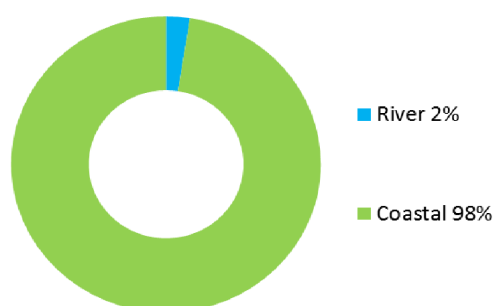


Lochmaddy and Trumisgarry (Potentially Vulnerable Area 02/04)

Local Plan District	Local authority	Main catchment
Outer Hebrides	Comhairle nan Eilean Siar	North Uist coastal

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>	New flood warning	<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>	<i>Maintain flood warning</i>	Awareness raising	<i>Surface water plan/study</i>	Emergency plans/response
<i>Maintain flood protection scheme</i>	<i>Strategic mapping and modelling</i>	Flood forecasting	Self help	Maintenance	Planning policies

Actions

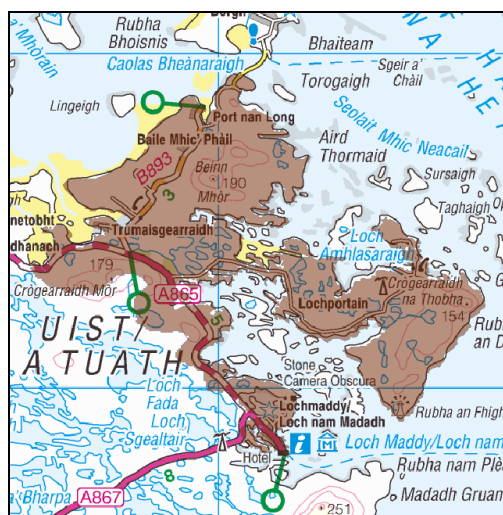
Lochmaddy and Trumisgarry (Potentially Vulnerable Area 02/04)

Local Plan District	Local authority	Main catchment
Outer Hebrides	Comhairle nan Eilean Siar	North Uist coastal

Background

This Potentially Vulnerable Area covers the north east of North Uist and is approximately 51km² (shown below).

There is a long coastline which comprises rocky and sandy shorelines and numerous sea lochs and tidal inlets.



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The A865, which runs along the southern boundary, is an important transport link between the islands.

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

The Annual Average Damages are estimated to be £61,000, the majority of which is a result of coastal floods.

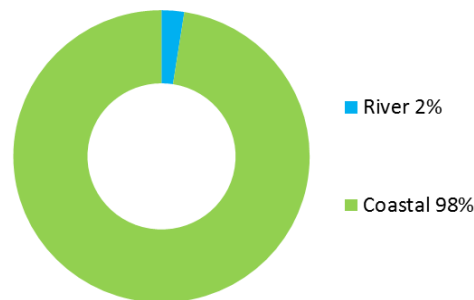


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

Flood risk is caused by coastal flooding, affecting the surrounding lochs and their drainage into the sea. 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. The impacts of flooding are limited mainly to minor lengths of road and areas of agricultural land. For this Potentially Vulnerable Area the highest damages are to roads followed by residential properties.

Four designated cultural heritage sites are at risk of flooding. Environmentally designated sites are also at risk, including Loch au Duin Site of Special Scientific Interest (SSSI), Loch nam Madadh Special Area of Conservation and SSSI, Machairs Robach and Newton SSSI and the North Uist Machair and Island Special Protection Area.

The location of the impacts of flooding is shown in Figure 3.

	1 in 10	1 in 200	1 in 1000
	High likelihood	Medium likelihood	Low likelihood
Residential properties (total 170)	<10	<10	<10
Non-residential properties (total 80)	<10	<10	<10
People	<10	<10	<10
Community facilities	0	0	0
Utilities assets	0	0	0
Transport links (excluding minor roads)	Roads at 10 locations	Roads at 20 locations	Roads at 20 locations
Environmental designated areas (km ²)	1	1	1
Designated cultural heritage sites	4	4	4
Agricultural land (km ²)	0.6	0.7	0.8

Table 1: Summary of flooding impacts¹

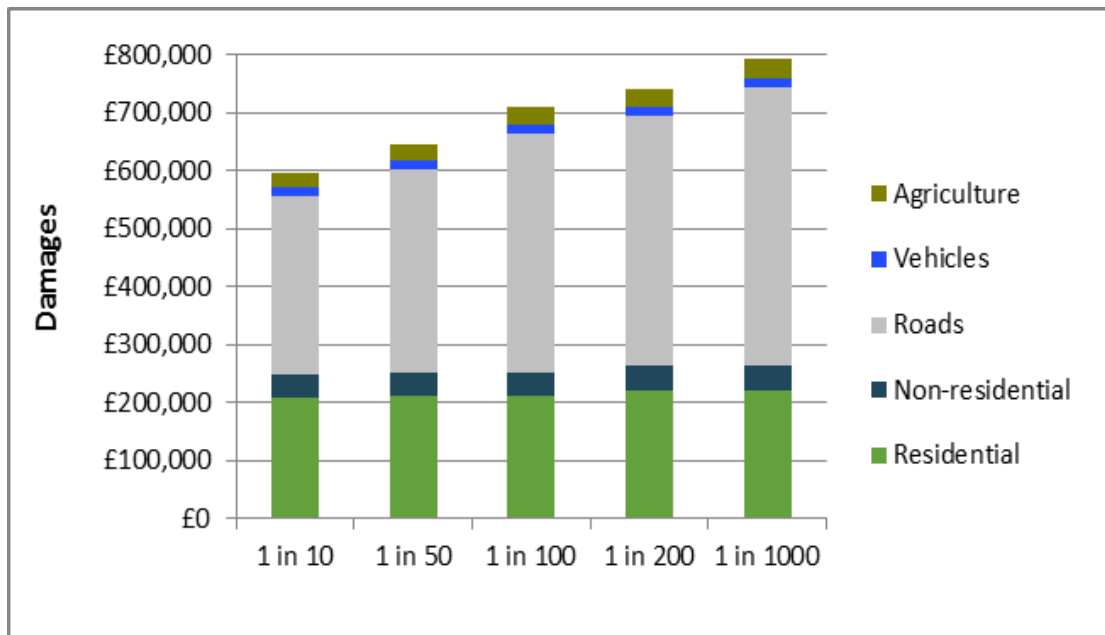


Figure 2: Damages by flood likelihood

History of flooding

There is no record of historic floods within this Potentially Vulnerable Area.

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

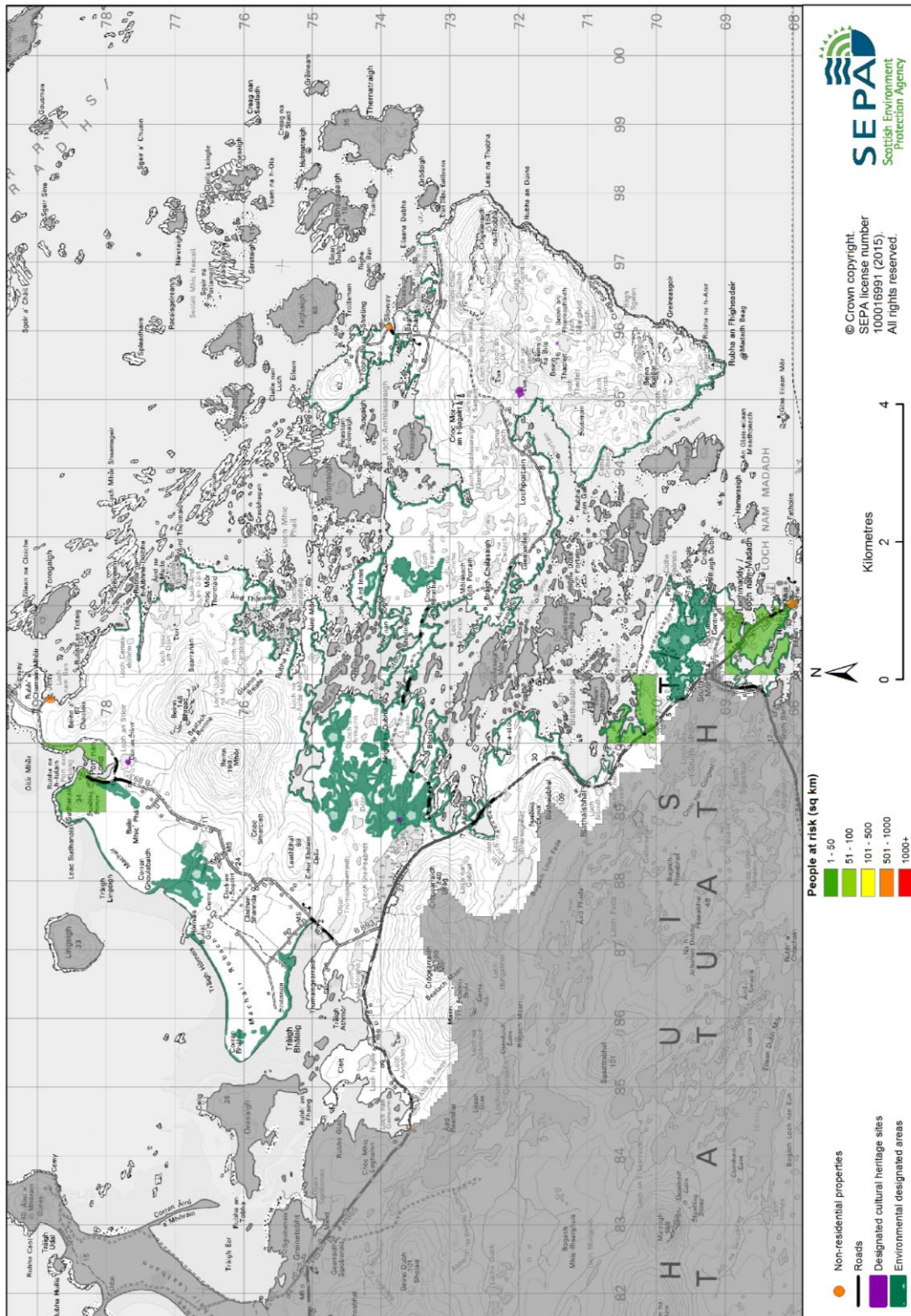


Figure 3: Impacts of flooding

Objectives to manage flooding in Potentially Vulnerable Area 02/04

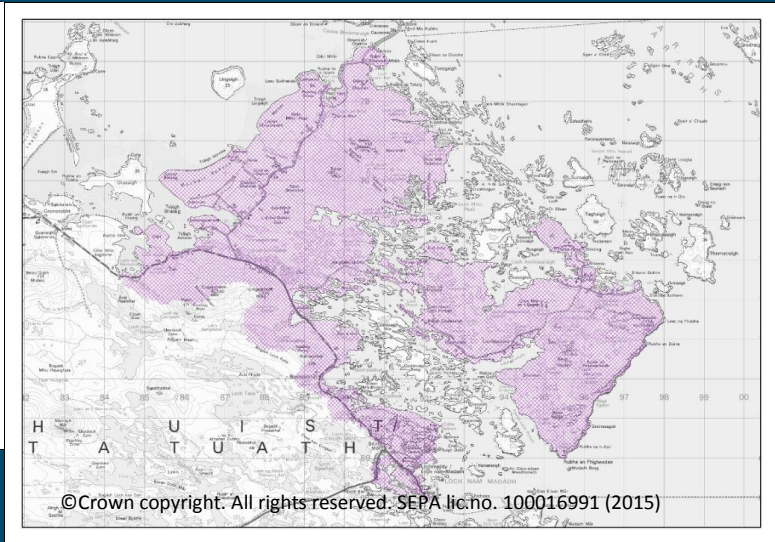
Objectives provide a common goal and shared ambition for managing floods. These objectives have been set by SEPA and agreed with flood risk management authorities following consultation. They were identified through an assessment of the underlying evidence of the causes and impacts of flooding. Target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

Reduce disruption to roads in North Uist from coastal flooding

Indicators:

- A865 (Aileodair)
- B893 (Port nan Long and Trumisgarry)

Objective ID: 200401



Target area	Objective	ID	Indicators within PVA
Applies across Outer Hebrides Local Plan District	Avoid an overall increase in flood risk	200001	<ul style="list-style-type: none"> • <10 residential properties • £61,000 Annual Average Damages
Applies across Outer Hebrides Local Plan District	Reduce overall flood risk	200002	<ul style="list-style-type: none"> • <10 residential properties • £61,000 Annual Average Damages
Applies across Outer Hebrides 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 02/04

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 Lochmaddy and Trumisgarry Potentially Vulnerable Area.

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

Action (ID):	NEW FLOOD WARNING (2000020010)		
Objective (ID):	Reduce overall flood risk (200002)		
Delivery lead:	SEPA		
Status:	Not started	Indicative delivery:	2016-2021
Description:	The area under consideration covers the coastline of the Outer Hebrides. A flood forecasting system will be required before flood warnings can be implemented for this area.		

Action (ID):	FLOOD PROTECTION STUDY (2004010005)		
Objective (ID):	Reduce disruption to roads in North Uist from coastal flooding (200401)		
Delivery lead:	Comhairle nan Eilean Siar		
Priority:	National:	Within local authority:	
	146 of 168	5 of 5	
Status:	Not started	Indicative delivery:	2016-2021
Description:	A study is required to investigate what improvements could be made to the existing flap valve structures on culverts to reduce coastal flooding of the B893 road as a result of interaction with the small watercourses. The impacts of improvement works would require further assessment. Other actions may also be considered to develop the most sustainable range of options.		

Potential impacts	
Economic:	The business case for works in this location would need to be developed as part of the study, focusing on the disruption to traffic during floods.
Social:	The B893 is the only road which connects the causeway from the island of Berneray to the main A865 road around North Uist. Flooding of this road causes disruption to communities on Berneray and along the B893, potentially cutting them off from the rest of North Uist. A reduction in flood risk would have a positive benefit to the health and wellbeing of the community and socially vulnerable people. 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. Opportunities to mitigate any environmental impacts may include design and timing of works. There is potential for impacts on coastal landscapes and habitats; as there are existing structures in the locations where defences are proposed the impacts are likely to be limited. 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 North Uist Machair and Islands Special Protection Area, and North Uist Machair Special Area of Conservation. There is potential for direct impacts on the Machairs Robach and Newton Site of Special Scientific Interest. There are three scheduled monuments which may benefit from future flood protection works.

Action (ID):	FLOOD FORECASTING (2000020009)		
Objective (ID):	Reduce overall flood risk (200002)		
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 'Western Isles' flood alert area.</p>		

Action (ID):	SELF HELP (2000020011)		
Objective (ID):	Reduce overall flood risk (200002)		
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 (2000020013)		
Objective (ID):	Reduce overall flood risk (200002)		
Delivery lead:	Responsible authorities		
Status:	Existing	Indicative delivery:	Ongoing
Description:	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. 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.		

Action (ID):	MAINTENANCE (2000020007)		
Objective (ID):	Reduce overall flood risk (200002)		
Delivery lead:	Comhairle nan Eilean Siar, 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>There is a flap valve situated in the culvert below the B893 road to Berneray which allows freshwater to flow out to sea and which prevents sea water from flowing into the loch. Regular maintenance of the flap valve is essential and is undertaken by the land manager.</p>		

Action (ID):	EMERGENCY PLANS/RESPONSE (2000020014)		
Objective (ID):	Reduce overall flood risk (200002)		
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 (2000010001)		
Objective (ID):	Avoid an overall increase in flood risk (200001) Reduce overall flood risk (200002)		
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.		