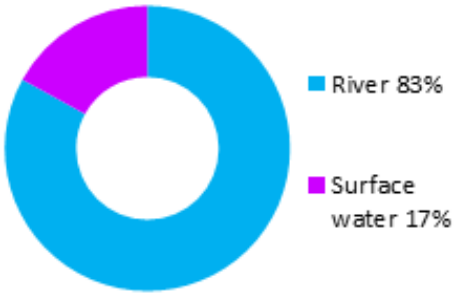
Haddington (Potentially Vulnerable Area 10/24)

Local Plan District	Local authority	Main catchment
Forth Estuary	East Lothian Council	River Tyne

Summary of flooding impacts



At risk of flooding

- 230 residential properties
- 140 non-residential properties
- £700,000 Annual Average Damages

(damages by flood source shown left)

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.

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

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Local Plan District	Local authority	Main catchment
Forth Estuary	East Lothian Council	River Tyne

Background

This Potentially Vulnerable Area is 16km^2 and part of the East Lothian and Berwickshire catchment group (shown below). This is a small, rural area covering Haddington and its surroundings. The main watercourse is the River Tyne which flows through the south of Haddington before continuing through the town centre and out to the east.

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The area has a risk of river and surface water flooding. The majority of damages in this Potentially Vulnerable Area are caused by river flooding.

There are approximately 230 residential properties and 140 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £700,000.

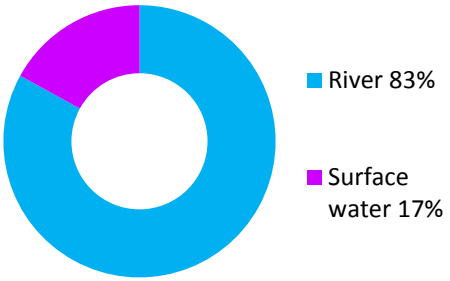


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

The highest risk of river flooding is from the River Tyne to Haddington and the highest risk of surface water flooding is also in Haddington.

The risk of flooding to people, 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. 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.

The figures presented for Annual Average Damages include damages to residential properties, non-residential properties, transport and agriculture.

	1 in 10 High likelihood	1 in 200 Medium likelihood	1 in 1000 Low likelihood
Residential properties (total 3,800)	70	230	330
Non-residential properties (total 670)	30	140	210
People	150	500	720
Community facilities	0	<10 Educational buildings	<10 Educational buildings
Utilities	<10	<10	<10
Transport links (excluding minor roads)	4 A roads, 1 B roads at 25 locations	5 A roads, 2 B roads at 59 locations	5 A roads, 2 B roads at 68 locations
Environmental designated areas (km^2)	0	0	0
Designated cultural heritage sites	9	11	13
Agricultural land (km^2)	0.6	0.8	0.9

Table 1: Summary of flooding impacts

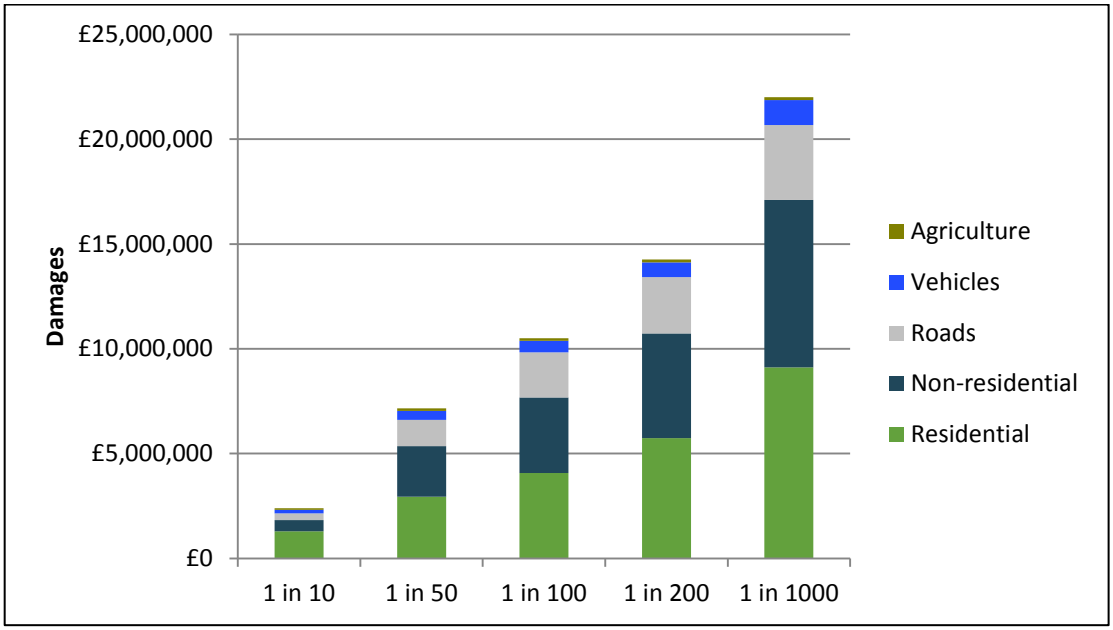


Figure 2: Damages by flood likelihood

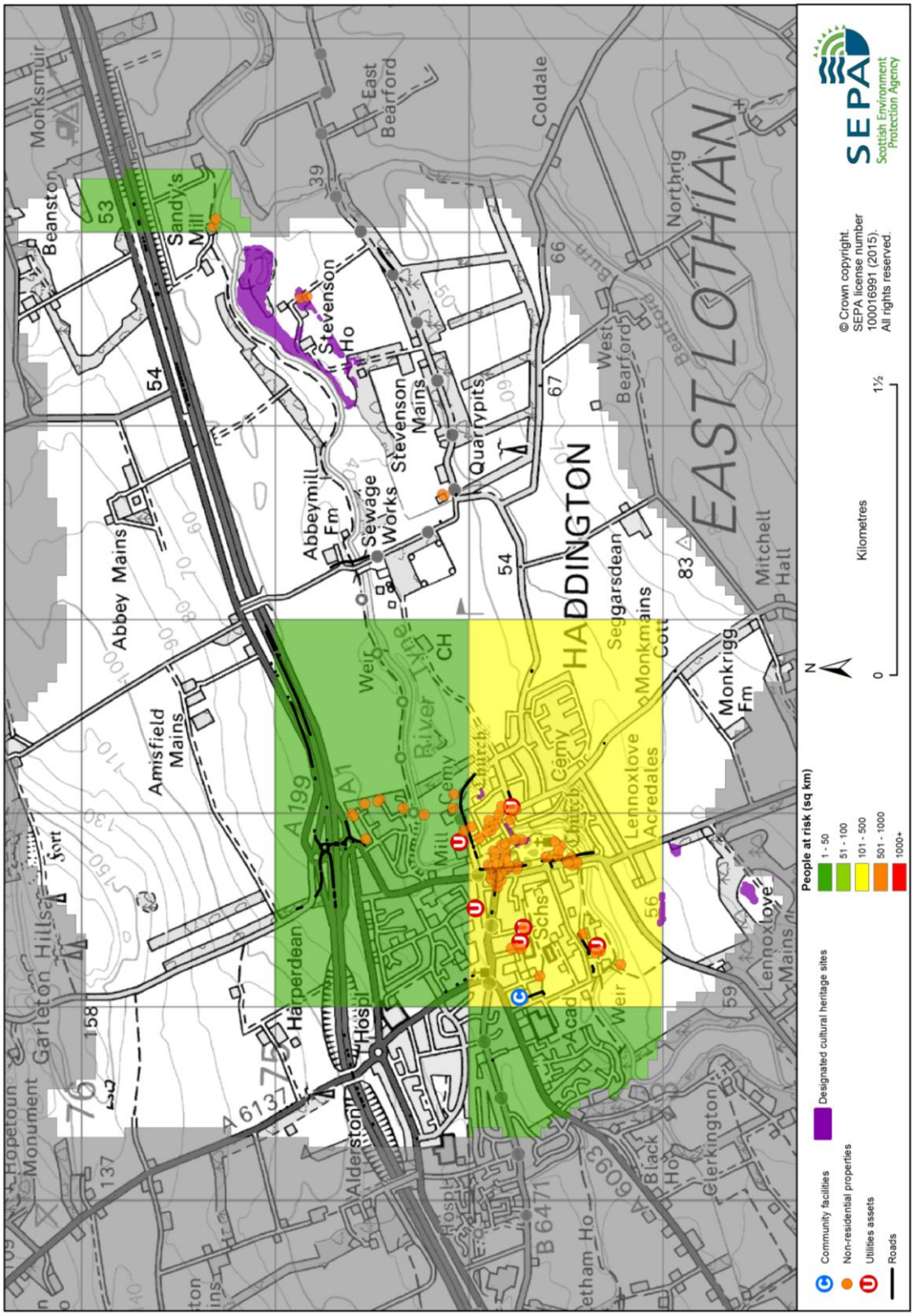


Figure 3: Impacts of flooding

History of flooding

The following significant river floods have been recorded in this area:

- 7 July and 25 Sept 2012: High river levels in Haddington caused drains and watercourses to back up and unable to discharge into the River Tyne. This resulted in property flooding.
- 12 August 1948: The waters of the River Tyne rose 2 inches above the levels reached during the large flood of 1775. The High Street flooded to a depth of 57 inches. The flood event is known to have affected a large area with railway lines and road bridges damaged or destroyed and multiple buildings flooded.
- 1926 and 1932: Photographic evidence of large flood events in Haddington.
- October 1775: A large flood event in Haddington inundated most of the town.

Objectives to manage flooding in Potentially Vulnerable Area 10/24

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 Haddington Potentially Vulnerable Area.

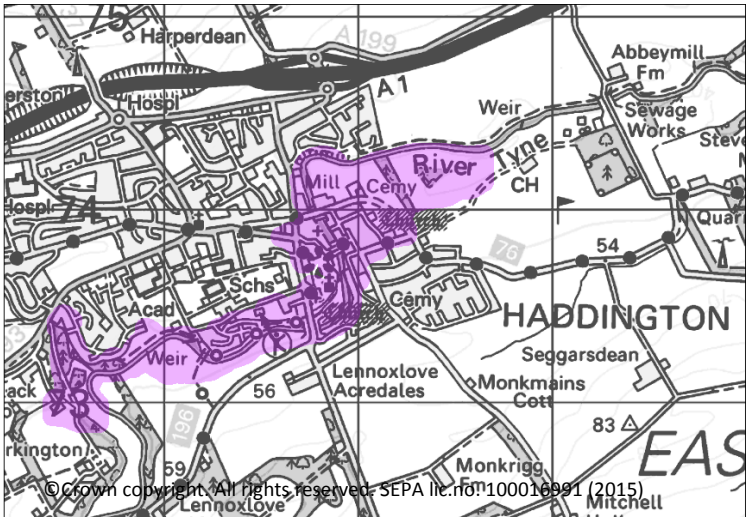
Reduce economic damages to residential and non-residential properties in Haddington caused by flooding from the River Tyne

Indicators:

- £370,000 Annual Average Damages from residential properties
- £180,000 Annual Average Damages from non-residential properties

Objective ID: 10082

Target area:



Target area	Objective	ID	Indicators within PVA
Applies across Forth Estuary Local Plan District	Avoid an overall increase in flood risk	10001	• 230 residential properties • £700,000 Annual Average Damages
Applies across Forth Estuary Local Plan District	Reduce overall flood risk	10099	• 230 residential properties • £700,000 Annual Average Damages
Applies across Forth Estuary 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 10/24

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 Haddington 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** (100820006)		
Objective (ID):	Reduce economic damages to residential and non-residential properties in Haddington caused by flooding from the River Tyne (10082)		
Delivery lead:	East Lothian Council		
Priority:	National:	Within local authority:	
	37 of 42	**2 of 2**	
Status:	**Under development**	Indicative delivery:	**2016-2021**
Description:	A flood protection scheme has been proposed for Haddington to reduce flood risk from the River Tyne. The scheme would consist of flood defences, possibly in combination with natural flood management.		
Potential impacts			
Economic:	The proposed scheme may benefit 231 residential and non-residential properties at risk of flooding in this location, with estimated damages avoided of £8.8 million. The flood protection scheme has an estimated benefit cost ratio of 1.2.		
Social:	A reduction in flood risk would have a positive benefit to the health and wellbeing of the community. There may be negative impacts through disturbance to the local community during the construction phase.		
Environmental:	Flood protection schemes can have both positive and negative impacts on the ecological quality of the environment depending on how they are designed. A number of nationally and locally designated sites are present in the study area and could be positively or negatively impacted. These include conservation areas, scheduled monuments, gardens and designed landscapes and listed buildings.		

Action (ID):	**STRATEGIC MAPPING AND MODELLING** (100990019)		
Objective (ID):	Reduce overall flood risk (10099)		
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** (100990030)		
Objective (ID):	Reduce overall flood risk (10099)		
Delivery lead:	SEPA		
Status:	**Existing**	Indicative delivery:	**Ongoing**
Description:	Continue to maintain the three flood warning areas in Haddington which are part of the Tyne river flood warning scheme.		

Action (ID):	**FLOOD FORECASTING** (100990009)		
Objective (ID):	Reduce overall flood risk (10099)		
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.		

Action (ID):	**COMMUNITY FLOOD ACTION GROUPS** (100820012)		
Objective (ID):	Reduce economic damages to residential and non-residential properties in Haddington caused by flooding from the River Tyne (10082)		
Delivery lead:	Community		
Status:	**Existing**	Indicative delivery:	**Ongoing**
Description:	East Lothian Tenants and Residents Panel and Friends of the River Tyne operate in this area. The groups could help increase community resilience to flooding.		

Action (ID):	**SELF HELP** (100990011)		
Objective (ID):	Reduce overall flood risk (10099)		
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** (100990013)		
Objective (ID):	Reduce overall flood risk (10099)		
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 and promote Floodline. This will be achieved through SEPA-led education events. Local authorities will be undertaking additional awareness raising activities. Further details will be set out in the Local FRM Plan.		

Action (ID):	**MAINTENANCE** (100990007)		
Objective (ID):	Reduce overall flood risk (10099)		
Delivery lead:	East Lothian 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** (100990014)		
Objective (ID):	Reduce overall flood risk (10099)		
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. East Lothian Council strategically deploys temporary flood barriers and sandbags when properties are threatened by flooding.		

Action (ID):	**PLANNING POLICIES** (100010001)		
Objective (ID):	Avoid an overall increase in flood risk (10001) Reduce overall flood risk (10099)		
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.		