

Fettercairn (Potentially Vulnerable Area 07/02)

Local Plan District	Local authority	Main catchment
Tay Estuary and Montrose Basin	Aberdeenshire Council	River North Esk (Tayside)

Summary of flooding impacts



At risk of flooding

- 50 residential properties
- 10 non-residential properties
- £140,000 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>	Community flood action groups	<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
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

Actions

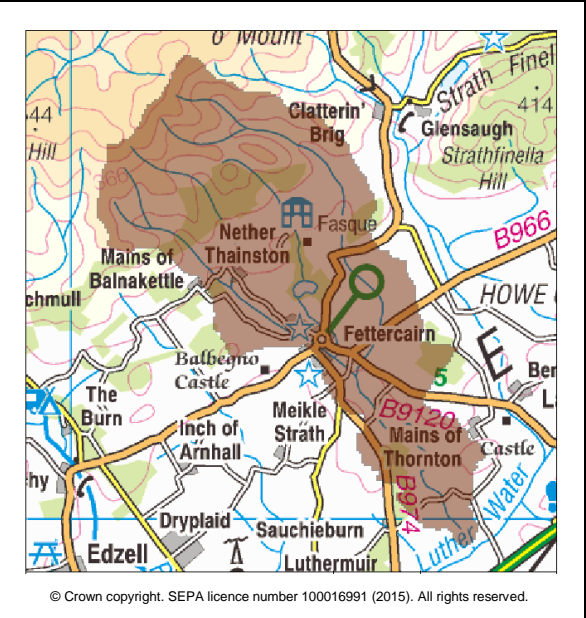
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Local Plan District	Local authority	Main catchment
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Background

This Potentially Vulnerable Area is 32km² and is situated in the River North Esk catchment (shown to the right). It includes Fettercairn and the main watercourses are the Dowrie Burn and its tributaries, the Burn of Cauldcotts, the Crichtie Burn and the Craigmoston Burn.

There are approximately 50 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £140,000. All damages are derived from river flooding.



Summary of flooding impacts

The highest risk of flooding is in Fettercairn and Craigmoston from the Burn of Cauldcotts and Craigmoston Burn.

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 1.

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 2.

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 280)	40	50	50
Non-residential properties (total 70)	<10	10	10
People	80	100	110
Community facilities	0	0	0
Utilities assets	0	0	0
Transport links (excluding minor roads)	3 B roads at 9 locations	3 B roads at 11 locations	3 B roads at 12 locations
Environmental designated areas (km ²)	0	0	0
Designated cultural heritage sites	3	3	3
Agricultural land (km ²)	1.2	1.7	1.8

Table 1: Summary of flooding impacts

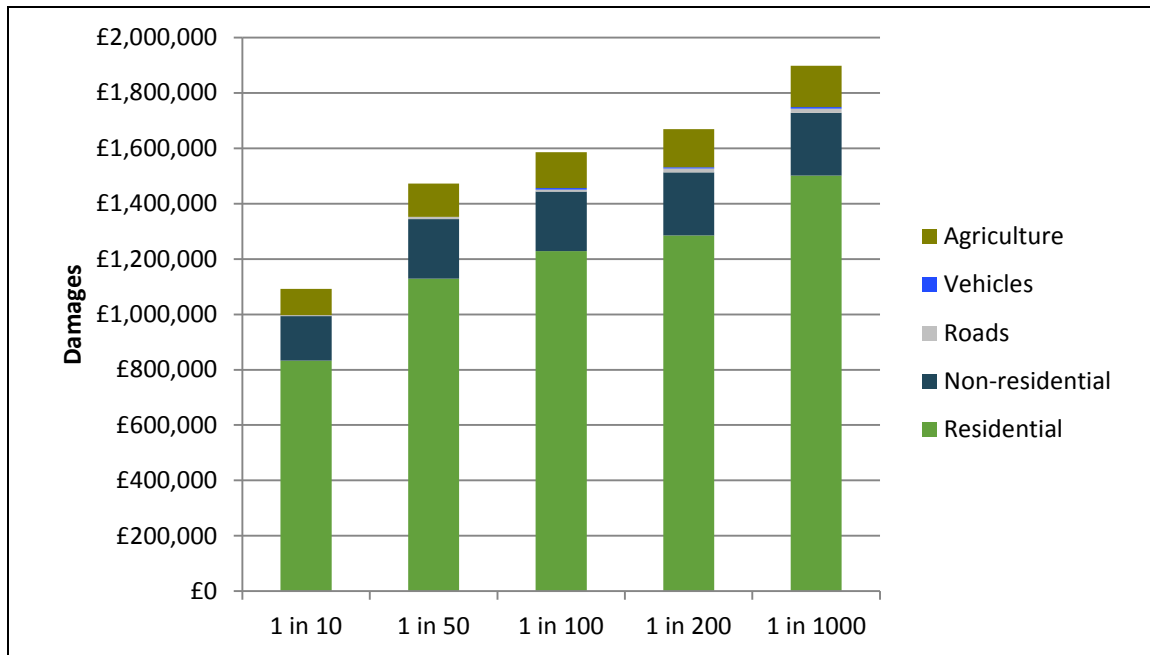


Figure 1: Damages by flood likelihood

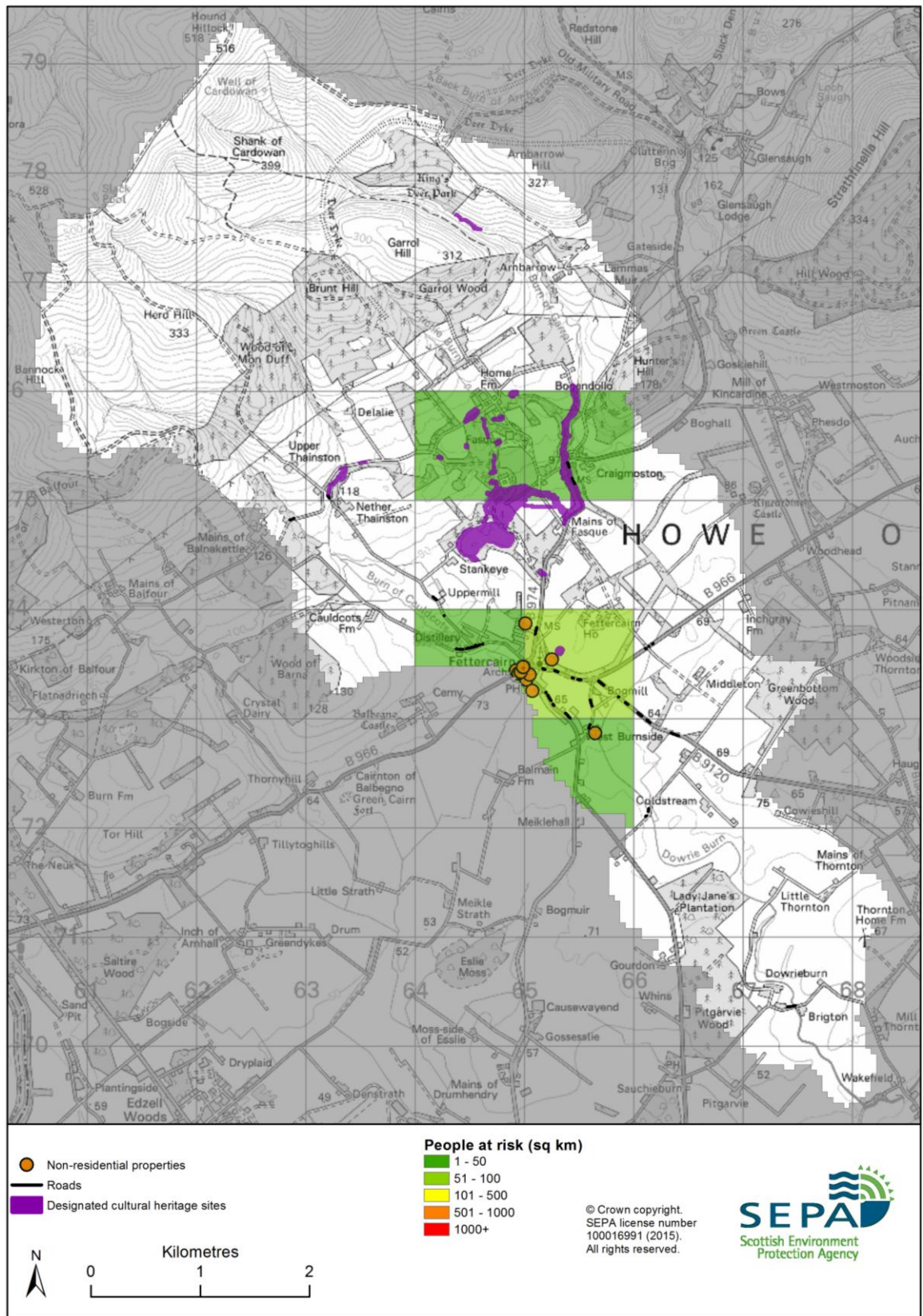


Figure 2: Impacts of flooding

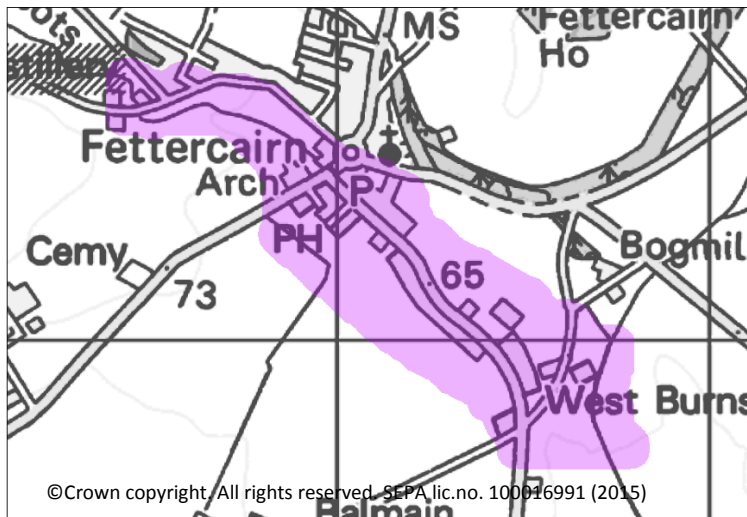
History of flooding

The following floods have been recorded in this area:

- December 2012: A small number of properties were flooded in Fettercairn after the Cauldcotts Burn overtopped flood defences.
- October 2009: Fettercairn hit by flood water when the Cauldcotts Burn burst its banks near the distillery. The water flowed down a field and flooded a number of properties.

Objectives to manage flooding in Potentially Vulnerable Area 07/02

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 Fettercairn Potentially Vulnerable Area.

Reduce economic damages to residential and non-residential properties in Fettercairn caused by river flooding	
Indicators:	Target area:
<ul style="list-style-type: none"> £96,000 Annual Average Damages from residential properties £17,000 Annual Average Damages from non-residential properties 	 <p style="font-size: small; text-align: center;">© Crown copyright. All rights reserved. SEPA, lic.no. 100016991 (2015)</p>
Objective ID: 7003	

Target area	Objective	ID	Indicators within PVA
Applies across Tay Estuary and Montrose Basin Local Plan District	Avoid an overall increase in flood risk	7001	<ul style="list-style-type: none"> 50 residential properties £140,000 Annual Average Damages
Applies across Tay Estuary and Montrose Basin Local Plan District	Reduce overall flood risk	7054	<ul style="list-style-type: none"> 50 residential properties £140,000 Annual Average Damages
Applies across Tay Estuary and Montrose Basin 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 07/02

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 Fettercairn Potentially Vulnerable Area.

Selected actions					
<i>Flood protection scheme/works</i>	<i>Natural flood management works</i>	<i>New flood warning</i>	Community flood action groups	<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
Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies

Action (ID):	FLOOD PROTECTION STUDY (70030005)		
Objective (ID):	Reduce economic damages to residential and non-residential properties in Fettercairn caused by river flooding (7003)		
Delivery lead:	Aberdeenshire Council		
Priority:	National:		Within local authority:
	102 of 168		6 of 12
Status:	Ongoing	Indicative delivery:	2022-2027
Description:	A flood protection study has been recommended for Fettercairn to further assess options to manage flood risk. The study should build on existing studies and should include natural flood management, focusing on the assessment of runoff control and sediment management. The study should also consider the viability of property level protection. The study should take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream. The study has a lower national priority and is to be carried out in the second flood risk management cycle.		
Potential impacts			
Economic:	The study could benefit 39 residential properties and 10 non-residential properties at risk of flooding in this location, with potential damages avoided of up to £2.6 million. Thirty-four of these properties are at risk from high likelihood floods and could benefit from natural flood management actions.		
Social:	Social impacts will depend on the outcome of the study and recommended actions. A reduction in flood risk would have a positive benefit to the health and wellbeing of the community. The study could also benefit two roads located within the study area. Natural		

Social:	flood management actions can restore and enhance natural environments and create opportunities for recreation and tourism.
Environmental:	Flood protection studies should consider the positive and negative impacts of proposed actions on the ecological quality of the environment and designated sites. Where possible opportunities to enhance and restore the environment should be sought. In this location designated sites include conservation areas and listed buildings.

Action (ID):	STRATEGIC MAPPING AND MODELLING (70540016)		
Objective (ID):	Reduce overall flood risk (7054)		
Delivery lead:	SEPA		
Status:	Not started	Indicative delivery:	2022-2027
Description:	SEPA will seek to develop flood mapping in the Black Burn and Luther Water areas to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability. As this work coincides with a proposed local authority study in Fettercairn, SEPA will work collaboratively to ensure consistent modelling approaches are applied.		

Action (ID):	MAINTAIN FLOOD PROTECTION SCHEME (70030017)		
Objective (ID):	Reduce economic damages to residential and non-residential properties in Fettercairn caused by river flooding (7003)		
Delivery lead:	Aberdeenshire Council		
Status:	Existing	Indicative delivery:	Ongoing
Description:	Continue to maintain existing flood protection schemes that provide protection to Fettercairn from river flooding. These include the Fettercairn Flood Protection Scheme constructed in 1982 and an informal flood storage area on the Burn of Cauldcotts constructed in 2011.		

Action (ID):	FLOOD FORECASTING (70540009)		
Objective (ID):	Reduce overall flood risk (7054)		
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>In this area Aberdeenshire Council also owns and operates two river level gauges on telemetry for Fettercairn.</p>		

Action (ID):	COMMUNITY FLOOD ACTION GROUPS (70030012)		
Objective (ID):	Reduce economic damages to residential and non-residential properties in Fettercairn caused by river flooding (7003)		
Delivery lead:	Community		
Status:	Existing	Indicative delivery:	Ongoing
Description:	<p>Fettercairn Flood Resilience Group operates in this area. This is a community-run group set up in spring 2013. When possible it is supported by Aberdeenshire Council.</p>		

Action (ID):	SELF HELP (70540011)		
Objective (ID):	Reduce overall flood risk (7054)		
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> <p>Aberdeenshire Council provides a range of flood protection products at cost price with free delivery across Aberdeenshire, available for all types of flooding.</p>		

Action (ID):	AWARENESS RAISING (70540013)		
Objective (ID):	Reduce overall flood risk (7054)		
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 (70540007)		
Objective (ID):	Reduce overall flood risk (7054)		
Delivery lead:	Aberdeenshire 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 (70540014)		
Objective (ID):	Reduce overall flood risk (7054)		
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 (70010001)		
Objective (ID):	Avoid an overall increase in flood risk (7001) Reduce overall flood risk (7054)		
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.		