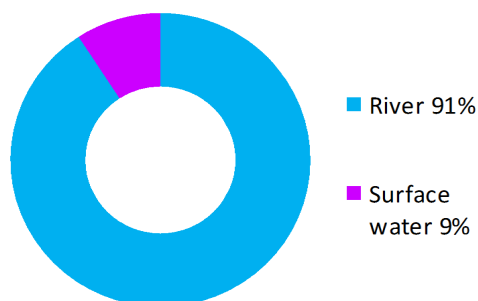


Kingussie (Potentially Vulnerable Area 05/12)

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

Summary of flooding impacts



At risk of flooding

- 30 residential properties
- 20 non-residential properties
- £92,000 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>	<i>Community flood action groups</i>	<i>Property level protection scheme</i>	<i>Site protection plans</i>
Flood protection study	<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

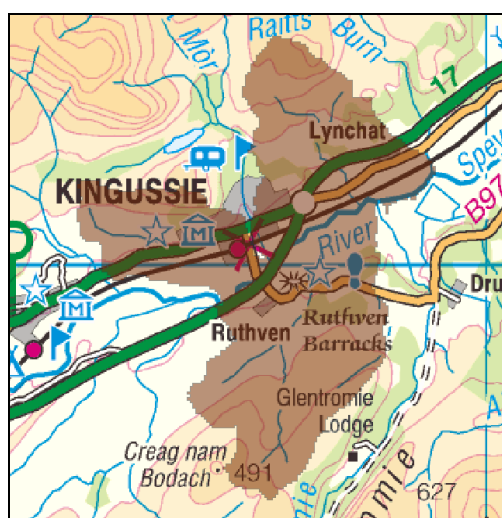
Actions

Kingussie (Potentially Vulnerable Area 05/12)

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

Background

This Potentially Vulnerable Area covers the town of Kingussie and surrounding rural areas (shown below). It is approximately 24km² and located within the Cairngorms National Park.



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The main river in the area is the River Spey. There are also several smaller burns including the Gynack Burn which flows through the centre of Kingussie.

There are approximately 30 residential and 20 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £92,000 with the majority caused by river flooding.

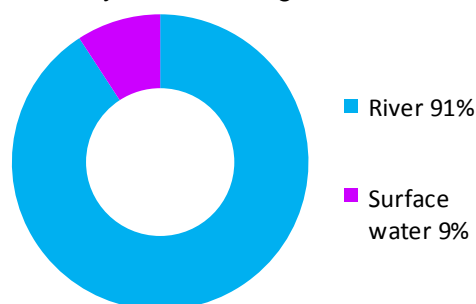


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

Kingussie is mostly elevated above the floodplain of the River Spey. The Gynack Burn, a tributary of the River Spey, flows through the town and is the main source of river flooding to properties in Kingussie.

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 potentially affected by flooding include the A9, A86, B970 and B9152. The Inverness to Perth railway line has a risk of being flooded at several locations. Two designated cultural heritage sites and an extensive area of environmental importance are shown to be at risk within this area. This includes small areas of Insh Marshes, however it should be noted that flooding of Insh Marshes is essential to maintain the natural characteristics of the site and its designated features.

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

	1 in 10 High likelihood	1 in 200 Medium likelihood	1 in 1000 Low likelihood
Residential properties (total 700)	<10	30	40
Non-residential properties (total 130)	<10	20	30
People	<10	70	100
Community facilities	0	0	<10 Educational buildings
Utilities assets	0	<10	<10
Transport links (excluding minor roads)	Roads at 20 locations Rail at <10 locations	Roads at 30 locations Rail at 10 locations	Roads at 30 locations Rail at 10 locations
Environmental designated areas (km ²)	12	12	12
Designated cultural heritage sites	2	2	2
Agricultural land (km ²)	4	4	4

Table 1: Summary of flooding impacts¹

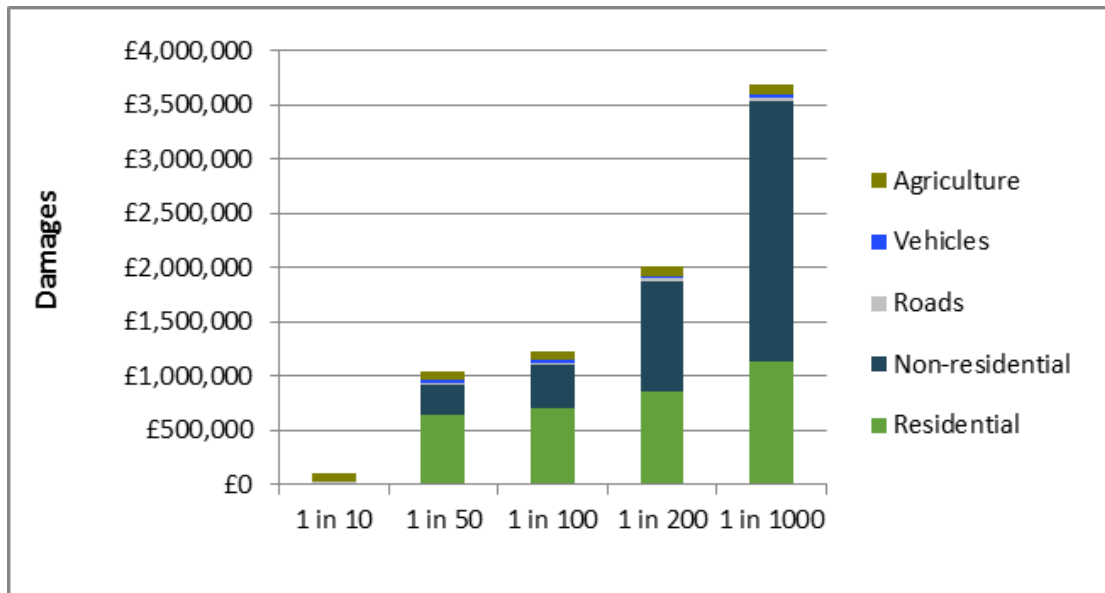


Figure 2: Damages by flood likelihood

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

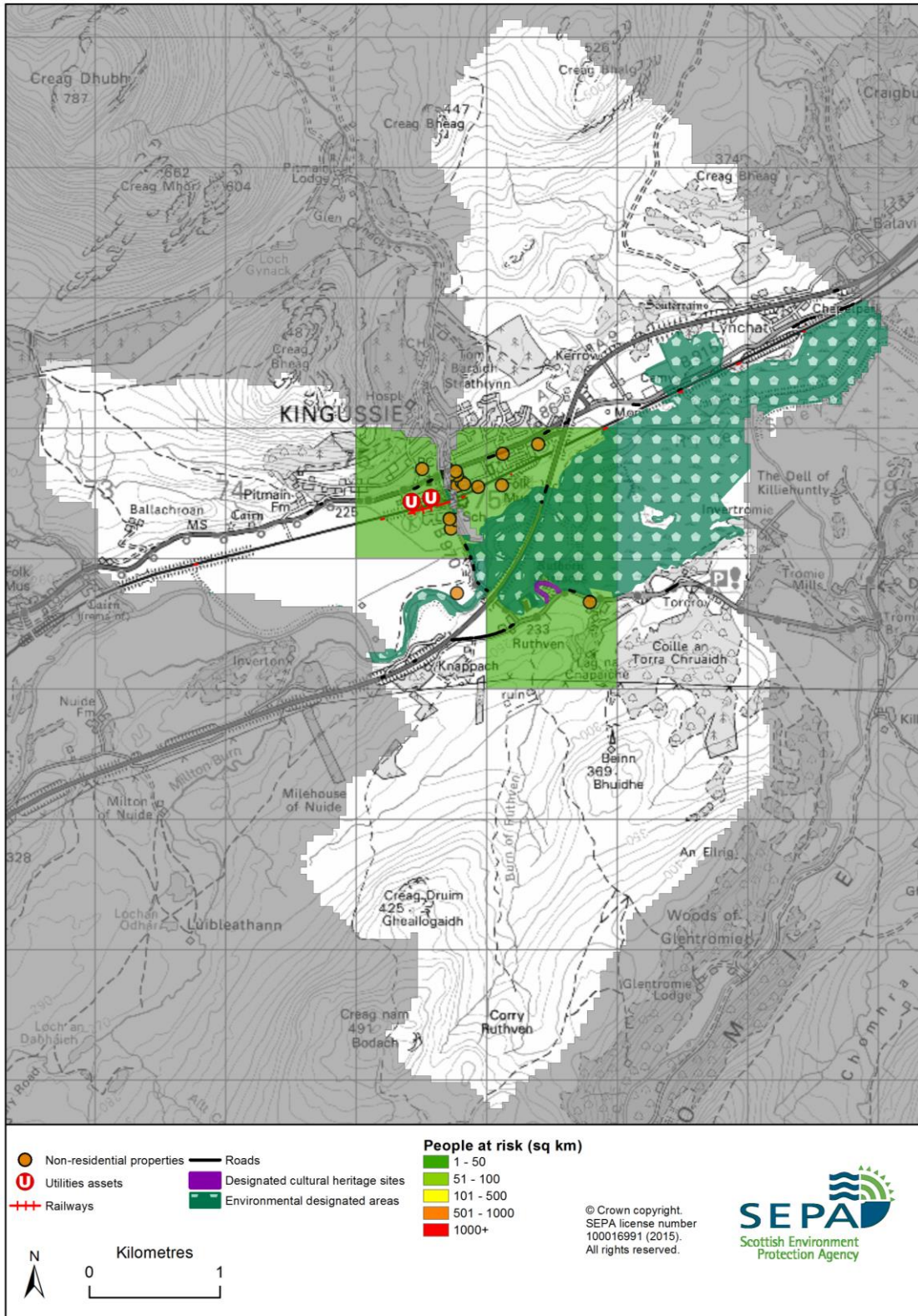


Figure 3: Impacts of flooding

History of flooding

This Potentially Vulnerable Area was affected by the Great Muckle Spate in 1829. The River Spey flooded in 1849, 1883, 1901, 1903, 1904, 1906, 1989, and 1990 with some of these floods associated with snow melt. Flooding affected properties, roads and the railway. Flooding of the railway has sometimes led to the closure of the main line from Perth to Inverness resulting in considerable disruption and economic impacts outside the Potentially Vulnerable Area.

There were floods from the Gynack Burn in 1888, 1990, 2005, 2006, 2008 and 2014, affecting properties and making roads impassable. In 2014, the railway line was closed due to flooding from the Gynack Burn.

Objectives to manage flooding in Potentially Vulnerable Area 05/12

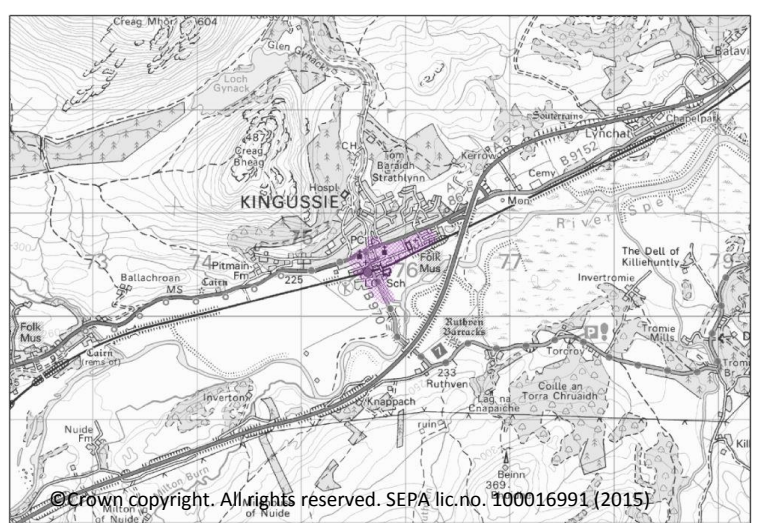
Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. They were identified through an assessment of the underlying evidence of the causes and impacts of flooding. Target 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 Kingussie Potentially Vulnerable Area.

Reduce flood risk to Kingussie from the Gynack Burn

Indicators:

Target area:

- £39,000 Annual Average Damages from residential properties
- £21,000 Annual Average Damages from non-residential properties



Objective ID: 501201

Target area	Objective	ID	Indicators within PVA
Kingussie	Reduce the physical risk, or disruption risk, related to areas of the A9 at risk of flooding	5309	<ul style="list-style-type: none"> • 3 locations on the A9 covering a total length of 50m.
Applies across Findhorn, Nairn and Speyside Local Plan District	Avoid an overall increase in flood risk	500001	<ul style="list-style-type: none"> • 30 residential properties • £92,000 Annual Average Damages
Applies across Findhorn, Nairn and Speyside Local Plan District	Reduce overall flood risk	500002	<ul style="list-style-type: none"> • 30 residential properties • £92,000 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 05/12

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 Kingussie Potentially Vulnerable Area.

Selected actions					
Flood protection scheme/works	<i>Natural flood management works</i>	<i>New flood warning</i>	<i>Community flood action groups</i>	<i>Property level protection scheme</i>	<i>Site protection plans</i>
Flood protection study	<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

Action (ID):	FLOOD PROTECTION SCHEME/WORKS (5309021)		
Objective (ID):	Reduce the physical risk, or disruption risk, related to areas of the A9 at risk of flooding (5309)		
Delivery lead:	Transport Scotland		
Status:	Under development	Indicative delivery:	2022-2027
Description:	Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A9.		

Action (ID):	FLOOD PROTECTION STUDY (5012010005)		
Objective (ID):	Reduce flood risk to Kingussie from the Gynack Burn (501201)		
Delivery lead:	The Highland Council		
Priority:	National:	Within local authority:	
	49 of 168	2 of 23	
Status:	Not started	Indicative delivery:	2016-2021
Description:	A flood protection study is required to identify an appropriate combination of actions to reduce flood risk. Options to be investigated include upstream storage in Loch Gynack, direct defences through Kingussie, widening of the railway bridge to improve conveyance and natural flood management (sediment management). Other actions may also be considered to reach the most sustainable options.		

Potential impacts	
Economic:	The study could benefit 36 residential and 16 non-residential properties at risk of flooding in this location, with potential damages avoided of up to £1.8 million.
Social:	An estimated 79 people may benefit from flood protection works. A reduction in flood risk would have a positive benefit to the health and wellbeing of the community and socially vulnerable people. There may also be a reduction of flood risk to the railway, local roads, and an energy production/electricity utility site, reducing disruption to the wider community. Natural flood management actions can restore and enhance natural environments and create opportunities for recreation and tourism. Negative impacts through disturbance to the local community during the construction phase should be considered.
Environmental:	Flood protection studies should consider the positive and negative impacts of proposed actions on the ecological quality of the environment. Natural flood management actions can have a positive impact by restoring and enhancing natural habitats. Opportunities to mitigate any environmental impacts may include design and timing of works. There is potential for impacts on habitats and ecology. To be in accord with the FRM Strategy, the responsible authority should seek to ensure as part of the study that the action will not have an adverse effect on the integrity of the River Spey Special Area of Conservation, Insh Marshes Special Area of Conservation, and River Spey - Insh Marshes Special Protection Area. There is potential to impact on the Insh Marshes Site of Special Scientific Interest and Special Area of Conservation. The physical condition of the River Gynack (water body ID 23137) is identified by river basin management planning to be at less than good status. Future works could improve the condition of the river or degrade it. Opportunities to improve the condition of the river should be considered by coordinating with river basin management planning.

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 'Kingussie to Kinraig' and 'Newtonmore to Kingussie' 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:	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>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 Highland 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>		

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> <p>The Highland Council operates a flood monitor on the Gynack Burn next to the Spey Street bridge to provide early warning of potential flooding.</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:	<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 Annex 2.</p>		