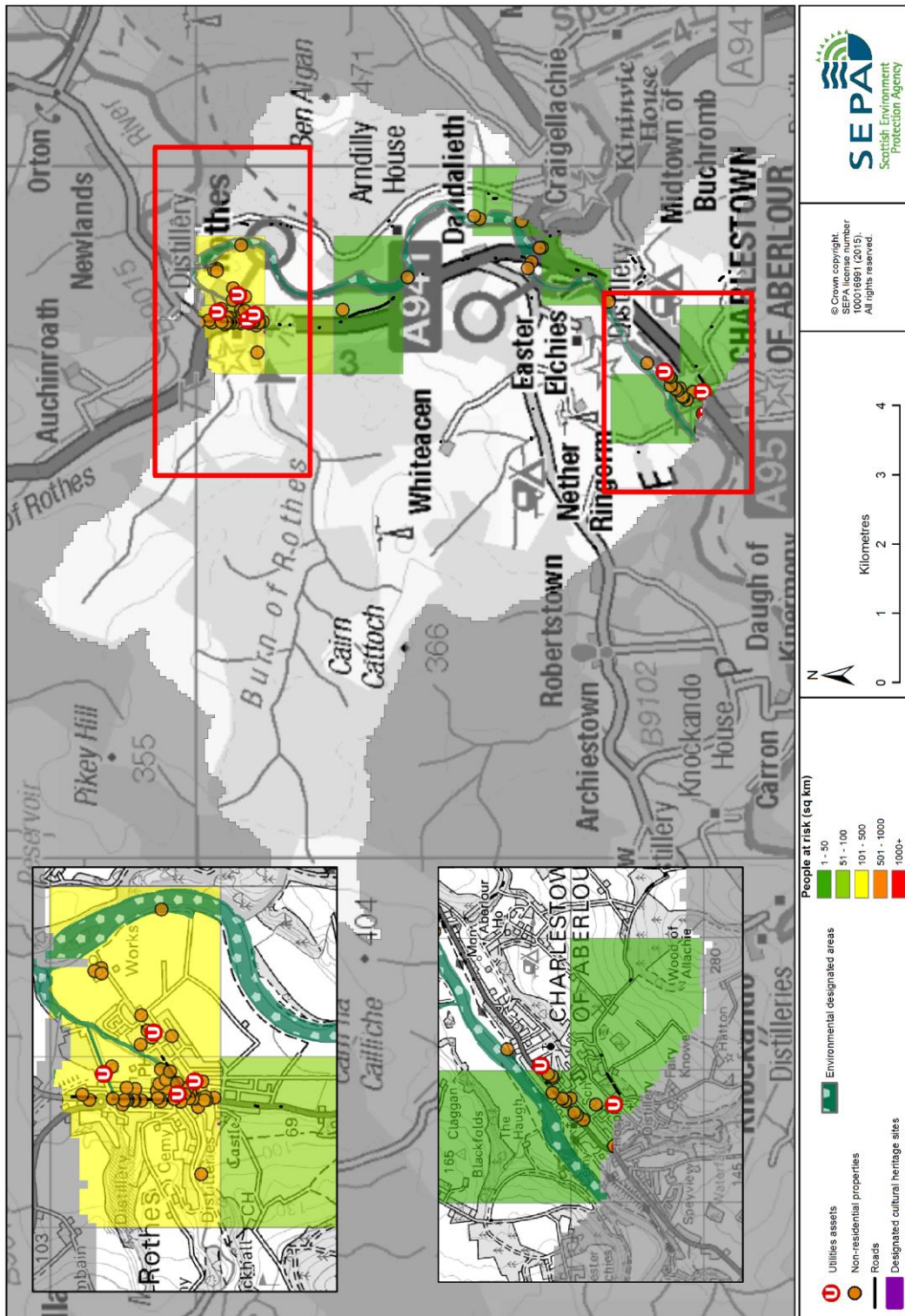


Figure 3: Impacts of flooding

History of flooding

There is a long history of flooding in Rothes from the smaller watercourses such as the Burn of Rothes, Back Burn and Black Burn. The earliest recorded flood was in 1846, when heavy rainfall damaged crops in Knockando and Rothes. Notable floods occurred more recently in 2002, 2004, 2005, 2007, and 2009.

Objectives to manage flooding in Potentially Vulnerable Area 05/09

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 Rothes and Aberlour Potentially Vulnerable Area.

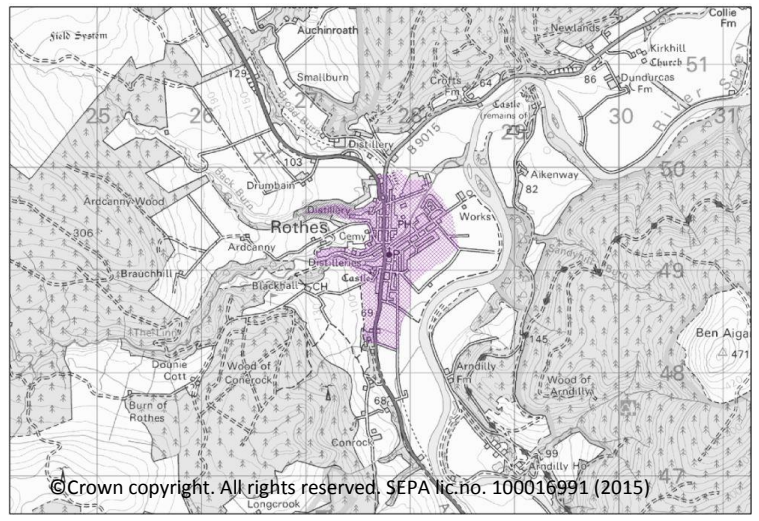
Maintain the Rothes Flood Protection Scheme and accept existing levels of flood risk from the Burn of Rothes, Back Burn and Black Burn

Indicators:

Target area:

- An estimated 800 people will continue to be protected (to a 1 in 100 year standard of protection)
- An estimated 40 non-residential properties will continue to be protected (to a 1 in 100 year standard of protection)

Objective ID: 500901



Target area	Objective	ID	Indicators within PVA
Rothies	Reduce risk of flooding to one electricity substation	5306	<ul style="list-style-type: none"> • 1 electricity sub-station
Rothies and Aberlour	Reduce risk from surface water flooding in Rothies and Aberlour	500903	* See note below
Applies across Findhorn, Nairn and Speyside Local Plan District	Avoid an overall increase in flood risk	500001	<ul style="list-style-type: none"> • 350 residential properties • £390,000 Annual Average Damages
Applies across Findhorn, Nairn and Speyside Local Plan District	Reduce overall flood risk	500002	<ul style="list-style-type: none"> • 350 residential properties • £390,000 Annual Average Damages
Applies across Findhorn, Nairn and Speyside 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.		

* This objective will be monitored using surface water flood risk across the Potentially Vulnerable Area. For 05/09 there are 60 residential properties at risk and Annual Average Damages of £190,000.

Actions to manage flooding in Potentially Vulnerable Area 05/09

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 Rothes and Aberlour Potentially Vulnerable Area.

Selected actions					
Flood protection scheme/works	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 plan/study	Emergency plans/response
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

Action (ID):	FLOOD PROTECTION SCHEME/WORKS (5306021)		
Objective (ID):	Reduce risk of flooding to one electricity substation (5306)		
Delivery lead:	Asset owner		
Status:	Under development	Indicative delivery:	2016-2021
Description:	Asset owners will carry out a flood protection works to reduce flooding to one electricity sub-station in Rothes.		

Action (ID):	SURFACE WATER PLAN/STUDY (5009030018)		
Objective (ID):	Reduce risk from surface water flooding in Rothes and Aberlour (500903)		
Delivery lead:	The Moray Council		
Status:	Ongoing	Indicative delivery:	2016-2021
Description:	The area must be covered by a surface water management plan or plans that set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives.		

Action (ID):	STRATEGIC MAPPING AND MODELLING (5000020019)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	Scottish Water		
Status:	Not started	Indicative delivery:	2016-2021
Description:	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk.		

Action (ID):	MAINTAIN FLOOD PROTECTION SCHEME (5000020017)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	The Moray Council		
Status:	Existing	Indicative delivery:	Ongoing
Description:	Continue to maintain the Aberlour Flood Protection Scheme (1991).		

Action (ID):	MAINTAIN FLOOD PROTECTION SCHEME (5009010017)		
Objective (ID):	Maintain the Rothes Flood Protection Scheme and accept existing levels of flood risk from the Burn of Rothes, Back Burn and Black Burn (500901)		
Delivery lead:	The Moray Council		
Status:	Existing	Indicative delivery:	Ongoing
Description:	Continue to maintain the Rothes Flood Protection Scheme. The existing scheme provides a 1 in 100 year standard of protection, including an allowance for climate change, to 365 residential and 35 non-residential properties.		

Action (ID):	MAINTAIN FLOOD WARNING (5000020030)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	SEPA		
Status:	Existing	Indicative delivery:	Ongoing
Description:	Continue to maintain the 'Aberlour, Craigellachie and Dandaleith' and 'Rothes' flood warning areas which form part of the Spey river flood warning scheme.		

Action (ID):	FLOOD FORECASTING (5000020009)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	SEPA		
Status:	Existing	Indicative delivery:	Ongoing
Description:	<p>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.</p> <p>The Potentially Vulnerable Area is within the 'Findhorn Nairn Moray and Speyside' flood alert area.</p>		

Action (ID):	SELF HELP (5000020011)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	—		
Status:	Existing	Indicative delivery:	Ongoing
Description:	<p>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.</p>		

Action (ID):	AWARENESS RAISING (5000020013)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	Responsible authorities		
Status:	Existing	Indicative delivery:	Ongoing
Description:	<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>From 2016 SEPA will engage with the community through local participation in national initiatives, including partnership working with Neighbourhood Watch Scotland. In addition, SEPA will engage with local authorities and community resilience groups where possible. Local authorities will be undertaking additional awareness raising activities. Further details will be set out in the Local FRM Plan.</p>		

Action (ID):	MAINTENANCE (5000020007)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	The Moray Council, asset / land managers		
Status:	Existing	Indicative delivery:	Ongoing
Description:	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.		

Action (ID):	EMERGENCY PLANS/RESPONSE (5000020014)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	Category 1 and 2 Responders		
Status:	Existing	Indicative delivery:	Ongoing
Description:	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.		

Action (ID):	PLANNING POLICIES (5000010001)		
Objective (ID):	Avoid an overall increase in flood risk (500001) Reduce overall flood risk (500002)		
Delivery lead:	Planning authority		
Status:	Existing	Indicative delivery:	Ongoing
Description:	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.		