

# Orkney Local Plan District (LPD 3)

Draft Flood Risk Management Strategy 2021-2027

Every day SEPA works to protect and enhance Scotland's environment, helping communities and businesses thrive within the resources of our planet.



We call this **One Planet Prosperity**

For information on accessing this document in an alternative format or language please either contact SEPA by telephone on 03000 99 66 99 or by email to [equalities@sepa.org.uk](mailto:equalities@sepa.org.uk)

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

<http://contactscotland-bsl.org/>

[www.sepa.org.uk](http://www.sepa.org.uk)

03000 99 66 99

Strathallan House, Castle Business Park, Stirling, FK9 4TZ

# Orkney Local Plan District (LPD 3)

## Draft Flood Risk Management Strategy 2021-2027



---

The Orkney Local Plan District covers an area of around 1,000km<sup>2</sup> and has a population of approximately 23,000 people. It includes all of the Orkney Islands, 20 of which are inhabited.

The majority of the islands comprise low-lying flat ground with hills on the Mainland, Rousay and Hoy. Land cover is dominated by agricultural land (predominantly improved grassland) with heather and wetlands also significant. There are a number of large inland lochs in the area including Loch of Harray and Loch of Stenness. The coastline has a total length of approximately 860km, much of it soft and easy to erode.

The main risk of flooding in Orkney is from coastal flooding. Orkney has been affected by several floods, notably widespread coastal flooding in January 2005. Heavy rain caused significant surface water and river flooding across Orkney in October 2006 with Kirkwall particularly badly affected. The Churchill Barriers, which are vital transport links between islands, are frequently disrupted by wave overtopping. Erosion of the soft coastline around Orkney is also of significance.

Currently it is estimated that there are 2,300 people and 1,900 homes and businesses at risk from flooding. This is estimated to increase to 2,700 people and 2,200 homes and businesses by the 2080s due to climate change. Annual cost of flooding is approximately £4.8 million. Note however that flooding from wave overtopping is not fully represented in the assessment of flood risk and the impact of coastal flooding may be underestimated.

SEPA lead development of the Flood Risk Management Strategies for Scotland and delivery of flood warning services. Local flood risk management planning is led by Orkney Islands Council. The other responsible authority in this district is Scottish Water. They are supported by Scottish Government agencies including Forestry and Land Scotland, Scottish Forestry and Transport Scotland.

Within this Local Plan District, actions are regularly carried out by SEPA and responsible authorities to help prepare communities for potential flooding and reduce the impact of any

flooding that does occur. More information on these actions will be added to this section for 22 March 2021.

Potentially Vulnerable Areas (PVA) were designated in 2018 based on the potential current or future risk from all sources of flooding. This designation was informed by the National Flood Risk Assessment ([link](#)). As part of continued analysis of flood risk, the National Flood Risk Assessment and PVAs will be reviewed every six years to take on board any new information. There are eight PVAs in the Orkney Local Plan District. Following sections provide more information on these areas.



Figure 1. Potentially Vulnerable Areas in Orkney Local Plan District

## LPD 3 Orkney- table of contents

Click the [blue text](#) to select your area of interest

PVA Ref	PVA NAME	Local Authority
02/03/01	<a href="#">Sanday</a>	Orkney
02/03/02	<a href="#">Stronsay</a>	Orkney
02/03/03	<a href="#">Westray</a>	Orkney
02/03/04	<a href="#">Stromness and Stenness</a>	Orkney
02/03/05	<a href="#">Kirkwall</a>	Orkney
02/03/06	<a href="#">Hoy and South Walls</a>	Orkney
02/03/07	<a href="#">South Ronaldsay</a>	Orkney
02/03/08	<a href="#">Burray and the Churchill Barriers</a>	Orkney

## 02/03/01 (Sanday)

Sanday is designated as a Potentially Vulnerable Area due to the risk of coastal flooding. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Some coastal flooding occurred during Storm Brendan in January 2020.

There is 1 area in this PVA, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

Sanday (Target Area 370)

## 02/03/02 (Stronsay)

Stronsay is designated as a Potentially Vulnerable Area due to the risk of coastal flooding in Whitehall. Coastal flood risk is likely to increase due to sea level rise caused by climate change. There is a history of flooding, recently caused by coastal flooding.

There is 1 area in this PVA, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

Whitehall (Target Area 371)

## 02/03/03 (Westray)

Westray is designated as a Potentially Vulnerable Area due to the risk of coastal flooding to Pierowall, which has suffered from coastal flooding in the past. Coastal flood risk is likely to increase due to sea level rise caused by climate change. There is a history of flooding, recently caused by rivers and surface water.

There is 1 area in this PVA, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

Pierowall (Target Area 440)

## 02/03/04 (Stromness and Stenness)

Stromness and Stenness is designated as a Potentially Vulnerable Area due to the risk of coastal flooding. Coastal flood risk is likely to increase due to sea level rise caused by climate change. There is a history of coastal flooding in the area. Recently Stromness suffered from coastal flooding due to Storm Brendan.

There is 1 area in this PVA, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

Stromness (Target Area 372)

## 02/03/05 (Kirkwall)

This area is designated as a Potentially Vulnerable Area due to the risk of coastal and surface water flooding to Kirkwall, St. Mary's, A960 Deerness and Graemeshall. Recently the area was affected by surface water flooding. Kirkwall benefits from coastal defences.

There are 4 areas in this PVA, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within these areas will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

St Mary's (Target Area 373)  
Graemeshall (Target Area 374)  
Kirkwall (Target Area 375)  
A960 Deerness (Target Area 456)

## 02/03/06 (Hoy and South Walls)

The area around Hoy and South Walls is designated as a Potentially Vulnerable Area due to coastal flooding to Little Ayre and The Ayre. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Coastal flooding has recently occurred in the area.

There are 2 areas in this PVA, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within these areas will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

Little Ayre (Target Area 377)  
The Ayre (Target Area 441)

## 02/03/07 (South Ronaldsay)

South Ronaldsay is designated as a Potentially Vulnerable Area due to the risk of coastal flooding to St. Margaret's Hope. Coastal flood risk is likely to increase due to sea level rise caused by climate change. Coastal flooding has recently occurred in the area.

There is 1 area in this PVA, which has been the focus of further assessment, this is identified below. Further information on the proposed objectives and actions to manage flood risk within this area will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

### List of target areas

St Margaret's Hope (Target Area 382)

## 02/03/08 (Burray and the Churchill Barriers)

This area is designated as a Potentially Vulnerable Area due to the risk of coastal flooding to Burray Village and Churchill Barrier No 2. The Barriers form a vital link between Kirkwall and the communities in South Ronaldsay and intermediate islands. Coastal flood risk is likely to increase due to sea level rise caused by climate change. The Churchill Barriers regularly close due to coastal flooding, including in January 2020 during Storm Brendan.

There are 2 areas in this PVA, which have been the focus of further assessment, these are listed below. Further information on the proposed objectives and actions to manage flood risk within these areas will be provided in Phase 2 of the consultation (launching on 22nd March 2021).

**List of target areas**

Burray Village	(Target Area 385)
Churchill Barrier No2	(Target Area 446)