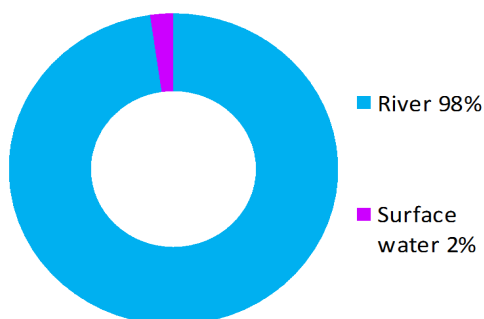


Moniaive (Candidate Potentially Vulnerable Area 14/25c)

Local Plan District	Local authority	Main catchment
Solway	Dumfries and Galloway Council	Dalwhat Water

Summary of flooding impacts



At risk of flooding

- 20 residential properties
- <10 non-residential properties
- £55,000 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

Moniaive (Candidate Potentially Vulnerable Area 14/25c)

Local Plan District	Local authority	Main catchment
Solway	Dumfries and Galloway Council	Dalwhat Water

Background

This candidate Potentially Vulnerable Area includes the town of Moniaive which is located in the centre of the Solway Local Plan District (shown below). The Craigdarroch Water and the Dalwhat Water flow through the area. It is approximately 55km².



There are approximately 20 residential properties at risk of flooding.

The Annual Average Damages are approximately £55,000.

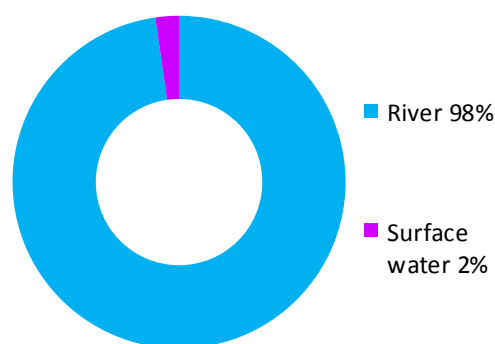


Figure 1: Annual Average Damages by flood source

Summary of flooding impacts

This area was not originally identified as a Potentially Vulnerable Area in 2011. However, updated information on flood risk identified that this area should be regarded as a candidate Potentially Vulnerable Area due to the risk to people and properties.

Flood risk in the area is mostly attributed to river flooding from the Craigdarroch Water and the Dalwhat Water. The Dalwhat Water flows from the north east of the area, with the Craigdarroch Water flowing from the west. The confluence of the two watercourses is in Moniaive where there is a risk of flooding to residential properties.

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. Residential properties affected by river flooding experience the greatest economic impact at approximately 80% of the damages.

The location of the impacts of flooding is shown in Figure 3. It shows that there are limited impacts within the area.

	1 in 10 High likelihood	1 in 200 Medium likelihood	1 in 1000 Low likelihood
Residential properties (total 310)	10	20	20
Non-residential properties (total 30)	<10	<10	<10
People	30	40	40
Community facilities	0	0	0
Utilities assets	<10	<10	<10
Transport links - roads (km)	0.3 of A road	0.5 (of which 0.4 is A road)	0.6 (of which 0.5 is A road)
Environmental designated areas (km ²)	0	0	0
Designated cultural heritage sites	0	0	0
Agricultural land (km ²)	1.2	1.4	1.4

Table 1: Summary of flood impacts¹

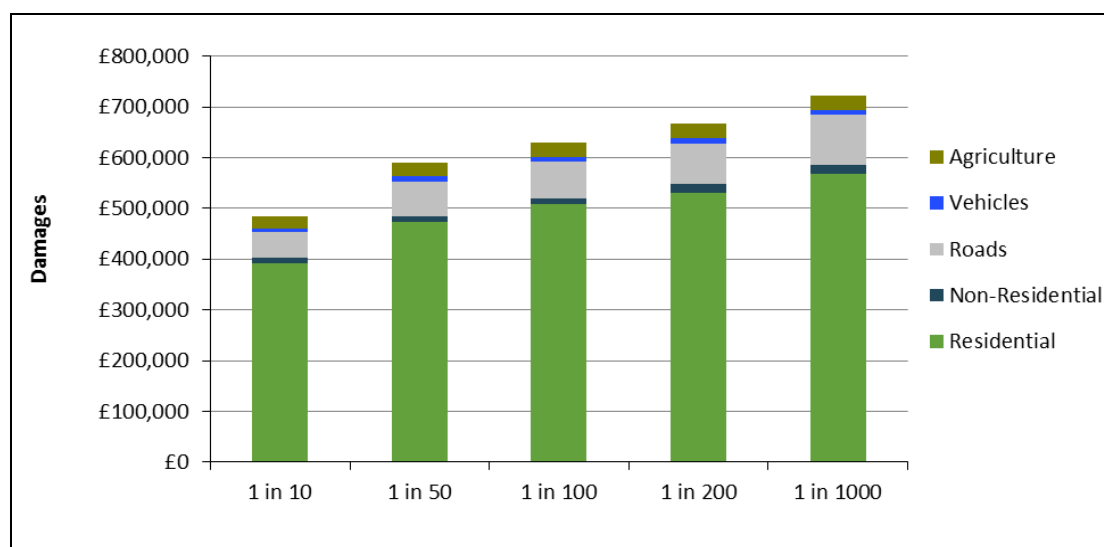


Figure 2: Damage by flood likelihood

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

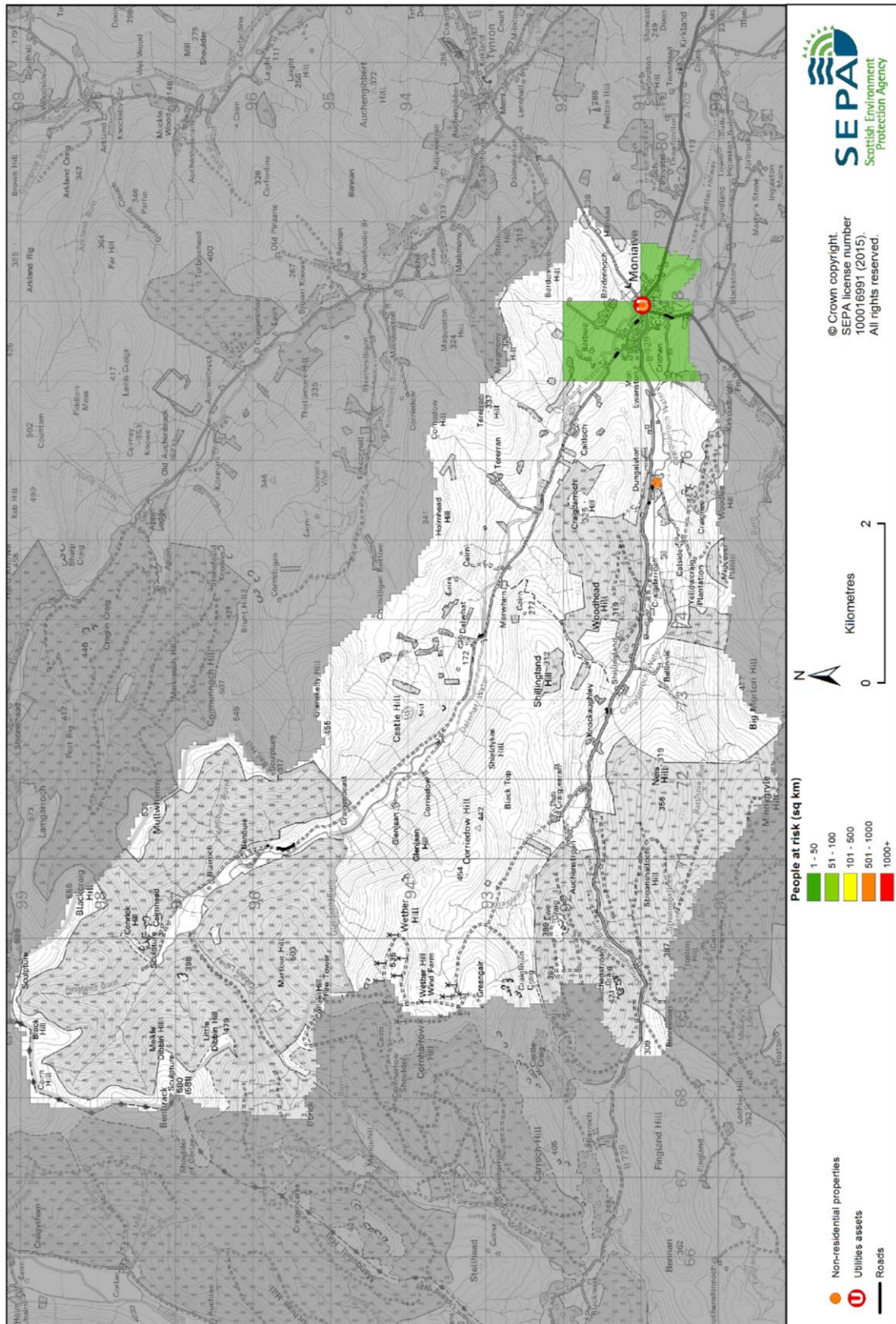


Figure 4: Impacts of flooding

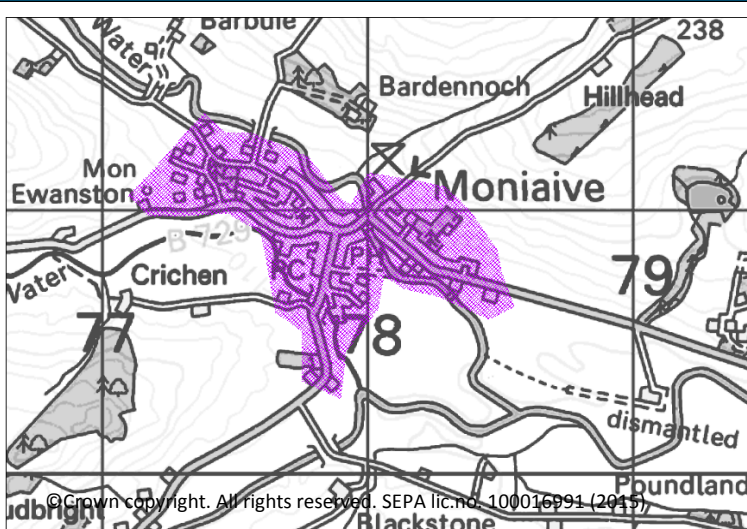
History of flooding

The Dalwhat Water flooded in December 2013 and affected residential properties, roads and public spaces in Moniaive. In November 2006, further reported incidents of flooding from the Dalwhat Water affected Nithside, Moniaive and Woodside and resulted in gardens being flooded as well as the A702 and B729 roads.

There are records of flooding from surface water runoff in December 2013 which resulted in flooding of residential properties. Recorded flooding in November 2002 impacted Nithsdale and Moniaive. In October 2004 drainage flooding in Moniaive caused flooding to non-residential properties and the A702 road.

Objectives to manage flooding in Potentially Vulnerable Area 14/25c

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 Moniaive Candidate Potentially Vulnerable Area.

Reduce the risk of flooding in Moniaive	
Indicators:	Target area:
<ul style="list-style-type: none"> 18 residential properties <10 non-residential properties £44,000 Annual Average Damages 	
Objective ID: 14038	© Crown copyright. All rights reserved. SEPA lic.no. 100016991 (2013)

Target area	Objective	ID	Indicators within PVA
Applies across Solway Local Plan District	Avoid an overall increase in flood risk	14033	<ul style="list-style-type: none"> 20 residential properties £55,000 Annual Average Damages
Applies across Solway Local Plan District	Reduce overall flood risk	14040	<ul style="list-style-type: none"> 20 residential properties £55,000 Annual Average Damages
Applies across Solway 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 14/25c

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 Moniaive Candidate 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 (140380005)		
Objective (ID):	Reduce the risk of flooding in Moniaive (14038)		
Delivery lead:	Dumfries and Galloway Council		
Priority:	National:		Within local authority:
	168 of 168		10 of 10
Status:	Ongoing	Indicative delivery:	2016-2021
Description:	A flood protection scheme has previously been built in Moniaive to address flooding experienced within the town. As the scheme was built more than 50 years ago it is recommended that a study is undertaken to assess the current flood risk within Moniaive and if further work is required to reduce the level of risk in the area now or in the future, due to climate change.		
Potential impacts			
Economic:	The economic impacts have not been defined at this stage.		
Social:	A reduction in flood risk would have a positive benefit to the health and wellbeing of the community.		
Environmental:	Flood protection studies should consider the positive and negative impacts of proposed actions on the ecological quality of the environment.		

Action (ID):	MAINTAIN FLOOD PROTECTION SCHEME (140380017)		
Objective (ID):	Reduce the risk of flooding in Moniaive (14038)		
Delivery lead:	Dumfries and Galloway Council		
Status:	Existing	Indicative delivery:	Ongoing
Description:	A flood protection scheme was built in Moniaive to address flooding experienced within the town. The level of protection offered by the scheme is not currently known. A flood protection study is being carried out by Dumfries and Galloway Council to establish the level of protection offered by the current scheme and potential further work to reduce flood risk.		

Action (ID):	FLOOD FORECASTING (140400009)		
Objective (ID):	Reduce overall flood risk (14040)		
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):	SELF HELP (140400011)		
Objective (ID):	Reduce overall flood risk (14040)		
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>Dumfries and Galloway Council has a Pilot Flood Product Subsidy Scheme in place, it is recommended that this should be continued. Residential or business properties that are identified as being at risk of flooding are eligible for the scheme. There are various products to reduce the impact of flooding to properties which can be purchased as part of the scheme.</p>		

Action (ID):	AWARENESS RAISING (140400013)		
Objective (ID):	Reduce overall flood risk (14040)		
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 communities and promote Floodline using most the appropriate mix of methods for the area. These could include direct mailings, education activities, participation in local events and relevant flooding messages in the media.</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 (140400007)		
Objective (ID):	Reduce overall flood risk (14040)		
Delivery lead:	Dumfries and Galloway 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 (140400014)		
Objective (ID):	Reduce overall flood risk (14040)		
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>Dumfries and Galloway Council along with the Scottish Fire and Rescue Service, SEPA and the Scottish Flood Forum have procured a Flood Pod. The Pod can be deployed to an area at risk of a flood emergency and is filled with flood protection equipment which is issued to the public.</p>		

Action (ID):	PLANNING POLICIES (140330001)		
Objective (ID):	Avoid an overall increase in flood risk (14033) Reduce overall flood risk (14040)		
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>		