

## Shotts (Potentially Vulnerable Area 11/20)

Local Plan District	Local authority	Main catchment
Clyde and Loch Lomond	North Lanarkshire Council, West Lothian Council	South Calder Water

### Summary of flooding impacts



#### At risk of flooding

- <10 residential properties
- <10 non-residential properties
- £7,200 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>
<i>Flood protection study</i>	<i>Natural flood management study</i>	<i>Maintain flood warning</i>	<b>Awareness raising</b>	<i>Surface water plan/study</i>	<b>Emergency plans/response</b>
<i>Maintain flood protection scheme</i>	<b>Strategic mapping and modelling</b>	<b>Flood forecasting</b>	<b>Self help</b>	<b>Maintenance</b>	<b>Planning policies</b>

Actions

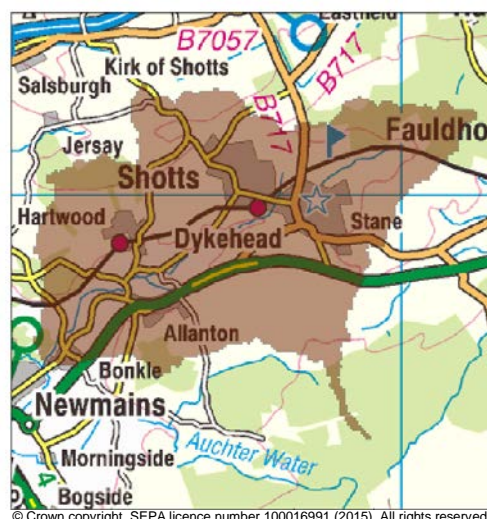
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### Background

The Potentially Vulnerable Area is located to the east of Glasgow, is approximately 30km<sup>2</sup> and incorporates the urban areas of Dykehead and Shotts (shown below).

There are less than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £7,200. All damages in this Potentially Vulnerable Area are caused by river flooding.



### Summary of flooding impacts

The numbers provided in the assessment of flood risk do not include local impacts from groundwater. In this area there are known drainage problems in the village of Allanton due to groundwater rebound from the cessation of mining activities, with the water table close to or above ground level. Iron rich water breaks out at various locations to the south or within the village resulting in problems for land drainage. A number of houses currently have pumps installed within the surface of the soil to prevent flooding of the sub-structure.

The South Calder Water, a tributary of the River Clyde, is the main watercourse in area. It flows in a south-westerly direction through Shotts and past Allanton and Bonkle. The land surrounding the South Calder Water between Bonkle and Shotts is largely rural with extensive flood plains. River flooding is predicted to affect a small number of properties in Calderhead, Shotts where the South Calder Water is culverted underneath the B717 Burnbrae Road for approximately 350m. Historically, this culvert has been the cause of flooding due to blockages. A river restoration scheme is being undertaken to alleviate the problem by opening this culverted section to restore the South Calder to its natural state.

There were no residential properties assessed at risk of surface water flooding within the area however this does not correspond with the known flood history. In Allanbank and Bonkle there are small sections of roads at risk of surface water flooding. The A71 has also been identified to have a small risk of surface water flooding.

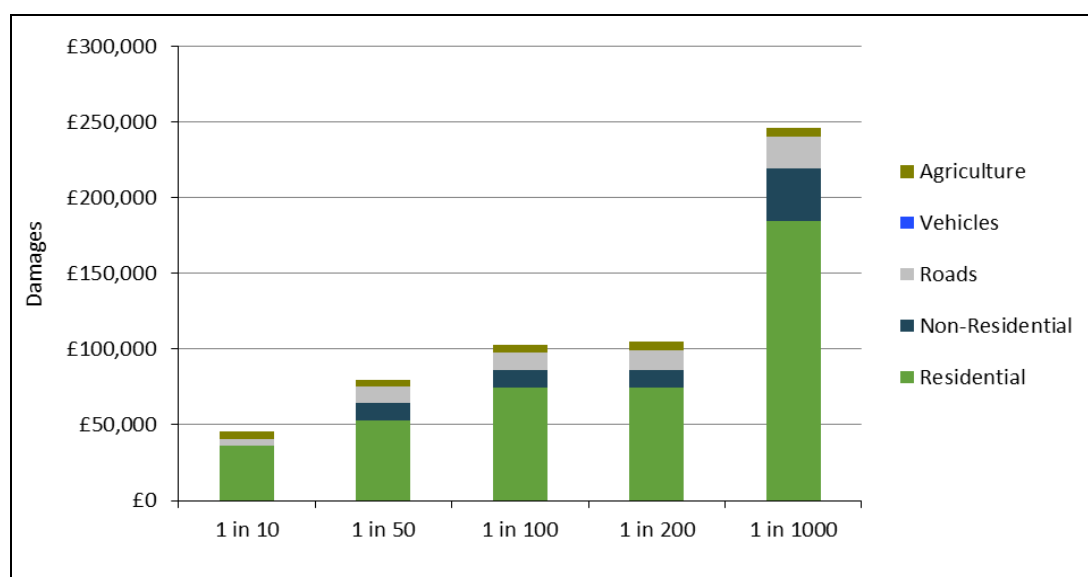
Within this Potentially Vulnerable Area it is estimated that climate change will increase the number of residential properties at risk of flooding from fewer than ten to 20.

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

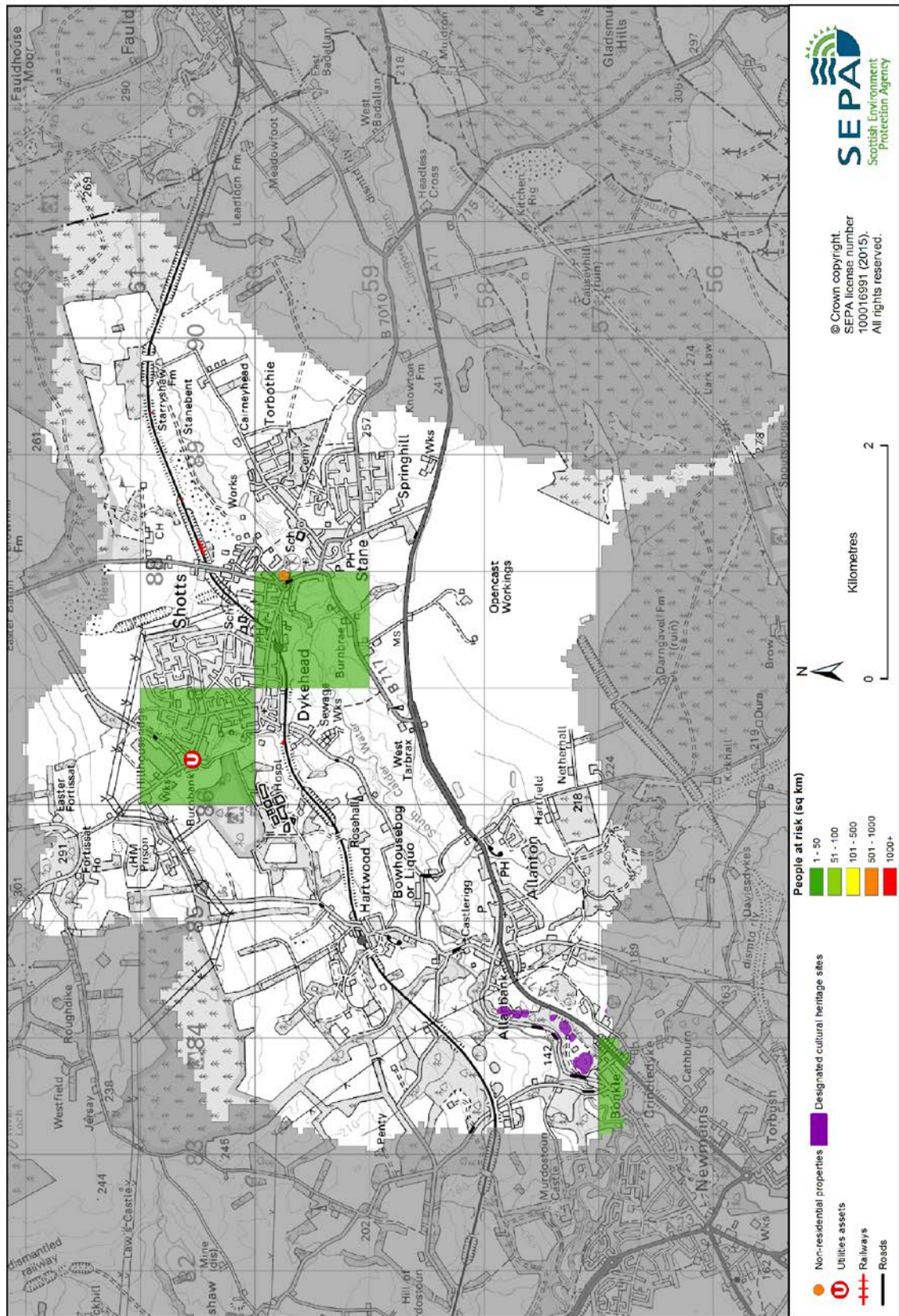
	1 in 10 High Likelihood	1 in 200 Medium Likelihood	1 in 1000 Low Likelihood
Residential properties (total 4,600)	<10	<10	20
Non-residential properties (total 240)	<10	<10	<10
People	<10	<10	30
Community facilities	0	0	0
Utilities assets	<10	<10	<10
Transport links - roads (km)	0.3 (of which <0.1 is A road)	0.7 (of which <0.1 is A road)	0.8 (of which <0.1 is A road)
Transport links - rail (km)	0.2	0.2	0.2
Environmental designated areas (km <sup>2</sup> )	0	0	0
Designated cultural heritage sites	2	2	2
Agricultural land (km <sup>2</sup> )	0.2	0.3	0.3

**Table 1:** Summary of flooding impacts<sup>1</sup>



**Figure 2:** Damages by flood likelihood

<sup>1</sup> Some receptors are counted more than once if flooded from multiple sources



**Figure 3: Impacts of flooding**

## History of flooding

There are records of river and surface water flooding, between the areas of Hartwood, Stane and Shotts. These floods have not had any major impacts and are relatively infrequent.

There are known drainage problems in the village of Allanton due to minewater rebound from the cessation of mining activities, with the groundwater table close to or above ground level. This problem has been mainly affecting residential gardens in the area. The residents association has also expressed concerns about waterlogged gardens and poor horticultural conditions. The council continues to deal with high deposition rates of ochre sediment precipitated in drains and ditches.



## Objectives to manage flooding in Potentially Vulnerable Area 11/20

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 Shotts Potentially Vulnerable Area.

Target area	Objective	ID	Indicators within PVA
Applies across Clyde and Loch Lomond Local Plan District	Avoid an overall increase in flood risk	11127	<ul style="list-style-type: none"> <li>• &lt;10 residential properties</li> <li>• £7,200 Annual Average Damages</li> </ul>
Applies across Clyde and Loch Lomond Local Plan District	Reduce overall flood risk	11132	<ul style="list-style-type: none"> <li>• &lt;10 residential properties</li> <li>• £7,200 Annual Average Damages</li> </ul>
Applies across Clyde and Loch Lomond 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 11/20

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

<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (111320016)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Not started</b>	Indicative delivery:	<b>2016-2021</b>
<b>Description:</b>	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 2,200km <sup>2</sup> of improved surface water data is currently available within this Local Plan District. The inclusion of additional surface water hazard data resulting from the completion of local authority surface water management plans and Scottish Water integrated catchment studies will be considered as these projects are completed.		

<b>Action (ID):</b>	<b>STRATEGIC MAPPING AND MODELLING (111320019)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	Scottish Water		
<b>Status:</b>	<b>Not started</b>	Indicative delivery:	<b>2016-2021</b>
<b>Description:</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk.		

<b>Action (ID):</b>	<b>FLOOD FORECASTING (111320009)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	SEPA		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		

<b>Action (ID):</b>	<b>SELF HELP (111320011)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	—		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		

<b>Action (ID):</b>	<b>AWARENESS RAISING (111320013)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	Responsible authorities		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		



<b>Action (ID):</b>	<b>MAINTENANCE (111320007)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	Local authorities, asset / land managers		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		

<b>Action (ID):</b>	<b>EMERGENCY PLANS/RESPONSE (111320014)</b>		
<b>Objective (ID):</b>	Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	Category 1 and 2 Responders		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		

<b>Action (ID):</b>	<b>PLANNING POLICIES (111270001)</b>		
<b>Objective (ID):</b>	Avoid an overall increase in flood risk (11127) Reduce overall flood risk (11132)		
<b>Delivery lead:</b>	Planning authority		
<b>Status:</b>	<b>Existing</b>	Indicative delivery:	<b>Ongoing</b>
<b>Description:</b>	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.		