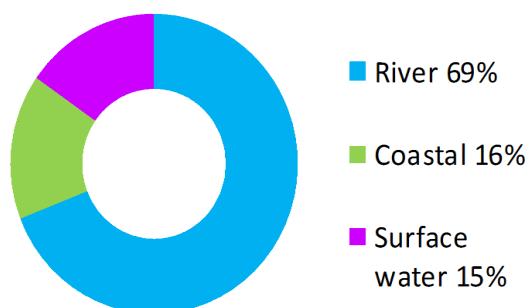


Spey Bay (Potentially Vulnerable Area 05/04)

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

Summary of flooding impacts



At risk of flooding

- 40 residential properties
- <10 non-residential properties
- £120,000 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

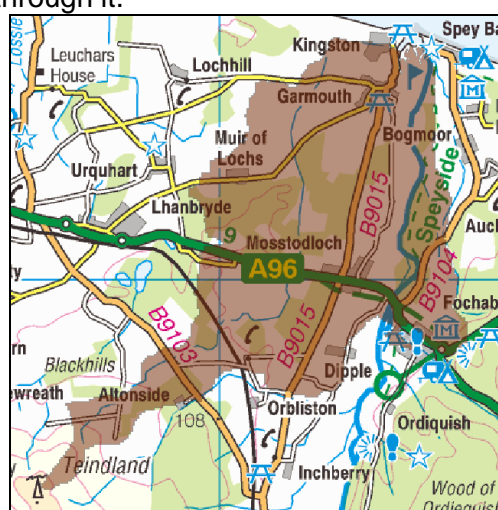
Spey Bay (Potentially Vulnerable Area 05/04)

Local Planning District	Local authority	Main catchments
Findhorn, Nairn and Speyside	The Moray Council	River Spey, Spey Bay coastal

Background

This Potentially Vulnerable Area is located south of Spey Bay on the Moray Firth (shown below). It is approximately 42km².

The River Spey flows along the eastern edge of the area and the A96 passes through it.



© Crown copyright. SEPA licence number 100016991 (2015). All rights reserved.

Garmouth, Mosstodloch and part of Kingston are located in the Potentially Vulnerable Area.

There are approximately 40 residential and fewer than 10 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £120,000 with the majority caused by river flooding.

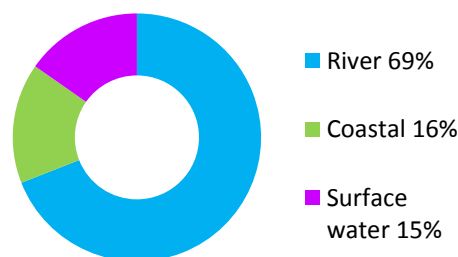


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

The main risks of river and coastal flooding in area are associated with the floodplain of the River Spey east of Garmouth and the tidal reaches around Spey Bay. The coastline is particularly dynamic in the vicinity of Spey Bay with episodes of erosion and accretion occurring in response to spates on the River Spey and to coastal storms.

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.

Roads at risk of flooding include the A96, B9015 and B9104. Of particular concern is that Kingston can be cut off from the rest of the area due to flooding of the access road to and from the village. Five stretches of the Elgin to Keith railway line also have a risk of being flooded. Three designated cultural heritage sites and a large area of environmental importance are shown to be at risk. These include Special Areas of Conservation, Special Protection Areas, and Sites of Special Scientific Interest at Spey Bay, Moray and Nairn coast and the lower River Spey.

The damages associated with floods of different scale are shown in Figure 2. For this Potentially Vulnerable Area the highest damages are to residential properties followed by damages to roads.

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)	<10	40	50
Non-residential properties (total 90)	<10	<10	<10
People	20	90	120
Community facilities	0	0	0
Utilities assets	0	<10	<10
Transport links (excluding minor roads)	Roads at 40 locations Rail at <10 locations	Roads at 70 locations Rail at <10 locations	Roads at 80 locations Rail at <10 locations
Environmental designated areas (km ²)	11	15	16
Designated cultural heritage sites	3	3	3
Agricultural land (km ²)	2	4	5

Table 1: Summary of flooding impacts¹

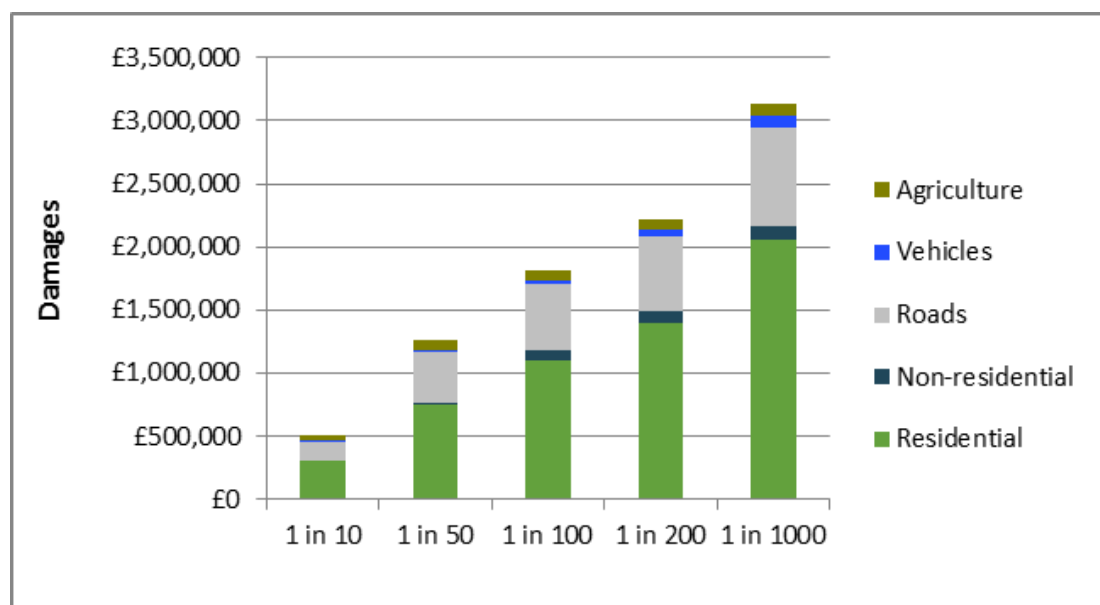


Figure 2: Damages by flood likelihood

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

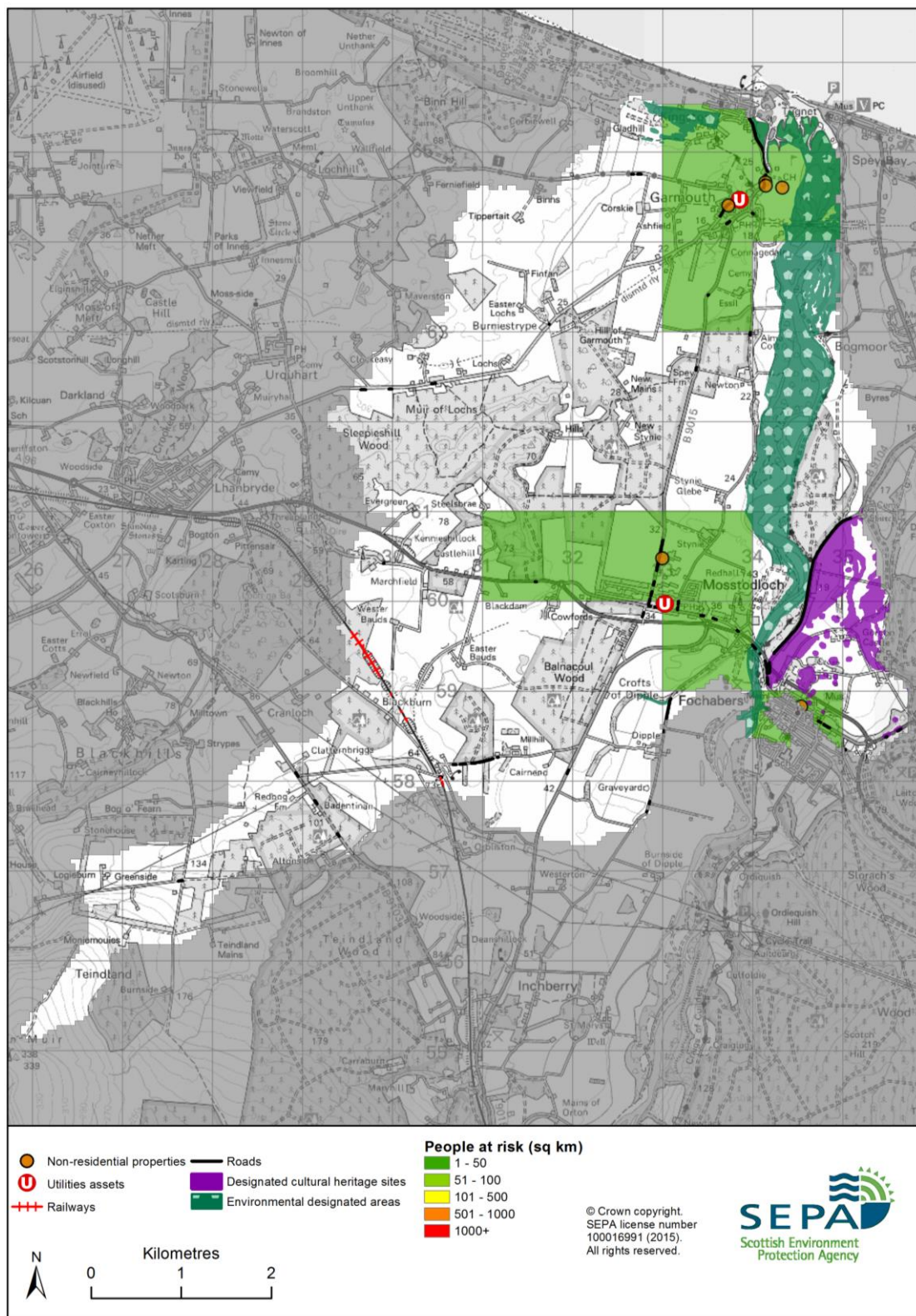


Figure 2: Impacts of flooding

History of flooding

The earliest recorded flood was in 1829, when flooding from the Spey during the Great Muckle Spate destroyed the bridge to Elgin. In 1887 the neighbourhoods of Kingston and Garmouth were flooded by the Spey, with the roads between the two areas impassable. The Spey has flooded Garmouth regularly, including in 1892, 1928, 1985, 1997, 2002 and 2009. A spate on the River Spey in the early 1960s led to two buildings being washed away.

Objectives to manage flooding in Potentially Vulnerable Area 05/04

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 Spey Bay Potentially Vulnerable Area.

Target area	Objective	ID	Indicators within PVA
Spey Bay	Reduce the physical risk, or disruption risk, related to areas of the A96 at risk of flooding	5301	<ul style="list-style-type: none"> • 4 locations of the A96 with a total length of 60m
Applies across Findhorn, Nairn and Speyside Local Plan District	Avoid an overall increase in flood risk	500001	<ul style="list-style-type: none"> • 40 residential properties • £120,000 Annual Average Damages
Applies across Findhorn, Nairn and Speyside Local Plan District	Reduce overall flood risk	500002	<ul style="list-style-type: none"> • 40 residential properties • £120,000 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.		

Actions to manage flooding in Potentially Vulnerable Area 05/04

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 Spey Bay 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 (5301021)		
Objective (ID):	Reduce the physical risk, or disruption risk, related to areas of the A96 at risk of flooding (5301)		
Delivery lead:	Transport Scotland		
Status:	Not started	Indicative delivery:	2028-2033
Description:	Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A96.		

Action (ID):	STRATEGIC MAPPING AND MODELLING (5000010016)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	SEPA		
Status:	Not started	Indicative delivery:	2016-2021
Description:	SEPA will be seeking to develop the flood hazard mapping in the Banff to Lossiemouth area to improve understanding of the coastal flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability. SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 700km ² of improved data is currently available within this Local Plan District.		

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 carry out an assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk.		

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 'Boat O' Brig to Spey Viaduct' flood warning area which forms part of the Spey river flood warning scheme. Continue to maintain the 'Spey Viaduct to Spey Bay' flood warning area which takes account of combined coastal and river flooding and forms part of both the Spey river flood warning scheme and the Moray Firth coastal flood warning scheme.		

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

Action (ID):	COMMUNITY FLOOD ACTION GROUPS (5000020012)		
Objective (ID):	Reduce overall flood risk (500002)		
Delivery lead:	Community		
Status:	Existing	Indicative delivery:	Ongoing
Description:	There are community groups in the Garmouth and Kingston area who have engaged with the authorities with respect to flooding issues in the past.		

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

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>SEPA will engage with the community and promote Floodline. This will be achieved through property level protection events delivered by the Scottish Flood Forum and SEPA led education events.</p> <p>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:	<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> <p>The shingle bank and lagoon at Kingston, located just outside this Potentially Vulnerable Area, are monitored by the Moray Council in response to residents' concerns that the bank may erode and result in significant property damage. The height and shape of the shingle bank changes in response to storms and is on occasions overtopped by waves. The River Spey is a very active system and in the past, when the mouth of the Spey has moved to the west, the council has relocated the mouth of the river in order to prevent it from causing erosion to the village of Kingston.</p>		

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:	<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>		

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.		