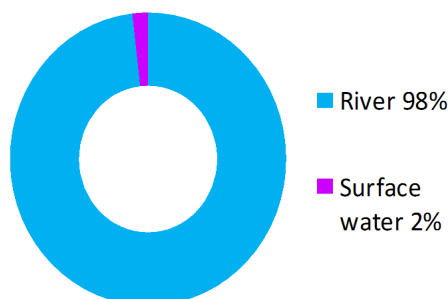


Kinlochewe (Potentially Vulnerable Area 01/13)

Local Plan District	Local authority	Main catchment
Highland and Argyll	The Highland Council	River Ewe

Summary of flooding impacts



At risk of flooding

- 10 residential properties
- 10 non-residential properties
- £61,000 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.

<i>Flood protection scheme/works</i>	<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	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

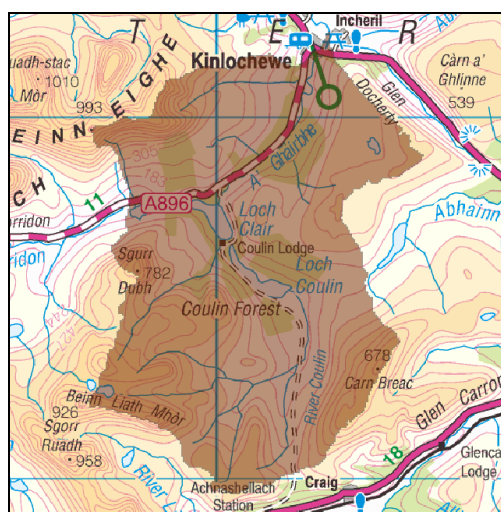
Kinlochewe (Potentially Vulnerable Area 01/13)

Local Plan District	Local authority	Main catchment
Highland and Argyll	The Highland Council	River Ewe

Background

This Potentially Vulnerable Area is approximately 76km². It is located to the south east of Loch Maree (shown below). It covers part of Kinlochewe and the mainly rural area to the south.

The A896 road runs through the area.



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The main river in the area is the River Coulin. There are also several smaller watercourses and lochs in the area, including Loch Clair and Loch Coulin.

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

The Annual Average Damages are approximately £61,000 with the majority caused by river flooding.

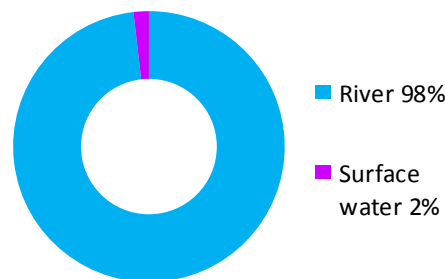


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

River flooding is primarily focused on the A832 road and properties in Kinlochewe.

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 A896 and A832 roads are at risk of being flooded. Small areas of environmental importance are also at risk within this area. These include Special Areas of Conservation, Special Protection Areas and Sites of Special Scientific Interest at Beinn Eighe, Coulin Pinewoods, Torridon Forest and the Loch Maree Complex.

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 20)	<10	10	10
Non-residential properties (total 20)	<10	10	10
People	10	20	20
Community facilities	0	0	0
Utilities assets	0	0	0
Transport links (excluding minor roads)	Roads at <10 locations	Roads at <10 locations	Roads at <10 locations
Environmental designated areas (km ²)	0.8	0.9	1
Designated cultural heritage sites	0	0	0
Agricultural land (km ²)	1	2	2

Table 1: Summary of flooding impacts¹

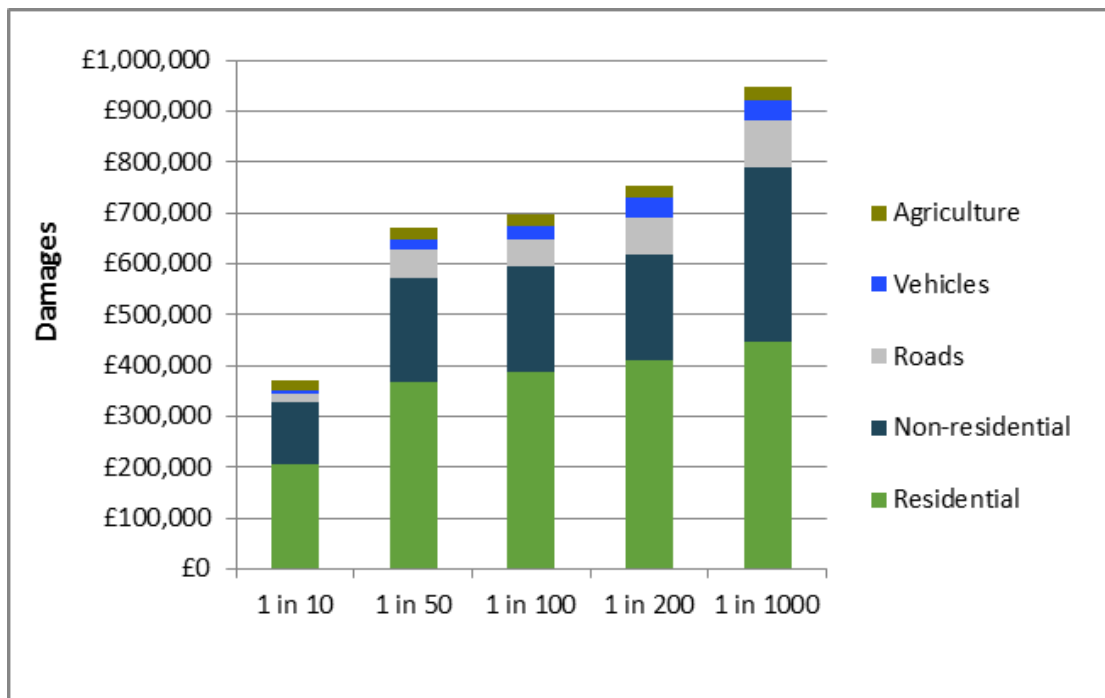


Figure 2: Damages by flood likelihood

History of flooding

There are no large floods recorded in this Potentially Vulnerable Area.

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

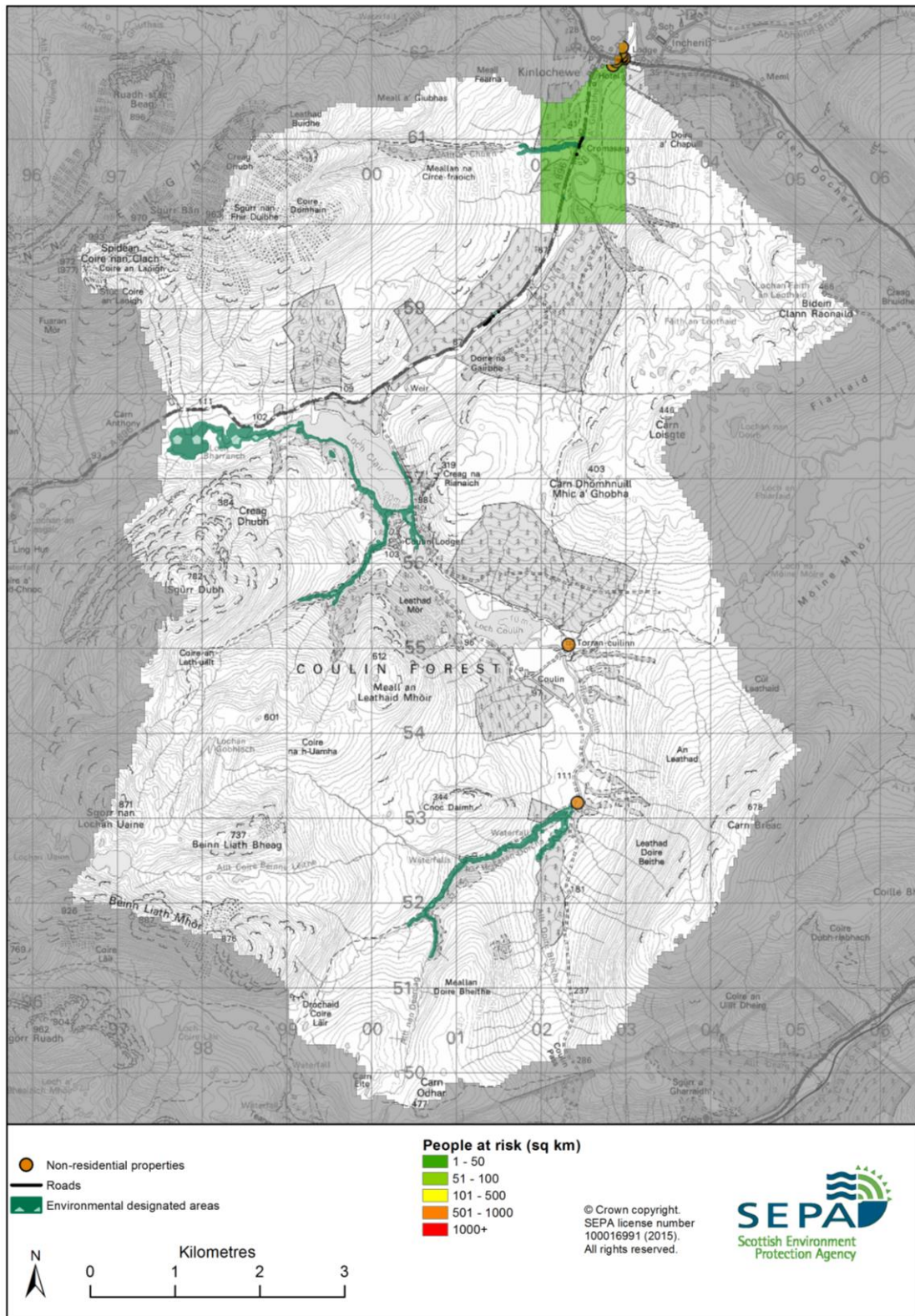
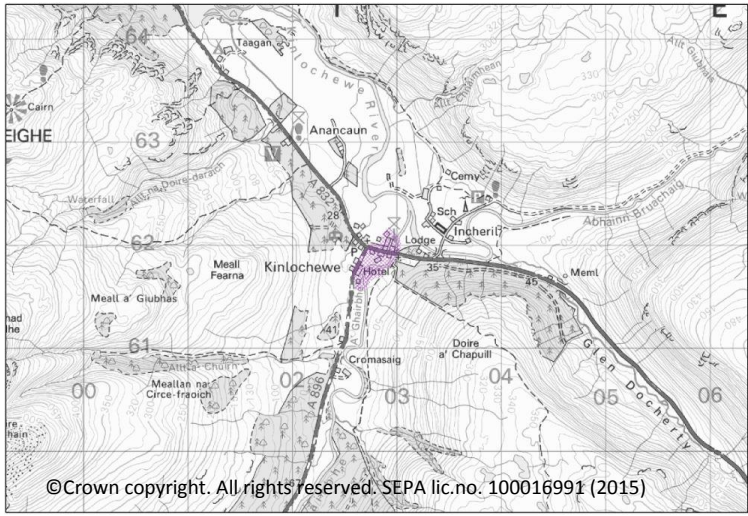


Figure 3: Impacts of flooding

Objectives to manage flooding in Potentially Vulnerable Area 01/13

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 Kinlochewe Potentially Vulnerable Area.

Reduce flood risk in Kinlochewe from the A'Ghairbhe river	
Indicators:	Target area:
<ul style="list-style-type: none"> £42,000 Annual Average Damages from residential properties 	
Objective ID: 101301	

Target area	Objective	ID	Indicators within PVA
Applies across Highland and Argyll Local Plan District	Avoid an overall increase in flood risk	100001	<ul style="list-style-type: none"> 10 residential properties £61,000 Annual Average Damages
Applies across Highland and Argyll Local Plan District	Reduce overall flood risk	100002	<ul style="list-style-type: none"> 10 residential properties £61,000 Annual Average Damages
Applies across Highland and Argyll 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 01/13

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 Kinlochewe Potentially Vulnerable Area.

Selected actions					
<i>Flood protection scheme/works</i>	<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	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 STUDY (1013010005)		
Objective (ID):	Reduce flood risk in Kinlochewe from the A'Ghairbhe river (101301)		
Delivery lead:	The Highland Council		
Priority:	National:	Within local authority:	
	122 of 168	13 of 23	
Status:	Not started	Indicative delivery:	2022-2027
Description:	A study is required to further investigate the feasibility of a flood protection scheme for Kinlochewe, focusing on direct defences, the use of a control structure at Loch Clair to increase storage upstream, natural flood management including runoff control, large woody debris and boulders in tributaries (river or floodplain restoration), sediment management and consideration of property level protection for any residual risk. Other actions may also be considered to develop the most sustainable range of options. The study should look to confirm the extent and size of defences required and the business case for flood protection works.		
Potential impacts			
Economic:	The study could benefit 14 residential and nine non-residential properties at risk of flooding in this location, with potential damages avoided of up to £1.8 million.		
Social:	Approximately 31 people may directly 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. Works may also reduce disruption to the wider community from the surrounding areas through reduced flooding to roads including A832. There are potential visual and access impacts for the		

Social:	community, reducing their connection to the watercourse. 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 changes to channel morphology. 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 Loch Maree Special Area of Conservation. Works would be located outside (and downstream) of the Beinn Eighe Site of Special Scientific Interest. There are unlikely to be impacts on the Loch Maree Special Protection Area due to the distance from the location of actions.

Action (ID):	FLOOD FORECASTING (1000020009)		
Objective (ID):	Reduce overall flood risk (100002)		
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 'Wester Ross' flood alert area.</p>		

Action (ID):	SELF HELP (1000020011)		
Objective (ID):	Reduce overall flood risk (100002)		
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 (1000020013)		
Objective (ID):	Reduce overall flood risk (100002)		
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 (1000020007)		
Objective (ID):	Reduce overall flood risk (100002)		
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 (1000020014)		
Objective (ID):	Reduce overall flood risk (100002)		
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 (1000010001)		
Objective (ID):	Avoid an overall increase in flood risk (100001) Reduce overall flood risk (100002)		
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.		