Flood Risk Management (Scotland) Act 2009:

FINAL REPORT

Local Flood Risk Management Plan (Cycle 1 2016-2022)

Highland & Argyll Local Plan District

Published by: The Highland Council

Contents

Foreword

This Final Report for the Local Flood Risk Management Plan shows the progress made in delivering the actions to avoid and reduce the risk of flooding, to allow us to prepare and protect ourselves and our communities across the breadth of the local plan district. The report also marks the completion of Cycle 1 as we now transition into Cycle 2.

"The impacts of flooding experienced by individuals, communities and businesses can be devastating and long lasting. It is vital that we continue to reduce the risk of any such future events and improve Scotland's ability to manage and recover from any events which do occur."
(Highland & Argyll Local Flood Risk Management Plan (LFRMP), June 2016)

The publication of this Final Report shows that the co-ordinated and collaborative efforts of public bodies can be brought together to deliver sustainable outcomes.

The Final Report is published by The Highland Council, as Lead Local Authority for the Highland & Argyll Local Plan District (LPD) - a partnership comprising of The Highland Council and Argyll and Bute Council as well as SEPA and a number of responsible authorities - Scottish Water; Forestry Commission Scotland; and Loch Lomond and the Trossachs National Park Authority. Input has also been received from Transport Scotland.

Individuals are the first line of defence against flooding and have responsibilities to protect themselves from flooding. Through self-help and property level protection, awareness raising and signing up to Floodline (www.floodlinescotland.org.uk), individuals, businesses and communities can and have made key contributions to the delivery of the actions in the LFRMP (the 'Plan').

Since the publication of the Plan in June 2016, public sector finances in Scotland have continued to be under considerable pressure. This placed an even greater responsibility on SEPA, local authorities, Scottish Water and other responsible authorities to deliver their flood risk management responsibilities in an effective and sustainable way. During Cycle 1 we have also had to respond to the challenges of the COVID-19 pandemic.

SEPA, local authorities, Scottish Water, and other responsible authorities will continue to work collaboratively to implement the actions set out in the 2nd planning cycle to June 2028.

1 Background

The Final Report is a statutory requirement of the Flood Risk Management (Scotland) Act 2009 (Section 38). The Final Report presents:

- an assessment of the progress made towards implementing the Highland & Argyll LFRMP (the 'Plan');
- a summary of the planned actions which were not implemented, with reasons for their non-implementation; and
- a description of any other actions implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the objectives.

Further details on flood risk management responsibilities in Scotland and the legal requirement for the publication of this Interim Report can be found in Appendix 1.

A copy of the Highland & Argyll Plan can be found at the following link:
http://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

2 Assessment of Progress

This section sets out an assessment of the progress towards implementing the actions set out in the Plan. There are actions that apply across the whole of the Highland & Argyll LPD and actions that are specific to each of the 40 Potentially Vulnerable Areas (as defined under Section 13 of the Act) in the Highland & Argyll LPD, which are shown below in Figure 1.

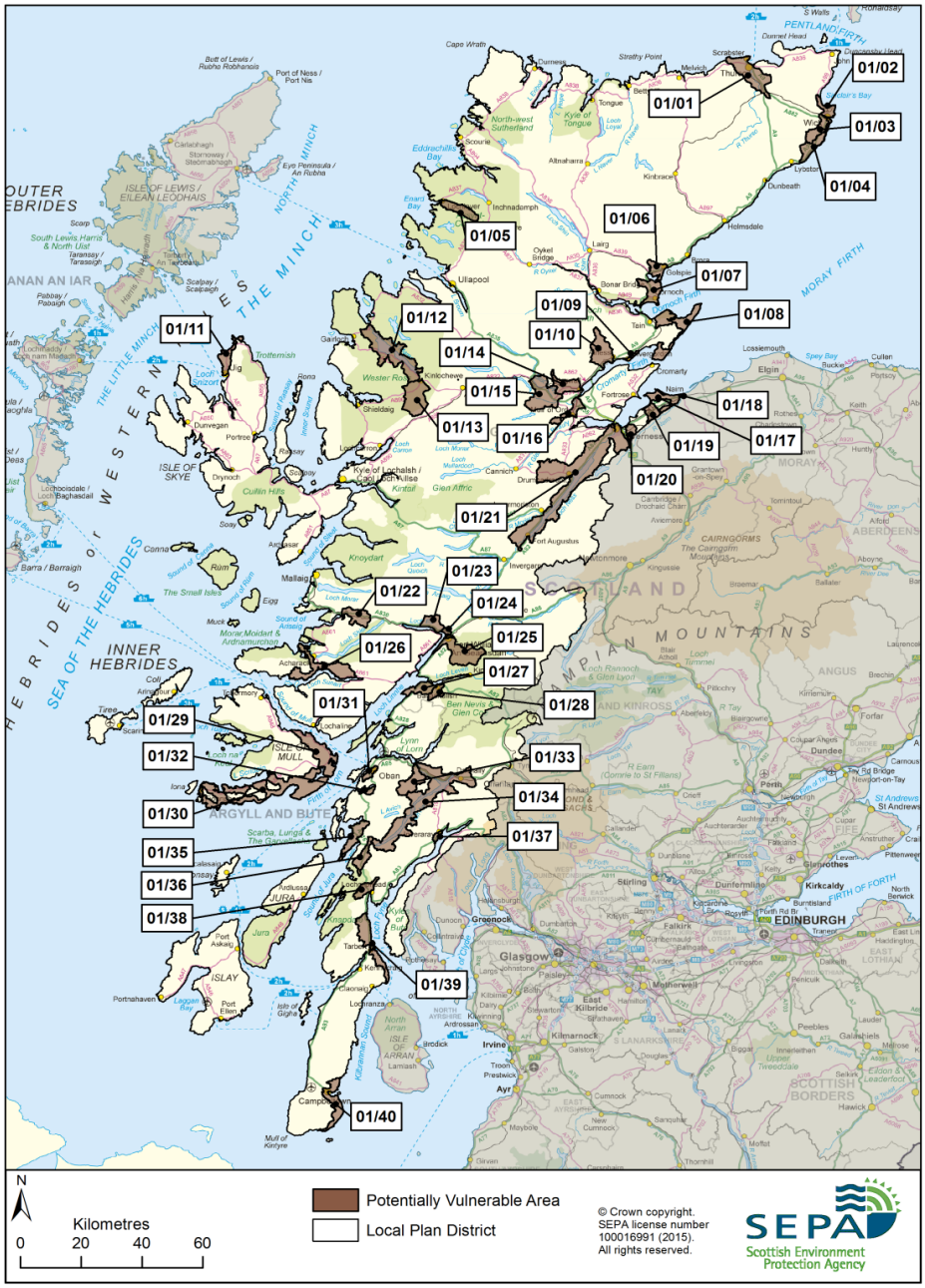


Figure 1: The Highland and Argyll Local Plan District with Potentially Vulnerable Areas identified

Reproduced from Highland and Argyll Local Plan District Flood Risk Management Strategy, SEPA (December 2015)

A progress summary of the actions set out in the Plan is shown overleaf in Table 1. Progress is shown using a traffic light system based on data collected during February 2022, where each item is

marked as Red, Amber or Green (RAG) to describe the status of the action as follows:

Green – Action has been completed.

Amber – Action has commenced but has not progressed as far as envisaged in the Plan.

Red – Action has not commenced.

Further detail on specific actions can be found in the relevant Potentially Vulnerable Area section within Section 4.

*Note: N/A is used where there is no formal Flood Protection Scheme or flood warning scheme present.

Highland Council PVA's	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
Thurso (01/01)				G			G			G			A	G	G		G	G
Wick Airport (01/02)							G		G	G			A	G	G		G	G
Wick- Burn of Newton (01/03)							G			G			A	G	G		G	G
Wick Coastal (01/04)							A		G	G			A	G	G		G	G
Lochinver (01/05)										G			A	G	G	R	G	G
Golspie (01/06)				G			A		G	G		G	A	G	G		G	G
Dornoch (01/07)									G	G			A	G	G		G	G
Tarbet Ness (01/08)				R			A		G	G			A	G	G		G	G

Invergordon (01/09)							G		G	G			A	G	G		G	G
Alness (01/10)							G		G	G			A	G	G	R	G	G
Uig (01/11)										G			A	G	G		G	G
Poolewe (01/12)										G			A	G	G		G	G
Kinlochewe (01/13)										G			A	G	G		G	G
Dingwall & Strathpeffer (01/14)				G		A	G	G	G	G			A	G	G		G	G
Contin & Garve (01/15)							A		G	G			A	G	G	R	G	G
Conon Bridge & Muir of Ord (01/16)							A	G		G			A	G	G		G	G
Nairn West & Ardersier (01/17)							A		G	G			A	G	G		G	G
Nairn Central (01/18)				A			A		G	G			A	G	G		G	G

Inverness Airport (01/19)							G			G			A	G	G		G	G
Smithton & Culloden (01/20)	G					A	G			G			A	G	G		G	G
Inverness & Great Glen (01/21)	G			R	G	A	A	G	G	G		G	A	G	G		G	G
Lochailort (01/22)										G			A	G	G		G	G
Corpach (01/23)						A	G		G	G			A	G	G		G	G
Caol & Inverlochy (01/24)	A					A	G		G	G			A	G	G		G	G
Fort William (01/25)				R		A	G		G	G			A	G	G		G	G
Sunart & Moidart (01/26)										G			A	G	G		G	G
South Ballachulish (01/27)										G			A	G	G		G	G
Ballachulish & Glencoe (01/28)										G			A	G	G		G	G

Argyll & Bute Council PVA's	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
Craignure, Mull (01/29)										G			A	G	G		G	G
Ross of Mull (01/30)										G			A	G	G		G	G
Oban (01/31)				G		G	G		G	G			A	G	G		G	G
Loch Feochan (01/32)										G			A	G	G		G	G
Taynuilt (01/33)							A			G			A	G	G		G	G
Loch Awe (01/34)							G			G			A	G	G		G	G
Craignish (01/35)										G			A	G	G		G	G
Kilmartin (01/36)										G			A	G	G		G	G
Inveraray (01/37)							G			G			A	G	G		G	G

Lochgilphead (01/38)				G			G		G	G			A	G	G		G	G
Tarbert (01/39)				G			G		G	G			A	G	G		G	G
Campbeltown (01/40)	A					G	G		G	G			A	G	G		G	G

(Table 1: progress summary of the actions set out in the Plan)

3 Progress with LPD-wide Actions

3.1 Actions applicable across the Local Plan District

Some flood risk management objectives and actions apply to all areas, whether designated as a Potentially Vulnerable Area or not. For example, flood risk can be managed through national planning policy or as part of ongoing statutory duties discharged by local authorities.

The Local Plan District-wide objectives and the corresponding actions are set out in the following tables by lead authority.

ABC – Argyll and Bute Council

THC – The Highland Council

LLTTNP – Loch Lomond and The Trossachs National Park Authority

CNP – Cairngorm National Park

NR – Network Rail

SEPA – Scottish Environment Protection Agency

SW – Scottish Water

TS – Transport Scotland

3.2 Progress of LDP-wide actions

Summary of progress of PVA-wide actions to manage flood risk						
Action	**Status**	**PVA**	**Description**	**Start**	**End**	**Final Progress**
Awareness raising	**Green**		SEPA and 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. Local authorities will be undertaking additional awareness raising activities linked to Potentially Vulnerable Area specific Actions. Scottish Water will keep responsible authorities informed of its awareness raising activities through the Local Plan District partnerships.	2015	2022	Argyll and Bute Council have promoted flood advice for property owners and landowners on our website https://www.argyll-bute.gov.uk/transport-and-streets/flood-advice SEPA continued to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of SEPA's awareness raising activities will continue. The focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public. The Highland Council, working with SFF and SEPA have begun developing a strategy for encouraging community resilience across the Highlands. The Highland Council continues to engage local members, community councils, schools and the public where Flood Protection Studies and Schemes are being carried out and aims to coordinate these events with SEPA and SFF. Scottish Forestry have: • continue to improve Scottish Forestry regional knowledge on flood risk and the potentially vulnerable areas; • to identify opportunities for forestry projects across the country • continue to engage with local communities through the revision of Land Management Plans

Summary of progress of PVA-wide actions to manage flood risk						
Action	**Status**	**PVA**	**Description**	**Start**	**End**	**Final Progress**
Emergency plans / response	**Green**		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.	2015	2022	Section 8 Argyll and Bute Emergency Response Plan details ABCs response to emergencies in particular Section 8 of the document relates to flooding. Further information from Preparing for civil emergencies in Argyll and Bute (argyll-bute.gov.uk) The Highland Council Emergency Planners have in place and maintain Emergency Plans for all contingencies. The Highland Council is a member of the Highlands & Islands Local Resilience Partnership (HILRP).
Self help	**Green**		**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.	2015	2022	The Highland Council and Argyll & Bute Council work with Scottish Flood Forum to recommend areas which might benefit from independent Property Level Protection surveys and recommendations. Scottish Flood Forum promotes self-help within communities through Property Level Protection (PLP) exhibitions, and advice regarding the selection, surveys and appropriate and relevant information to enable clients to make the right decisions. Ongoing community PLP training, Flood Warden and resilience group promotion.
Flood Forecasting	**Green**		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.	2015	2022	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.

Summary of progress of PVA-wide actions to manage flood risk						
Action	**Status**	**PVA**	**Description**	**Start**	**End**	**Final Progress**
Maintenance	**Green**		Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. The local authorities 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.	2015	2022	The Highland Council inspects watercourses within its region according to an inspection regime which also includes formal flood defences. The Highland Council's Schedule of clearance and repair works are published online at: https://www.highland.gov.uk/info/1226/emergencies/81/flooding/5 Argyll and Bute Council are developing a strategy for prioritising the assessment and clearing of watercourses that is appropriate to the geography, vulnerability/risk and resources available, focussing on the most vulnerable and potentially affected areas.

Summary of progress of PVA-wide actions to manage flood risk						
Action	**Status**	**PVA**	**Description**	**Start**	**End**	**Final Progress**
Planning Policy	**Green**		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.	2015	2022	Flood risk to development managed by Argyll and Bute Local Development Plan – Supplementary Guidance Addressing Climate Change: Policy SG LDP SERV 7 - Flooding and Land Erosion – The Risk Framework for Development. SEPA continues to exercise its planning functions with a view to reducing overall flood risk. We effectively contribute to the delivery of sustainable flood risk management, and we support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, we have and will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. We have and will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy. We remain committed to exercising our planning functions with a view to reducing overall flood risk, and when a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, we will take the same approach. The Highland Council, as a planning authority, considers flood risk and drainage impact to be a material consideration for any new planning application. When a new planning application is submitted to The Highland Council it must satisfy local adopted supplementary guidance on Flood Risk and Drainage Impact Assessment.

4 Progress with PVA-specific Actions

This chapter is focused on the actions being taken to manage flood risk in the Potentially Vulnerable Areas. For each Potentially Vulnerable Area, background information including a summary of flood impacts and the actions to manage flooding is presented. Additional information on flooding within each Potentially Vulnerable Area is available within the Highland & Argyll Flood Risk Management Strategy, available on the SEPA website here - http://apps.sepa.org.uk/FRMStrategies/

The background information sets the scene for the planned actions to manage flooding that have been prioritised for delivery between 2016 and 2022. The Potentially Vulnerable Area level action tables set out the flood management objective that is to be achieved, provide a description of the action, identify who will be responsible for the delivery and implementation and a timetable of when the actions will be undertaken. The Local Plan District wide actions noted in Section 4 apply to all Potentially Vulnerable Areas.

This information is provided for each of the 40 Potentially Vulnerable Areas within the Highland & Argyll Local Plan District. Each Potentially Vulnerable Area has a separate sub-section with each sub-section following the same format.

The flood management objectives are the shared aims for managing flooding. Actions describe where and how flood risk will be managed. Objectives and actions have been set by SEPA and agreed by the flood risk management responsible authorities following consultation.

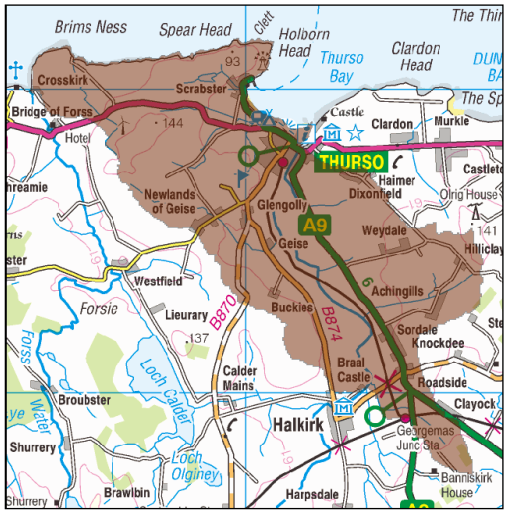
Many organisations, such as Scottish Water and energy companies, actively maintain and manage their own assets including the risk from flooding. Where known, these actions are described here.

The Highland Council and Argyll and Bute did carry out some works that were out with the actions of the plan these being, Conon Bridge Flood Defence Improvements, Kirkhill Watercourse Diversion Scheme, Halkirk Surface Water Management Plan and Clachan Flood Study. Further information can be found in Section 5.

4.1 Highland & Argyll Local Plan District

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Thurso

Summary of Progress for Thurso (PVA 01/01)



There are approximately 10 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £77,000. Further information can be found in LFRMP under PVA 01/01.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

Key progress:

- A Flood Protection Study to assess the fluvial and coastal flood risk in Thurso was completed in 2019. A preferred option to alleviate flood risk from the River Thurso has been identified.

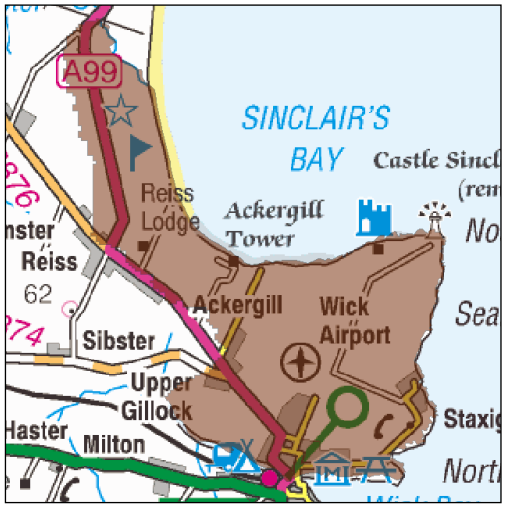
Overview of actions to manage flooding in PVA 01/01

PVA	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
01/01							G			G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/01						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood protection scheme/ works	**Green**	The Highland Council will undertake a hydraulic study to improve understanding of river (River Thurso) and coastal flood risk in Thurso.	THC	2016	2021	A Flood Protection Study to assess the fluvial and coastal flood risk in Thurso was completed in 2019. A preferred option to alleviate flood risk from the River Thurso has been identified. The preferred option consists of flood defence walls and an embankment
Strategic mapping and modelling	**Green**	Scottish Water to investigation and modelling of sewer catchments in Thurso and Halkirk.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Wick Coastal

Summary of Progress for Wick Coastal (PVA 01/02)



Summary of Progress for Wick Airport

Fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £10,000. Further information can be found in LFRMP under PVA 01/02.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Wick Flood Warning Area

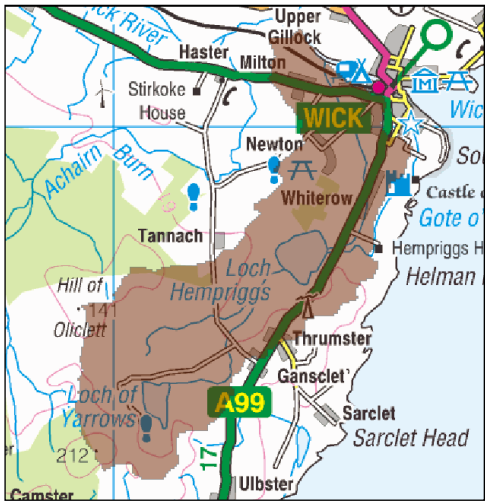
Overview of actions to manage flooding in PVA 01/02

PVA	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
01/02									G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/02						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	Continue to maintain the 'Wick' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Wick sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Wick

Summary of Progress for Burn of Newton (PVA 01/03)



Summary of Progress for Burn of Newton

There are approximately 40 residential properties and fewer than 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £190,000. Further information can be found in LFRMP under PVA 01/03.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Completion of hydraulic modelling of the Burn of Newton and Mill Laide.

Overview of actions to manage flooding in PVA 01/03

PVA	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
01/03										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/03						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Green**	SEPA will be seeking to develop the flood hazard mapping in the area of Loch Hempriggs to the confluence with the Wick River to improve understanding of the flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability.	SEPA	2016	2017	This action is complete. Updated river flood hazard mapping for this area was published on the SEPA web site in November 2020.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Wick sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Wick

Summary of Progress for Wick Coastal (PVA 01/04)

Summary of Progress for Wick Coastal

There are approximately 40 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £400,000. Further information can be found in LFRMP under PVA 01/04.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Wick Flood Warning Area. Completion of hydraulic modelling of the Burn of Newton and Mill Laide.

Overview of actions to manage flooding in PVA 01/04

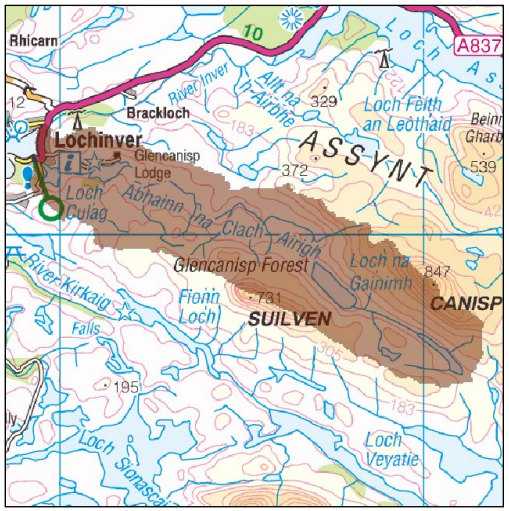
PVA	Flood protection scheme/works	Natural flood management works	New flood warning	Community flood action groups	Property level protection scheme	Site protection plans	Flood protection study	Natural flood management study	Maintain flood warning	Awareness raising	Surface water plan/study	Emergency plans/response	Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies
01/04									G	G		G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/04						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	SEPA will continue to maintain the 'Wick' flood warning area.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic mapping and modelling	Amber	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle. This action will not be taken forwards as described. SEPA will develop new Surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in Cycle 2. Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in Surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.

Summary of progress of actions to manage flood risk in PVA 01/04						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Green**	SEPA will be seeking to develop the flood hazard mapping in the area of Loch Hempriggs to the confluence with the Wick River to improve understanding of the flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability.	SEPA	2016	2017	This action is complete. Updated river flood hazard mapping for this area was published on the SEPA web site in November 2020.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Wick sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Abhainn na Clach Airigh

Summary of Progress for Lochinver (PVA 01/05)



Summary of Progress for Lochinver

There are approximately 10 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £140,000. Further information can be found in LFRMP under PVA 01/05.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Developing a strategy for raising awareness and community resilience

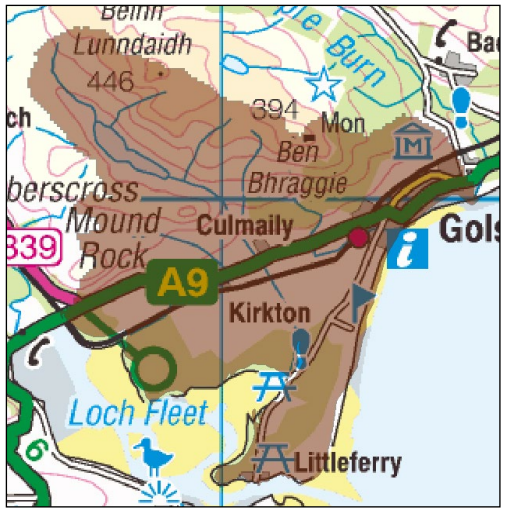
Overview of actions to manage flooding in PVA 01/05

PVA	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
01/05						R				G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/05						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Site Protection Plan	**Red**	The Highland Council will work with the management of a school and provide advice in the development of a site protection plan.	THC			The Highland Council did not develop a site protection plan

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Golspie Coastal

Summary of Progress for Golspie (PVA 01/06)



Summary of Progress for Golspie

There are approximately 60 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £190,000. Further information can be found in LFRMP under PVA 01/06. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- A Flood Protection Study to assess the coastal flood risk to Golspie was completed in 2019. A preferred option to alleviate flood risk to Golspie has been identified.

Overview of actions to manage flooding in PVA 01/06

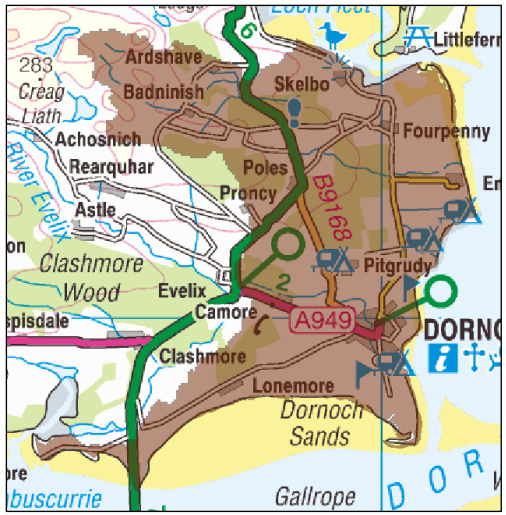
PVA	Flood protection scheme/works	Natural flood management works	New flood warning	Community flood action groups	Property level protection scheme	Site protection plans	Flood protection study	Natural flood management study	Maintain flood warning	Awareness raising	Surface water plan/study	Emergency plans/response	Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies
01/06				G			G		G	G		G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/06						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Green**	The Highland Council will undertake further hydraulic modelling of coastal flooding and carry out a Flood Protection Study to assess the benefits of improved defences along the town frontage to reduce coastal flood risk.	THC	2016	2019	A Flood Protection Study to assess the coastal flood risk in Golspie was completed in 2019. A preferred option to alleviate flood risk from the sea at Golspie has been identified, this preferred option consists of raising the existing sea defences.
Strategic mapping and modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Golspie sewer catchment to improve knowledge and understanding of flood risk	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Summary of progress of actions to manage flood risk in PVA 01/06						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	Continue to maintain the 'Helmsdale to Embo' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Community Flood Action Groups	**Green**	The Golspie Flood Prevention Group will work with THC to develop sustainable flooding solutions for Golspie	THC	Ongoing	Ongoing	The Highland Council has engaged with local flood action groups in the development of the study

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Dornoch Burn

Summary of Progress for Dornoch (PVA 01/07)



Summary of Progress for Dornoch

There are approximately 10 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £64,000. Further information can be found in LFRMP under PVA 01/07. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining 'Helmsdale to Embo' flood warning area

Overview of actions to manage flooding in PVA 01/07

PVA	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
01/07									G	G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/07						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	Green	Continue to maintain the 'Helmsdale to Embo' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Moray Firth

Summary of Progress for Tarbat Ness (PVA 01/08)

Summary of Progress for Tarbat Ness

There are approximately 40 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £130,000. Further information can be found in LFRMP under PVA 01/08. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Development of a Flood Protection Study planned for this cycle did not occur due to funding constraints.
- Maintaining the 'Cromarty Firth, Portmahomack to Inver and Rockfield to Balintore flood warning areas.
- Modelling of the Balintore sewer catchment was completed.

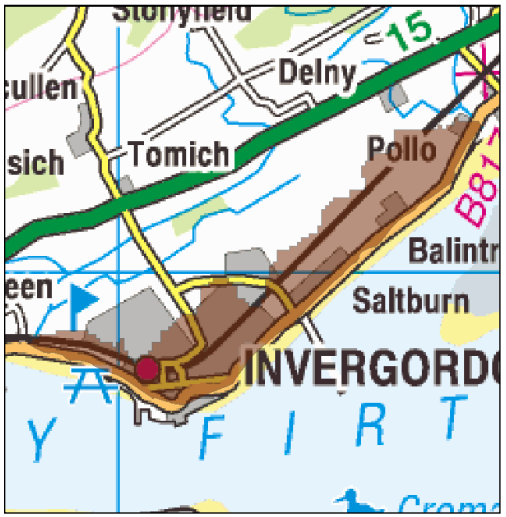
Overview of actions to manage flooding in PVA 01/08

PVA	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
01/08							R		G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/07						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Red**	The Highland Council will undertake a Flood Protection Study to further investigate the feasibility of developing a Flood Protection Scheme (or Works) for Tarbat Ness.	THC			The Flood Protection Study did not commence due to it being drop from The Highland Council's Capital Programme in 2018.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Balintore sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.
Maintain Flood Warning	**Green**	Continue to maintain the 'Cromarty Firth', 'Portmahomack to Inver' and 'Rockfield to Balintore' flood warning areas which are part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Cromarty Firth

Summary of Progress for Invergordon (PVA 01/09)



Summary of Progress for Invergordon

There are approximately 10 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £6,000. Further information can be found in LFRMP under PVA 01/09. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Cromarty Firth flood warning area
- Modelling of the Invergordon sewer catchment was completed

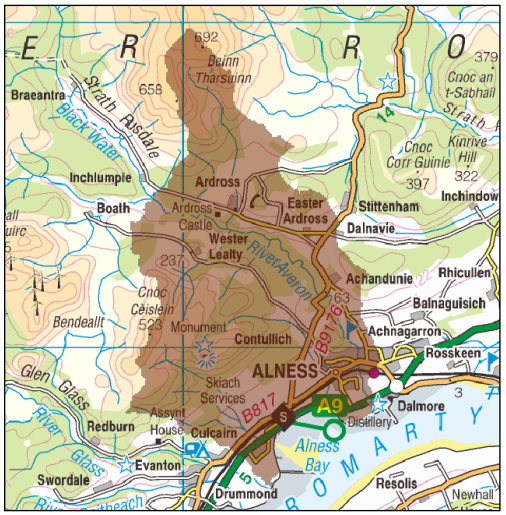
Overview of actions to manage flooding in PVA 01/09

PVA	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
01/09									G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/09						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	Continue to maintain the 'Cromarty Firth' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Invergordon sewer catchment	Scottish Water	2019	2020	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Alness

Summary of Progress for Alness (PVA 01/10)



Summary of Progress for Alness

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £38,000. Further information can be found in LFRMP under PVA 01/11.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- SEPA completed revised modelling of the River Averon and Contullich Burn
- Modelling of the Alness sewer catchment was completed

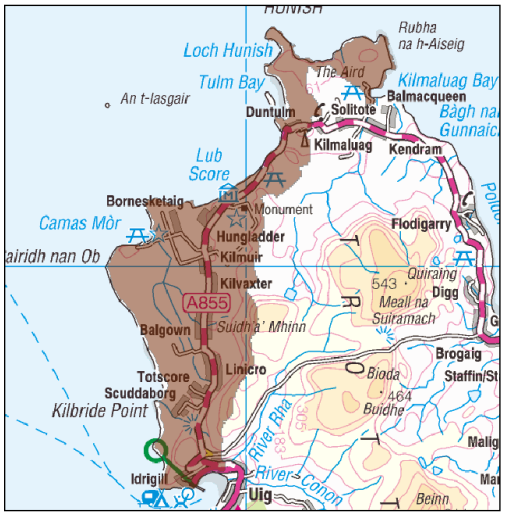
Overview of actions to manage flooding in PVA 01/10

PVA	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
01/10									G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/10						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Green**	SEPA will review existing modelling and data for River Alness/Averon.	SEPA			Revised flood modelling and mapping for the River Averon and Contullich Burn has been undertaken. Updated flood mapping for this area was published on the SEPA web site in April 2018.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Alness sewer catchment.	Scottish Water	2019	2020	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.
Maintain Flood Warning	**Green**	Continue to maintain the 'Cromarty Firth' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Site Protection Plan	**Red**	The Highland Council will work with a school and care home to build resilience in the event of a flood.	THC			The Highland Council did not develop a site protection plan

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Coast

Summary of Progress for Uig (PVA 01/11)



Summary of Progress for Uig

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £38,000. Further information can be found in LFRMP under PVA 01/11.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

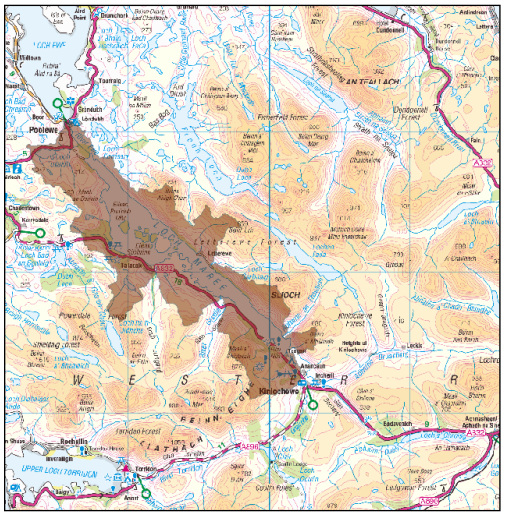
Overview of actions to manage flooding in PVA 01/11

PVA	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
01/11										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/11						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Maree

Summary of Progress for Poolewe (PVA 01/12)



Summary of Progress for Poolewe

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £28,000. Further information can be found in LFRMP under PVA 01/12.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

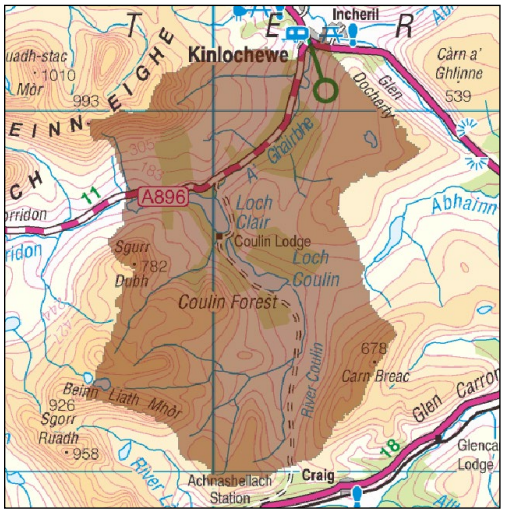
Overview of actions to manage flooding in PVA 01/12

PVA	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
01/12										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/12						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Coulin

Summary of Progress for Kinlochewe (PVA 01/13)



Summary of Progress for Kinlochewe

There are approximately 10 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £61,000. Further information can be found in LFRMP under PVA 01/13.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

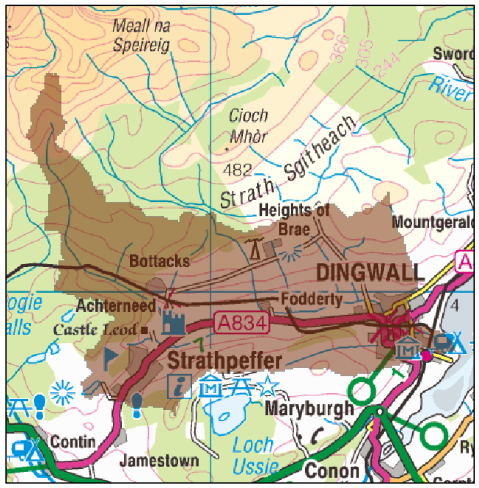
Overview of actions to manage flooding in PVA 01/13

PVA	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
01/13										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/13						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Peffery

Summary of Progress for Dingwall and Strathpeffer (PVA 01/14)



Summary of Progress for Dingwall & Strathpeffer

There are approximately 90 residential properties and 90 non-residential properties at risk of flooding. The Annual Average Damages are approximately £310,000. Further information can be found in LFRMP under PVA 01/14. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- A Flood Protection Study to assess the fluvial and coastal flood risk from the River Peffery was completed in 2019. A preferred option to alleviate flood risk has been identified.
- Commencement of a surface water management plan
- Maintaining existing flood defences
- Maintaining the Cromarty Firth flood warning area
- Modelling of the Dingwall & Strathpeffer sewer catchment was completed

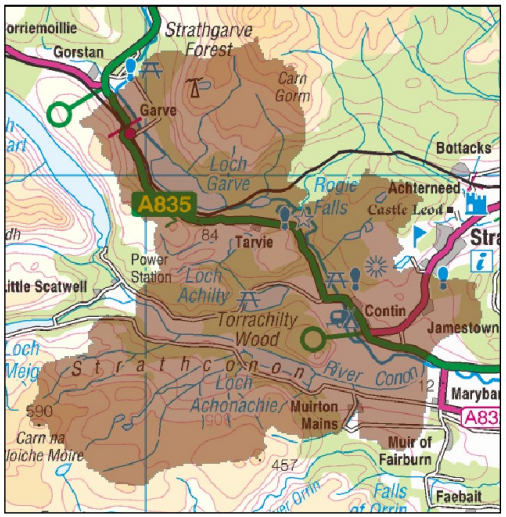
Overview of actions to manage flooding in PVA 01/14

PVA	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
01/14							G		G	G	A	G	G	G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/14						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Green**	The Highland Council will undertake a Flood Protection Study to improve understanding of flood risk in Dingwall and Blairninch.	THC	2016	2019	A Flood Protection Study to assess the fluvial and coastal flood from the River Peffery was completed in 2019. A preferred option to alleviate flood risk from the River Peffery has been identified, this preferred option consists of direct defences, culvert improvements and channel modification.
Surface Water Management Plan	**Amber**	The Highland Council will develop a Highland-wide SWMP and identify actions to alleviate surface water flooding in Dingwall and Strathpeffer.	THC			The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and given priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into cycle 2.
Strategic Mapping and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Dingwall and Strathpeffer sewer catchments.	Scottish Water	2018	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.
Maintain Flood Protection Scheme	**Green**	The Highland Council will maintain the existing Dingwall Flood Protection Scheme.	THC	Ongoing	Ongoing	The Highland Council will continue to inspect and maintain the defences on an annual basis.
Maintain Flood Warning	**Green**	Continue to maintain the 'Cromarty Firth' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Black Water

Summary of Progress for Contin and Garve (PVA 01/15)



Summary of Progress for Contin & Garve

There are approximately 30 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £59,000. Further information can be found in LFRMP under PVA 01/15. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Contin and Garve flood warning area
- Modelling of the Strathpeffer sewer catchment has been completed

Overview of actions to manage flooding in PVA 01/15

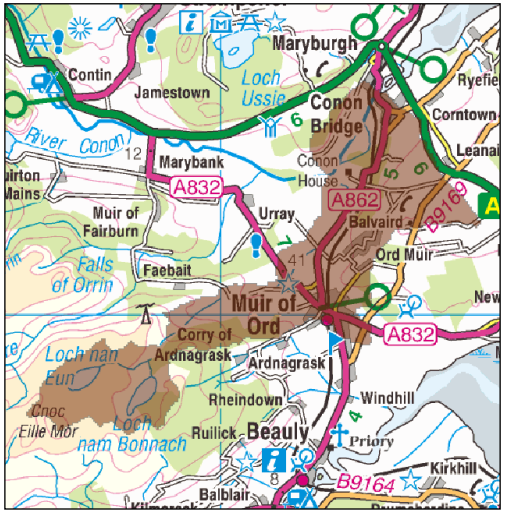
PVA	Flood protection scheme/works	Natural flood management works	New flood warning	Community flood action groups	Property level protection scheme	Site protection plans	Flood protection study	Natural flood management study	Maintain flood warning	Awareness raising	Surface water plan/study	Emergency plans/response	Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies
01/15						R			G	G		G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/15						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Strathpeffer sewer catchment	Scottish Water	2017	2017	The Scottish Water assessment of flood risk within the sewer catchment has been completed. The assessment helps to improve knowledge and understanding of surface water flood risk
Site Protection Plan	**Red**	The Highland Council will work with the management of a school, and provide advice in the development of a site protection plan, to reduce flood risk from the Black Water	THC			The Highland Council did not develop a site protection plan

Summary of progress of actions to manage flood risk in PVA 01/15						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/ Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A835.	Transport Scotland			No update has been provided by Transport Scotland.
Maintain Flood Warning	**Green**	Continue to maintain: the 'Contin' and 'Garve' flood warning areas, which warn of flooding to properties and roads, the 'Moy Bridge' flood warning area, which warns of potential flooding to the A832; and the 'Scatwell' flood warning area, which warns of flooding to low lying agricultural land. All four are part of the Conon Valley flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Conon

Summary of Progress for Conon Bridge and Muir of Ord (PVA 01/16)



Summary of progress for Conon Bridge & Muir of Ord

There are approximately 60 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £250,000. Further information can be found in LFRMP under PVA 01/16. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Development of a capital scheme to improve the standard of protection afforded by existing defences (see Section 5 for further information)
- Maintaining existing flood defences
- Modelling of the Conon Bridge and Muir of Ord sewer catchments has been completed

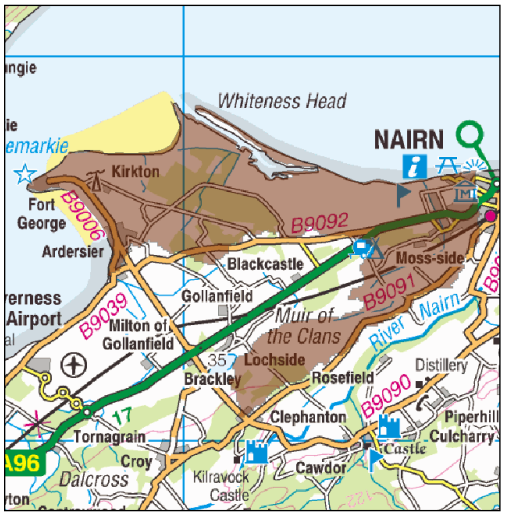
Overview of actions to manage flooding in PVA 01/16

PVA	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
01/16									G	G		G	G	A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/16						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Conon Bridge and Muir of Ord sewer catchments.	Scottish Water	2018	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed. The assessment helps to improve knowledge and understanding of surface water flood risk
Maintain Flood Protection Scheme	**Green**	The Highland Council will maintain the River Conon Flood Protection Scheme in Conon Bridge.	THC	Ongoing	Ongoing	The Highland Council will continue to inspect the defences on an annual basis.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Alton Burn

Summary of Progress for Nairn West and Ardersier (PVA 01/17)



Summary of Progress for Nairn West & Ardersier

There are approximately 30 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £73,000. Further information can be found in LFRMP under PVA 01/17. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Ardersier to Nairn flood warning area
- Modelling of the Ardersier and Nairn sewer catchments has been completed

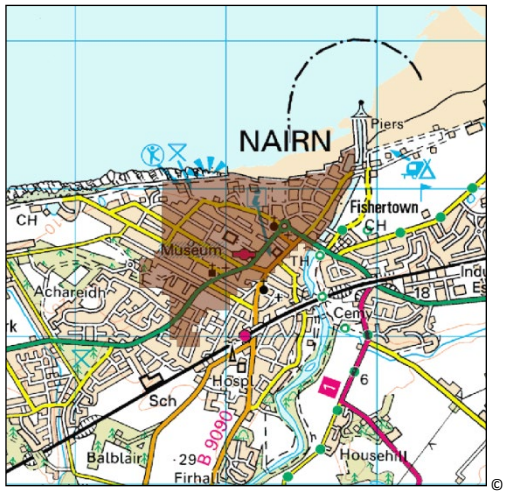
Overview of actions to manage flooding in PVA 01/17

PVA	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
01/17									G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/17						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	Continue to maintain the 'Ardersier to Nairn' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Ardersier and Nairn sewer catchments.	Scottish Water	2017	2018	The Scottish Water assessment of flood risk within the sewer catchment has been completed. The assessment helps to improve knowledge and understanding of surface water flood risk

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Nairn

Summary of Progress for Nairn Central (PVA 01/18)



Summary of Progress for Nairn Central

There are approximately 350 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £340,000. Further information can be found in LFRMP under PVA 01/18. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Maintaining the Ardersier to Nairn flood warning area
- Development of the Nairn Flood Protection Study started in 2022
- Modelling of the Nairn sewer catchment is complete

Overview of actions to manage flooding in PVA 01/18

PVA	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
01/18							A		G	G		G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/18						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Amber**	The Highland Council will undertake a Flood Protection Study to further investigate the feasibility of developing a Flood Protection Scheme (or Works) for central Nairn.	THC	2022	Cycle 2	The Highland Council has started the Flood Protection Study for the River Nairn which also includes its tributary the Auldearn Burn in 2022 with a hydraulic modelling study of the river and a damages assessment. This study will continue into cycle 2 and depending on the outcome of the first stage of the study, will move on to an Option Appraisal Assessment, identifying a preferred solution to the flood risk.
Strategic mapping and modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Ardersier and Nairn sewer catchments.	Scottish Water	2016	2017	The Scottish Water assessment of flood risk within the sewer catchment has been completed.

Summary of progress of actions to manage flood risk in PVA 01/18						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	SEPA will continue to maintain the 'Ardersier to Nairn' flood warning area.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	

Summary of Progress for Inverness Airport (PVA 01/19)

Summary of Progress for Inverness Airport

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £16,000. Further information can be found in LFRMP under PVA 01/19.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Modelling of the Ardersier sewer catchment is complete

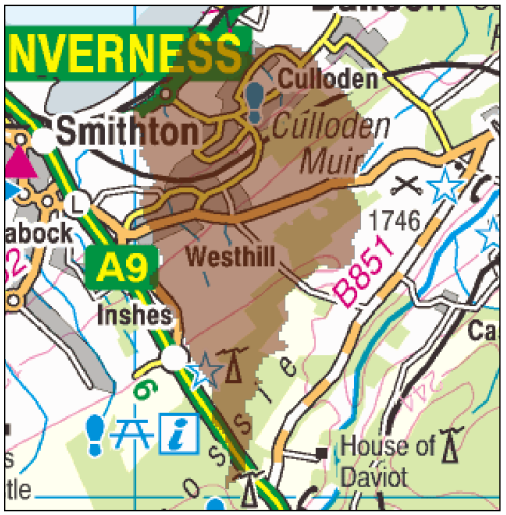
Overview of actions to manage flooding in PVA 01/19

PVA	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
01/19										G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/19						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Ardersier sewer catchment.	Scottish Water	2016	2017	The Scottish Water assessment of flood risk within the sewer catchment has been completed. The assessment helps to improve knowledge and understanding of surface water flood risk.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Cairnlaw Burn

Summary of Progress for Smithton and Culloden (PVA 01/20)



Summary of Progress for Smithton & Culloden

There are approximately 30 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £33,000. Further information can be found in LFRMP under PVA 01/20. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Completion of the detailed design and commencement of the Smithton & Culloden Flood Protection Scheme
- Commencement of a surface water management plan
- Completion of the Integrated Catchment Study

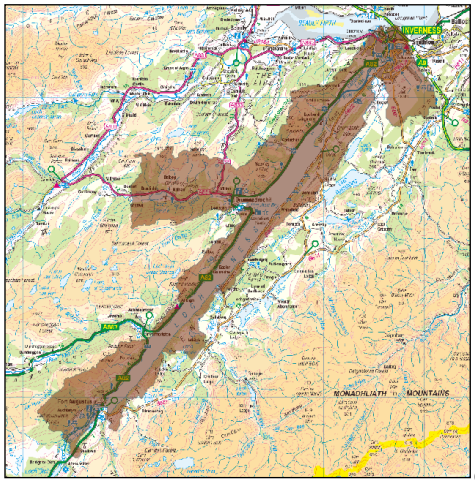
Overview of actions to manage flooding in PVA 01/20

PVA	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
01/20	G									G	A	G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/20						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme	**Green**	The Highland Council has already implemented Phases 1-3 of the Smithton/Culloden Flood Protection Scheme which will be fully completed within the cycle.	THC	2018	2020	The Smithton and Culloden Flood Protection Scheme was completed in 2020
Surface Water Management Plan	**Green**	The Highland Council will develop a Surface Water Management Plan to reduce the risk from surface water flooding in Smithton and Culloden.	THC	2020	Cycle 2	The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and give priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into cycle 2
Surface Water Management Plan	**Green**	Scottish Water will undertake an Integrated Catchment Study including Inverness and the wider catchment to inform surface water management planning.	Scottish Water	2017	2020	The Integrated Catchment Study was completed this cycle.
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Highland PFI sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Ness

Summary of Progress for Inverness and the Great Glen (PVA 01/21)



Summary of Progress for Inverness & the Great Glen

There are approximately 1400 residential properties and 380 non-residential properties at risk of flooding. The Annual Average Damages are approximately £5.6 million. Further information can be found in LFRMP under PVA 01/21.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Completion of a Flood Protection Scheme for the River Enrick
- Completion of a Natural Flood Management Study in Drumnadrochit
- Maintenance of the River Ness and Fort Augustus Flood Alleviation Schemes and South West Flood Relief Channel
- Maintenance of the Inverness Harbour, City, Drumnadrochit, The Riggs, Glen Urquhart, Ness-side flood warning areas
- Development of a Flood Protection Study for the River Ness planned for this cycle did not occur due to funding constraints
- A Flood Protection Study to assess the fluvial risk from the Mill Burn in Inverness was completed in 2019. A preferred option to alleviate flood risk has been identified
- Commencement of a Surface Water Management Plan
- Completion of the Integrated Catchment Study
- Modelling of the Highland PFI sewer catchment

Overview of actions to manage flooding in PVA 01/21

PVA	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
01/21	G			G			R	G	G	G	A	G	G	A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/21						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme	**Green**	The Highland Council will provide a flood protection scheme to reduce flood risk in Drumnadrochit and Kilmichael from the River Enrick.	THC	2021	2022	The Drumnadrochit Flood Protection Scheme was completed in 2022
Natural Flood Management Study	**Green**	This Study will be carried out as part of the Flood Protection Scheme for the River Enrick	THC	2016	2020	The Natural Flood Management Study has been completed. Actions were identified in the study and the council will support any organisation or landowner that wishes to implement them
Community Flood Action Groups	**Green**	The Glen Urquhart Land Use Partnership (GULUP) will work in partnership with any interested organizations with regard to flood risk from the River Enrick.	THC	Ongoing	Ongoing	The Highland Council will liaise directly with GULUP as necessary to encourage and support community resilience.
Flood Protection Scheme/ Works	**Green**	The Highland Council will complete a Flood Protection Scheme providing protection to properties a risk from the Mill Burn in Inverness.	THC	2018	2019	A Flood Protection Study to assess the fluvial flood risk from the Mill Burn was completed in 2019. A preferred option to alleviate flood risk from the Mill Burn has been identified. This preferred option consists of direct defences, headwall modifications, pipe removal under Harbour Road Bridge and natural flood management in the upstream catchment. The option to also include channel widening is being considered.
Flood Protection Study	**Red**	The Highland Council will carry out a Flood Protection Study to assess existing sea walls and defences in South Kessock, Inverness.	THC			The proposed planning application to develop the housing and associated embankment were dropped. Action has not been completed this cycle

Summary of progress of actions to manage flood risk in PVA 01/21						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Red**	The Highland Council will carry out a Flood Protection Study to reduce flood risk in Inverness from the River Ness between Ness Bridge and Ness Islands.	THC			Due to a reduction of funding to The Highland Council's Capital Programme (March 2018) this study did not progress.
Surface Water Management Plan	**Amber**	The Highland Council will develop a Surface Water Management Plan to reduce the risk from surface water flooding in Smithton and Culloden.	THC	2020	Cycle 2	The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and give priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into Cycle 2.
Surface Water Management Plan	**Green**	An Integrated Catchment Study (ICS) including Inverness and the wider catchment will be carried out to support the surface water management planning process in Inverness, Smithton and Culloden.	Scottish Water	2017	2020	Scottish Water has appointed consultants to work with The Highland Council to develop the ICS. Model build and verification is now complete with verification of predicted flooding planned for December 2018.

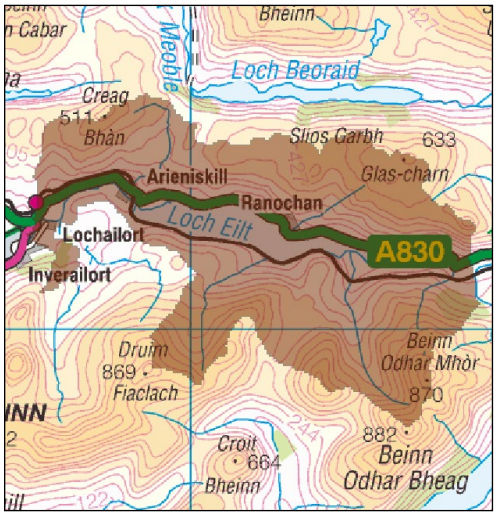
Summary of progress of actions to manage flood risk in PVA 01/21						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Highland PFI sewer catchment.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.
Strategic Mapping and Modelling	**Amber**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.

Summary of progress of actions to manage flood risk in PVA 01/21						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Protection Scheme	**Green**	The Highland Council will maintain the River Ness Flood Alleviation Scheme (Tidal Section) and accept existing levels of flood risk in the north of Inverness due to flooding from the River Ness, downstream of Ness Bridge, and the Moray Firth.	THC	Ongoing	Ongoing	The Highland Council will continue to inspect and maintain the defences on an annual basis.
Maintain Flood Protection Scheme	**Green**	The Highland Council will maintain the South West Inverness Flood Protection Scheme and accept existing levels of flood risk to properties in the south west of Inverness from various rivers.	THC	Ongoing	Ongoing	The Highland Council will continue to inspect and maintain the defences on an annual basis.
Maintain Flood Protection Scheme	**Green**	The Highland Council will maintain the Fort Augustus Flood Protection Scheme and accept existing levels of flood risk in Fort Augustus.	THC	Ongoing	Ongoing	The Highland Council will continue to inspect the defences on an annual basis.

Summary of progress of actions to manage flood risk in PVA 01/21						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	SEPA to continue to maintain the 'Drumnadrochit', 'Glen Urquhart', 'Invermoriston', 'Ness-side' and 'The Riggs, Fort Augustus' flood warning areas and provide warnings to low lying land.	SEPA	Ongoing	Ongoing	SEPA will continue to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Eilt

Summary of Progress for Lochalilort (PVA 01/22)



Summary of Progress for Lochailort

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £14,000. Further information can be found in LFRMP under PVA 01/22.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

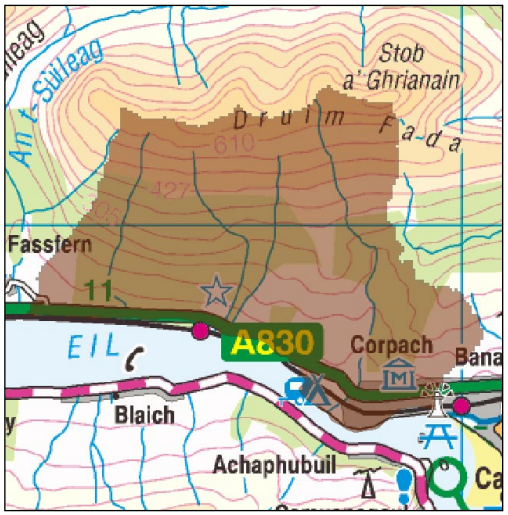
Overview of actions to manage flooding in PVA 01/22

PVA	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
01/22										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/22						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/ Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A830.	Transport Scotland			No update has been provided by Transport Scotland.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Eil

Summary of Progress for Corpach (PVA 01/23)



Summary of Progress for Corpach

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £94,000. Further information can be found in LFRMP under PVA 01/23.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Commencement of a surface water management plan
- Maintaining the Corpach and Caol flood warning area
- Modelling of the Corpach sewer catchment

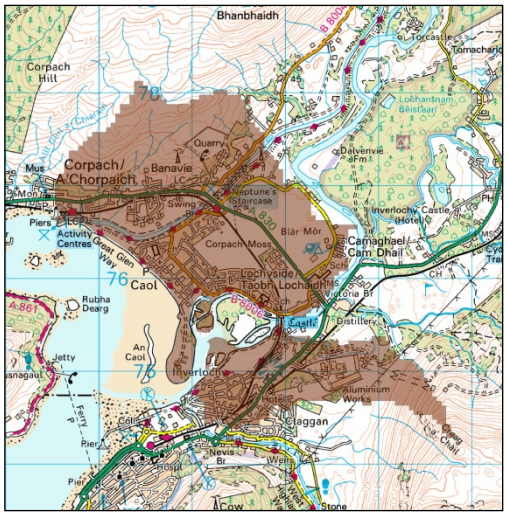
Overview of actions to manage flooding in PVA 01/23

PVA	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
01/23										G	G	G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/23						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Surface Water Management Plan	**Amber**	The Highland Council will develop a Surface Water Management Plan to reduce the risk from surface water flooding in Corpach.	THC			The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and give priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into cycle 2
Flood Protection Scheme/ Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A830.	Transport Scotland			No update has been provided by Transport Scotland.
Maintain Flood Warning	**Green**	Continue to maintain the 'Corpach and Caol' coastal flood warning area which is part of the Firth of Lorn and Loch Linnhe coastal flood warning scheme. This flood warning area also benefits properties in Lochybridge.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic Mapping and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Corpach sewer catchments to reduce overall flood risk.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Lochy

Summary of Progress for Caol & Inverlochy (PVA 01/24)



Summary of Progress for Caol & Inverlochy

There are approximately 170 residential properties and 40 non-residential properties at risk of flooding. The Annual Average Damages are approximately £250,000. Further information can be found in LFRMP under PVA 01/24. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Commencement of of the Caol and Lochyside Flood Protection Scheme
- Modelling of the Fort William and Corpach sewer catchments
- Commencement of the Caol and Inverlochy surface water management plan
- Maintaining the Corpach and Caol flood warning area

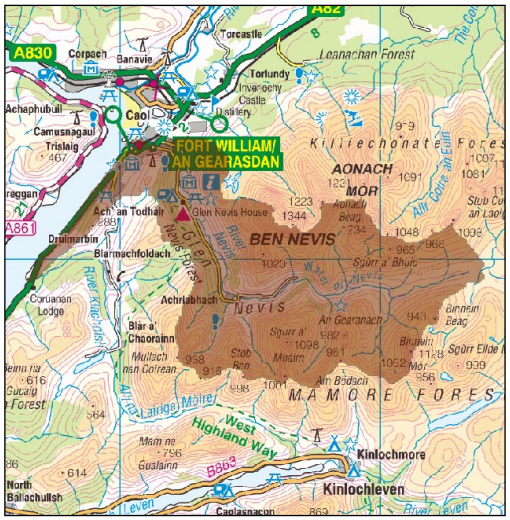
Overview of actions to manage flooding in PVA 01/24

PVA	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
01/24	A								G	G	A	G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/24						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme	**Amber**	The Caol Flood Protection Scheme, providing protection to properties a risk of flooding from Loch Linnhe and the River Lochy, will be completed within the cycle.	THC	2021	2023	Construction of the Caol and Lochyside Flood Protection Scheme has started and is due to be completed in 2023
Maintain Flood Warning	**Green**	SEPA will continue to maintain the 'Corpach and Caol' coastal flood warning area.	SEPA	Ongoing	Ongoing	SEPA will continue to operate the flood warning service
Surface Water Management Plan	**Amber**	The Highland Council will develop a Surface Water Management Plan to reduce the risk from surface water flooding in Caol.	THC			The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and give priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into cycle 2
Strategic Mapping and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Corpach and Fort William sewer catchments which includes Caol to reduce overall flood risk.	Scottish Water	2018	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Highland Council

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	River Lochy

Summary of Progress for Fort William (PVA 01/25)



Summary of Progress for Fort William

There are approximately 100 residential properties and 80 non-residential properties at risk of flooding. The Annual Average Damages are approximately £520,000. Further information can be found in LFRMP under PVA 01/25. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Development of a Flood Protection Study for Fort William was not completed as it was dropped from the The Highland Council Capital Programme in 2018
- Commencement of a surface water management plan
- Modelling of the Fort William sewer catchment
- Maintaining the Fort William flood warning area

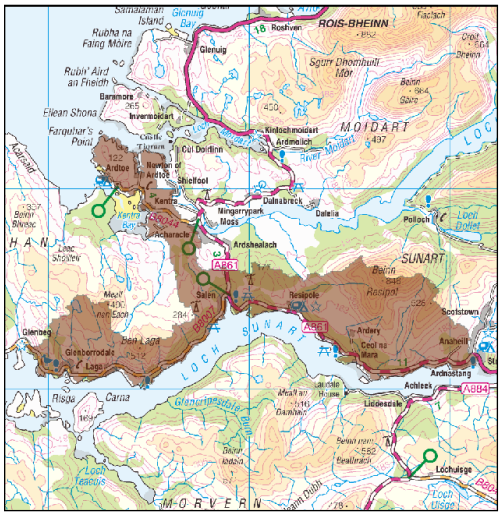
Overview of actions to manage flooding in PVA 01/24

PVA	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
01/25							R		G	G	A	G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/25						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Red**	The Highland Council will undertake a Flood Protection Study into the feasibility of developing a Flood Protection Scheme to reduce flood risk in Fort William from Loch Linnhe.	THC			Due to a reduction of funding to The Highland Council's Capital Programme (March 2018) this study did not progress.
Flood Protection Scheme/Works	**Green**	Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A82	Transport Scotland			No update has been provided by Transport Scotland.
Maintain Flood Warning	**Green**	SEPA will continue to maintain the Fort William' flood warning area	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service
Surface Water Management Plan	**Amber**	The Highland Council will develop a Surface Water Management Plan to reduce the risk from surface water flooding in Fort William.	THC			The Highland Council have started working on developing its SWMP. Hotspots within the priority areas have been identified and give priorities and objectives. An option appraisal is currently ongoing. Development of the plan will continue into cycle 2

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Sunart

Summary of Progress for Sunart & Moidart (PVA 01/26)



Summary of Progress for Sunart & Moidart

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £69,000. Further information can be found in LFRMP under PVA 01/26.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

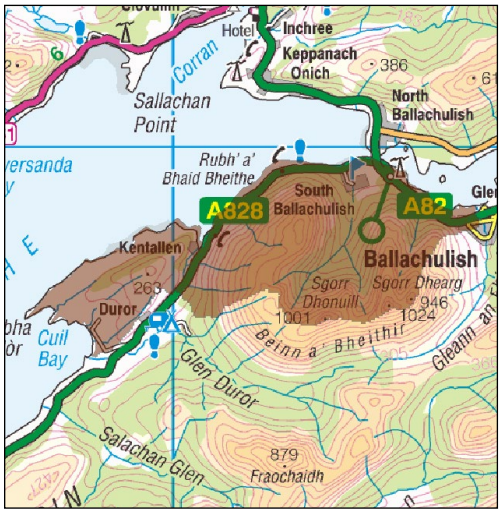
Overview of actions to manage flooding in PVA 01/26

PVA	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
01/26										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/26						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Linnhe

Summary of Progress for South Ballachulish (PVA 01/28)



Summary of Progress for South Ballachulish

There are approximately 20 residential properties and 40 non-residential properties at risk of flooding. The Annual Average Damages are approximately £130,000. Further information can be found in LFRMP under PVA 01/28.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

Overview of actions to manage flooding in PVA 01/27

PVA	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
01/28										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/27						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	The Highland Council	Loch Leven

Summary of Progress for Ballachulish & Glencoe (PVA 01/28)

Summary of Progress for Ballachulish & Glencoe

There are approximately 50 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £180,000. Further information can be found in LFRMP under PVA 01/28.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

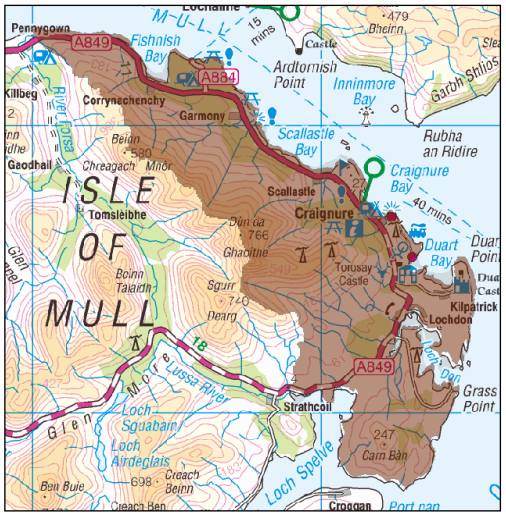
Overview of actions to manage flooding in PVA 01/27

PVA	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
01/28										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/28						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A82.	Transport Scotland			No update has been provided by Transport Scotland.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Sound of Mull

Summary of Progress for Isle of Mull (PVA 01/29)



Summary of Progress for Isle of Mull

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £69,000. Further information can be found in LFRMP under PVA 01/29.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

Overview of actions to manage flooding in PVA 01/29

PVA	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
01/28										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/29						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Firth of Lorn

Summary of Progress for Isle of Mull (PVA 01/30)

Summary of Progress for Ross of Mull

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £110,000. Further information can be found in LFRMP under PVA 01/30.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

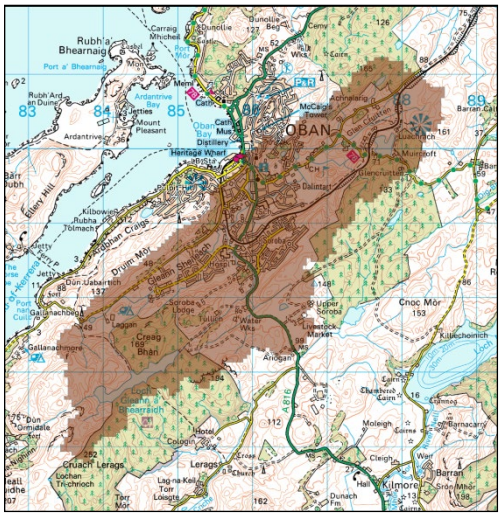
Overview of actions to manage flooding in PVA 01/30

PVA	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
01/28										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/30						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Black Lynn Burn

Summary of Progress for Oban (PVA 01/31)



Summary of Progress for Oban

There are approximately 320 residential properties and 310 non-residential properties at risk of flooding. The Annual Average Damages are approximately £1.8 million. Further information can be found in LFRMP under PVA 01/31. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- A preferred option for a scheme Oban was been identified
- Maintaining the Oban flood warning area
- Modelling of the Oban sewer catchment is complete
- Completion of a surface water management plan

Overview of actions to manage flooding in PVA 01/30

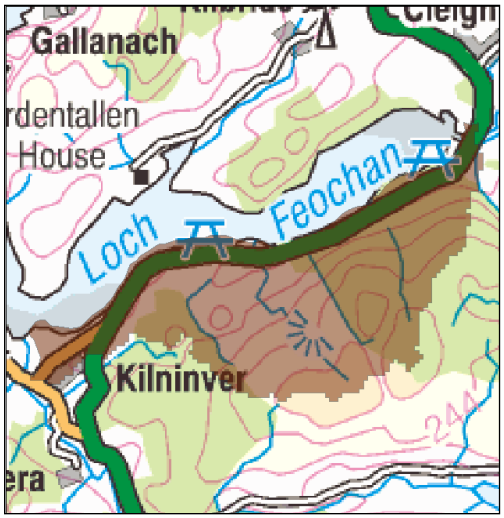
PVA	Flood protection scheme/works	Natural flood management works	New flood warning	Community flood action groups	Property level protection scheme	Site protection plans	Flood protection study	Natural flood management study	Maintain flood warning	Awareness raising	Surface water plan/study	Emergency plans/response	Maintain flood protection scheme	Strategic mapping and modelling	Flood forecasting	Self help	Maintenance	Planning policies
01/28							G		G	G	G	G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/31						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Green**	Argyll & Bute Council will undertake a study to assess flood risk from the Black Lynn Burn and coastal flooding in Oban Bay.	ABC	2016	2019	The Oban Flood Study was completed in December 2019, short-listed options were conceptually designed enabling economic appraisal. Options include traditional flood defences with more sustainable options such as upstream flood storage, alleviation of hydraulic bottlenecks and natural flood management The study was submitted to SEPA for inclusion in the national prioritisation process for flood alleviation schemes. Progression of the options will depend on ranking in the prioritisation process and subsequent funding from Scottish Government.
Surface Water Management Plan	**Green**	Argyll and Bute Council will produce a surface water management plan or plans, which set objectives for the management of surface water flood risk.	ABC	2016	2019	The Oban Flood Study was completed in December 2019 , short-listed options were conceptually designed enabling economic appraisal. Options include traditional flood defences with more sustainable options such as upstream flood storage, alleviation of hydraulic bottlenecks and natural flood management The study was submitted to SEPA for inclusion in the national prioritisation process for flood alleviation schemes. Progression of the options will depend on ranking in the prioritisation process and subsequent funding from Scottish Government.

Summary of progress of actions to manage flood risk in PVA 01/31						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Maintain Flood Warning	**Green**	Continue to maintain the 'Oban' coastal flood warning area which is part of the Firth of Lorn and Loch Linnhe coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service
Strategic Mapping and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Oban sewer catchments	Scottish Water	2017	2017	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with Argyll and Bute Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Loch Feochan

Summary of Progress for Loch Feochan (PVA 01/32)



Summary of Progress for Loch Feochan

There are approximately 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £19,000. Further information can be found in LFRMP under PVA 01/32.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

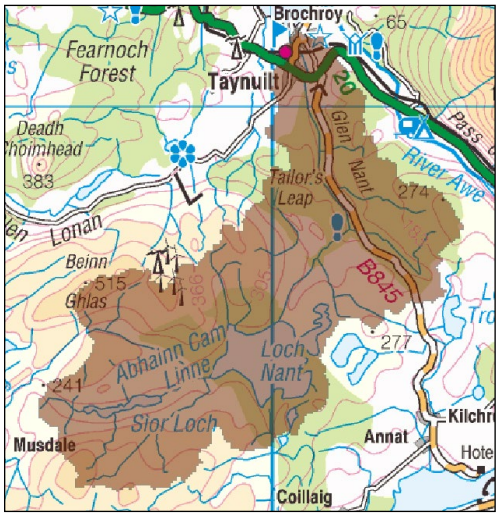
Overview of actions to manage flooding in PVA 01/32

PVA	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
01/28										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/32						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	River Nant/ Loch Etive

Summary of Progress for Taynuilt (PVA 01/33)



Summary of Progress for Taynuilt

There are approximately 40 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £130,000. Further information can be found in LFRMP under PVA 01/33. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Modelling of the Taynuilt sewer catchment completed
- Improved modelling of the flood risk from the River Nant has not been completed in this cycle

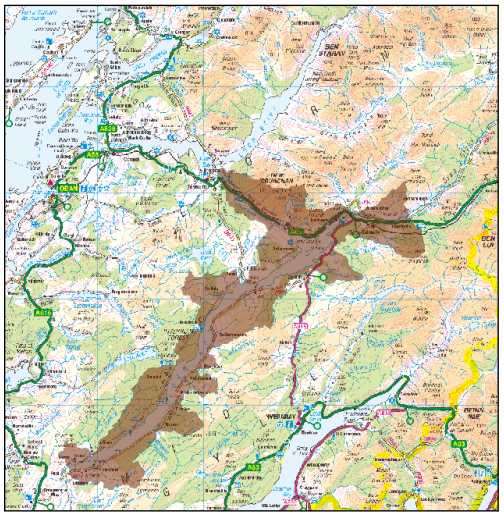
Overview of actions to manage flooding in PVA 01/32

PVA	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
01/33										G		G		A	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/33						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic mapping and modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Taynuilt sewer catchment to reduce overall flood risk.	Scottish Water	2019	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with The Argyll and Bute Council.
Strategic mapping and modelling	**Coastal: Green** **River: Amber**	SEPA will review existing coastal and river modelling and data in this area, to determine if any improvements can be made to the flood maps. SEPA will support the local authority if further work beyond a strategic scale required.	SEPA	Coastal: 2016 Fluvial: 2016	Coastal: 2019 Fluvial: 2016	Coastal: Updated design extreme sea levels (2018) have been used to update the coastal flood hazard maps for the Loch Etive area including Taynuilt. The updated flood mapping was published on the SEPA website in 2020. River: Action not complete.
Flood Protection Scheme/Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A85.	Transport Scotland			No update has been provided by Transport Scotland.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	River Awe/ Orchy

Summary of Progress for Loch Awe (PVA 01/34)



Summary of Progress for Loch Awe

There are approximately 20 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £100,000. Further information can be found in LFRMP under PVA 01/34.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

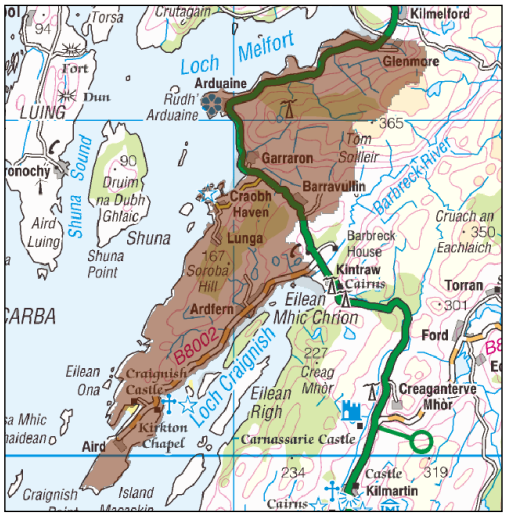
Overview of actions to manage flooding in PVA 01/34

PVA	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
01/33										G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/34						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/ Works	**Green**	Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A85.	Transport Scotland			No update has been provided by Transport Scotland.
Strategic mapping and modelling	**Green**	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District.	SEPA			SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	River Awe/ Orchy

Summary of Progress for Loch Awe (PVA 01/35)



Summary of Progress for Craignish

There are fewer than 10 residential and approximately 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £93,000. Further information can be found in LFRMP under PVA 01/35. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

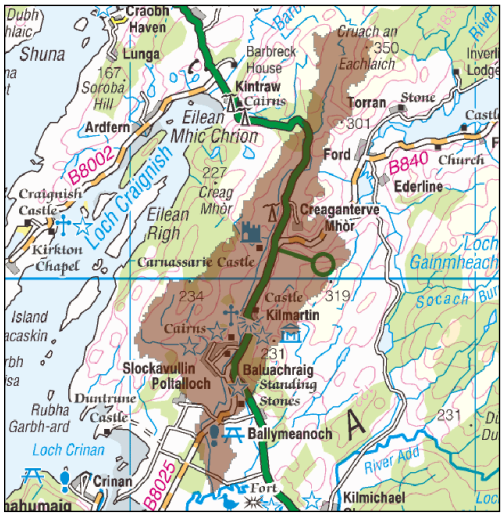
Overview of actions to manage flooding in PVA 01/35

PVA	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
01/33										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/35						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Kilmartin Burn

Summary of Progress for Loch Awe (PVA 01/36)



Summary of Progress for Kilmartin

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £49,000. Further information can be found in LFRMP under PVA 01/36.
https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

Overview of actions to manage flooding in PVA 01/36

PVA	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
01/33										G		G			G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/36						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
No PVA specific actions planned this cycle						

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	River Aray

Summary of Progress for Inveraray (PVA 01/37)

Summary of Progress for Inveraray

There are approximately 40 residential properties and 50 non-residential properties at risk of flooding. The Annual Average Damages are approximately £390,000. Further information can be found in LFRMP under PVA 01/37. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Improvements to coastal flood mapping is ongoing

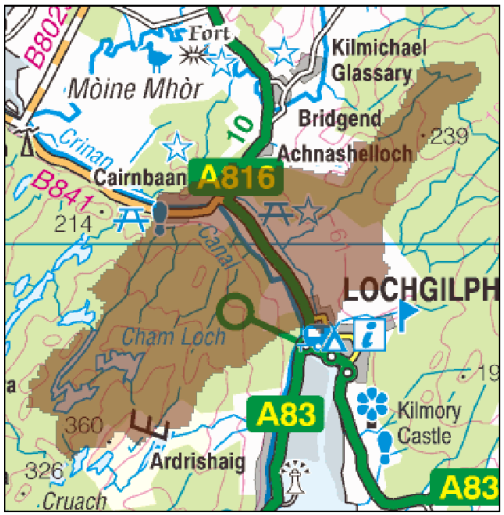
Overview of actions to manage flooding in PVA 01/37

PVA	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
01/33										G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/37						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/ Works		Transport Scotland will carry out civil engineering work which will reduce flood risk to identified sections of the A83.	Transport Scotland			No update has been provided by Transport Scotland.
Strategic mapping and modelling	**Green**	SEPA will review existing modelling for this area in partnership with Argyll and Bute Council to determine if any improvements can be made to the flood maps. SEPA will support the local authority if further work beyond a strategic scale is required.	SEPA	2016	2019	A topographic survey was undertaken through Inveraray in 2018 to inform the creation of a new composite survey and photogrammetry digital terrain model. The new digital terrain model data was used in conjunction with updated extreme sea levels (2018) to support an update of the coastal flood hazard maps for Inveraray. The updated flood mapping was published on the SEPA website in 2020.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Badden Burn/ Crinan Canal

Summary of Progress for Lochgilphead (PVA 01/38)



Summary of Progress for Lochgilphead

There are approximately 20 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £69,000. Further information can be found in LFRMP under PVA 01/38. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Development of a Flood Protection Study for Lochgilphead including detailed modelling of the fluvial and coastal flood risk is completed
- Maintaining the Lochgilphead A83 flood warning area
- Modelling of the Lochgilphead sewer catchment completed

Overview of actions to manage flooding in PVA 01/38

PVA	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
01/33										G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/38						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Green**	Argyll & Bute Council will undertake a hydraulic study to improve understanding of river and coastal flood risk in Lochgilphead.	ABC	2018	2019	The Lochgilphead Flood Study was completed in December 2019, the study recommended property flood resilience as the preferred option for managing the risk of flooding. (There were no economically viable options for river flooding). The property flood protection scheme would be implemented on a grant basis with homeowner maintenance and administered by Argyll and Bute Council. The study was submitted to SEPA for inclusion in the national prioritisation process for flood alleviation schemes. Progression of the scheme will depend on ranking in the prioritisation process and subsequent funding from Scottish Government.
Strategic mapping and modelling	**Green**	Scottish Water Further investigation and modelling in the Lochgilphead sewer catchment.	Scottish Water	2019	2020	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.
Maintain Flood Warning	**Green**	Continue to maintain the 'Lochgilphead A83' flood warning area which is part of the Firth of Clyde coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Loch Fyne

Summary of Progress for Tarbert (PVA 01/39)

Summary of Progress for Tarbert

There are approximately 10 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £110,000. Further information can be found in LFRMP under PVA 01/39. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Development of a Flood Protection Study assessing the coastal flood risk is completed
- Maintaining the Tarbert Harbour flood warning area
- Modelling of the Tarbert sewer catchment is complete

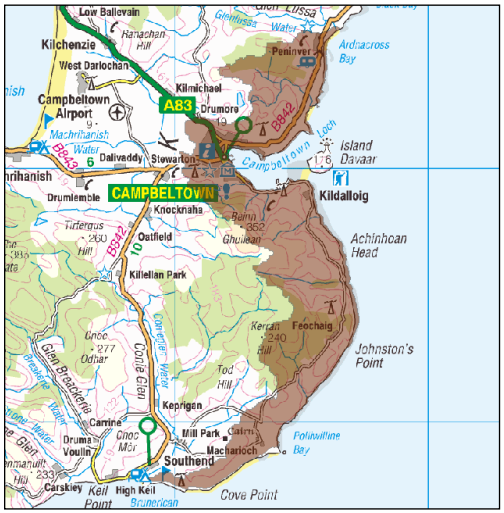
Overview of actions to manage flooding in PVA 01/39

PVA	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
01/33							G		G	G		G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/39						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Study	**Green**	Argyll & Bute Council will undertake a study to further investigate the feasibility of a Flood Protection Scheme for coastal flooding in Tarbert	ABC	2018	2019	The Tarbert coastal flood study was completed in December 2019 The study recommended a combination of Direct defences - traditional/demountable plus Property Flood Protection: for properties not protected by direct defences. The study was submitted to SEPA for inclusion in the national prioritisation process for flood alleviation schemes. Progression of the scheme will depend on ranking in the prioritisation process and subsequent funding from Scottish Government ABC will also engage in awareness raising of the benefits of PFR to those properties identified in the report.
Maintain Flood Warning	**Green**	Continue to maintain the 'Tarbert Harbour' flood warning area which is part of the Firth of Clyde coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Strategic Mappings and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Tarbert sewer catchment to reduce overall flood risk.	Scottish Water	2016	2017	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with Argyll and Bute Council.

Local Plan District	Local authority	Main catchment
Highland & Argyll	Argyll and Bute	Firth of Clyde, Millknowe, Balegreggan and Witchburn burns.

Summary of Progress for Campbeltown (PVA 01/40)



Summary of Progress for Campbeltown

There are approximately 360 residential properties and 350 non-residential properties at risk of flooding. The Annual Average Damages are approximately £550,000. Further information can be found in LFRMP under PVA 01/40. https://www.highland.gov.uk/downloads/file/16173/the_draft_highland_7_argyll_local_flood_risk_management_plan_lpd01

- Construction of flood protection scheme is due to commence and be completed in Cycle 2
- Modelling of the Cambeltown sewer catchment is completed
- Maintaining the Campbeltown Hall Street and Esplanade flood warning area
- Development of the surface water management plan is completed

Overview of actions to manage flooding in PVA 01/40

PVA	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
01/33	A						G		G	G	G	G		G	G	A	G	G

Summary of progress of actions to manage flood risk in PVA 01/40						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Flood Protection Scheme/ Works	**Amber**	A Flood Protection Scheme is to be developed for Campbeltown to reduce flood risk from small watercourses.	ABC	2017	Cycle 2	Status of Campbeltown Flood Protection Scheme • Designs completed 2021 • Tendered late 2021 • £12.7m Construction Contract awarded 27/05/2022 • Total estimated Project Cost is £15.215m • Contractor Mobilisation Programmed from September 2022 Planned completion end of January 2024
Maintain Flood Warning	**Green**	Continue to maintain the 'Campbeltown Hall Street and Esplanade' flood warning area which is part of the Firth of Clyde coastal flood warning scheme.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.

Summary of progress of actions to manage flood risk in PVA 01/40						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Surface Water Management Plan	**Green**	Argyll & Bute Council to produce Surface Water Management Plan to reduce surface water flood risk in Campbeltown.	ABC	2017	2019	A surface water management plan was developed in conjunction with the fluvial flood protection scheme, the attached report documents the process and options appraisal carried out. Campbeltown FRM and SWMP Options Appraisal report identified the following activities as preferred options and are being delivered through the CFPS; · Surface water separation and attenuation of flows via the Burnside Square underground attenuation tank and associated new surface water pipe network (connecting back to Scottish Water network, but at reduced flows) · Surface water separation and attenuation of flows via the Tomaig Road and Meadows above ground detention basins (3no.) associated new surface water pipe network (connection into existing surface water culvert, but with reduced flows). · Property level resilience measure will also be delivered to c. 20 properties to manage residual flood risk from both fluvial and pluvial flooding.

Summary of progress of actions to manage flood risk in PVA 01/40						
Action	**Status**	**Description**	**Lead Authority**	**Start Date**	**Finish Date**	**Final Progress**
Strategic Mapping and Modelling	**Green**	Scottish Water will undertake further investigation and modelling in the Campbeltown sewer catchment	Scottish Water	2018	2019	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.

5 Other actions

This section sets out details of additional significant actions undertaken in the LPD by local authorities to contribute to the implementation of the current actions in the plan and the achievement of the objectives in the plan.

5.1 Conon Bridge Flood Defence Improvements

The Highland Council carried out improvements to the Conon Bridge Flood Protection Scheme. The height of the defences were increased at a particular location.

5.2 Kirkhill Watercourse Diversion Scheme

The Highland Council constructed a diversion of a culverted section of the Kirkhill Burn in 2016/17 to alleviate flooding in Kirkhill due to a restriction on the culverted watercourse.

5.3 Clachan Flood Study

Argyll and Bute Council are progressing a flood study in the Clachan catchment, south of Tarbert, due to a series of significant flooding events in recent years. Clachan is not currently classified as a PVA, but is nominated as part of the NFRA2 process. Based on the study outcomes Argyll and Bute Council may seek to promote a scheme during Cycle 2.

5.4 Halkirk Surface Water Management Plan

The Highland Council has started work on developing a Highland wide Surface Water Management Plan (SWMP). Halkirk (not previously identified within a PVA) was identified in the 1st cycle as being a priority area for inclusion within the SWMP. The initial assessment of surface water flood risk for Halkirk determined that it should no longer be considered a priority area and no further assessment for Halirk will be carried out.

Annex 1: Roles and Responsibilities

Individuals are the first line of defence against flooding. However, public bodies have responsibilities too and are working together to reduce the impacts of flooding in Scotland. Responsibility for flood risk management planning falls in the main to SEPA, local authorities and Scottish Water. However, individuals have a personal responsibility to protect themselves and their property.

Some of the key roles are outlined below and more information is available from the SEPA website.

Your responsibilities

Organisations and individuals have responsibilities to protect themselves from flooding. Being prepared by knowing what to do and who to contact if flooding happens can help you reduce the damage and disruption flooding can have on your life.

The first step to being prepared is to sign up to Floodline - www.floodlinescotland.org.uk - to receive messages to let you know where and when flooding is likely to happen. Other useful tools and advice on how to be prepared are available on the Floodline website including a quick guide to who to contact in the event of a flood. You can also check how your area could be affected by flooding by looking at SEPA's flood maps - www.sepa.org.uk/environment/water/flooding/flood-maps

SEPA

SEPA is Scotland's national flood forecasting, flood warning and strategic flood risk management authority. SEPA has a statutory duty to produce Scotland's Flood Risk Management Strategies. SEPA works closely with other organisations responsible for managing flood risk through a network of partnerships and stakeholder groups to ensure that a nationally consistent approach to flood risk management is adopted.

SEPA also has a responsibility to identify where in Scotland there is the potential for natural flood management techniques to be introduced. Natural flood management is the use of the natural features of the land to store and slow down the flow of water.

In running Floodline, SEPA provides live flooding information and advice on how to prepare for or cope with the impacts of flooding 24 hours a day, seven days a week. To help forecast for flooding SEPA works closely with the Met Office.

To raise awareness of flooding at a national level, SEPA runs education initiatives, community engagement programmes and an annual campaign to promote the useful advice and information available through Floodline. SEPA works in partnership with local authorities, Neighbourhood Watch Scotland, Ready Scotland and others to share resources and help to promote preparedness and understanding of how flood risk is managed.

SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 72 of the FRM Act, 2009. SEPA also has a duty to co-operate with planning authorities in the preparation of development plans. When consulted in relation to planning applications for development or site allocations in development plans, and where the planning authority considers there may be a risk of

flooding, SEPA will provide advice. The advice provided by SEPA will be with respect to the risk of flooding and on the basis of the relevant information it holds which is suitable for planning purposes. It will also be in line with the principles and duties set out in the FRM Act. Further information about how SEPA engage in the planning system, including guidance on flood risk and planning is available on SEPA website www.sepa.org.uk/environment/land/planning

Local authorities

Local authorities work together for flood risk management planning purposes through a single lead authority which has the responsibility to produce a Local Flood Risk Management Plan. Local authorities have been working collaboratively in the manner described above to develop these.

It is the responsibility of your local authority to implement its flood protection actions agreed within the Local Flood Risk Management Plan. You can help your local authority to manage flooding by not dumping material on the banks of a watercourse and by letting them know if flood defences are tampered with.

During severe flooding, local authorities will work with the emergency services and coordinate shelter for people evacuated from their homes.

The Lead Local Authority for the Highland & Argyll Local Plan District is:

The Highland Council

Other local authorities who are responsible authorities for the Highland & Argyll Local Plan District are:

Argyll and Bute District Council

Scottish Water

Scottish Water is a responsible authority for flood risk management and is working closely with SEPA, local authorities and other responsible authorities to coordinate plans to manage flood risk.

Scottish Water has the public drainage duty and is responsible for foul drainage and the drainage of rainwater run-off from roofs and any paved ground surfaces from the boundary of properties. Additionally, Scottish Water helps to protect homes from flooding caused by sewers either overflowing or becoming blocked. Scottish Water is not responsible for private pipework or guttering within the property boundary.

National Park

The two National Park Authorities, Loch Lomond and the Trossachs National Park Authority and Cairngorms National Park, were designated as responsible authorities for flood risk management purposes in 2013. Both have worked with SEPA, local authorities and Scottish Water to help develop Flood Risk Management Strategies and Local Flood Risk Management Plans. They also fulfil an important role in land use planning, carrying out or granting permission for activities that can play a key role in managing and reducing flood risk. Loch Lomond and the Trossachs National Park Authority is a responsible authority for the Clyde and Loch Lomond Local Plan District.

Scottish Forestry

Scottish Forestry was designated in 2013 (then as Forestry Commission Scotland) as a responsible authority for flood risk management planning purposes and has engaged in the development of the Local Flood Risk Management Plan. This reflects the widely held view that forestry can play a significant role in managing flooding.

Other organisations

- The **Scottish Government** oversees the implementation of the Flood Risk Management (Scotland) Act 2009 which requires the production of Flood Risk Management Strategies and Local Flood Risk Management Plans. Scottish Ministers are responsible for setting the policy framework for how organisations collectively manage flooding in Scotland.
- **Nature Scot (**previously **Scottish Natural Heritage)** has provided general and local advice in the development of this Flood Risk Management Plan. Flooding is seen as a natural process that can maintain the features of interest at many designated sites, so Nature Scot helps to ensure that any changes to patterns of flooding do not adversely affect the environment. Nature Scot also provides advice on the impact of Flood Protection Schemes and other land use development on designated sites and species.
- During the preparation of the first flood risk management plans **Network Rail** and **Transport Scotland** have identified works to address flooding at a number of frequently flooded sites. Further engagement is planned with SEPA and local authorities to identify areas of future work. There is the opportunity for further works to be undertaken during the first flood risk management planning cycle although locations for these works are yet to be confirmed.

- **Utility companies** have undertaken site specific flood risk studies for their primary assets and have management plans in place to mitigate the effects of flooding to their assets and also minimise the impacts on customers.
- The **Met Office** provides a wide range of forecasts and weather warnings. SEPA and the Met Office work together through the Scottish Flood Forecasting Service.
- The **emergency services** provide emergency relief when flooding occurs and can coordinate evacuations. You should call the emergency services on 999 if you are concerned about your safety or the safety of others and act immediately on any advice provided.
- **Historic Environment Scotland** considers flooding as part of their regular site assessments. As such, flooding is considered as one of the many factors which inform the development and delivery of its management and maintenance programmes.
- The **Scottish Flood Forum** is a Scottish charitable organisation that provides support for those who are affected by, or are at risk of, flooding. It provides flood advice, information, awareness, education and training to individuals and communities to help reduce the risk of flooding; in partnership with the local authority, provides support during the recovery process following a flood incident and aims to support the development of resilient communities.

Annex 2: Links to other plans, policies and legislative requirements

S18 Schedule of Clearance and Repair

The table below provides details of how to access schedules of clearance and repair for each local authority under Section 18 of the Flood Risk Management (Scotland) Act 2009:

Local Authority	Method of public access to the S18 Schedule
The Highland Council	https://www.highland.gov.uk/info/1226/emergencies/81/flooding/5
Argyll and Bute District Council	Information available on request. Details available here http://www.argyll-bute.gov.uk/transport-and-streets/flood-advice or for further information contact floodingenquiries@argyll-bute.gov.uk

Annex 3: Supporting information

Sources of flooding described in this Plan

The Local Flood Risk Management Plan addresses the risk of flooding from rivers, the coast and surface water. The risk of flooding from rivers is usually due to rainfall causing a river to rise above bank level spreading out and inundating adjacent areas. Coastal flooding is where the risk is from the sea. Sea levels can change in response to tidal cycles or atmospheric conditions. Over the longer-term sea levels and coastal flood risk may change due to climate change. Surface water flooding happens when rainwater does not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead.

There can be interactions between these sources of flooding, and the Actions set out in this Local Plan take this into account.

The following aspects of flooding have not been incorporated into this Plan:

- **Groundwater** is generally a contributing factor to flooding rather than the primary source. It is caused by water rising from underlying rocks or flowing from springs.
- **Reservoir breaches** have been assessed under separate legislation (Reservoirs (Scotland) Act 2011). Further information and maps can be found on SEPA's website.
- The Flood Risk Management Act (Scotland) 2009 does not require SEPA or responsible authorities to assess or manage **coastal erosion**. However, SEPA has included consideration of erosion in the Flood Risk Management Plan by identifying areas that are likely to be susceptible to erosion and where erosion can exacerbate flood risk. As part of considering where actions might deliver multiple benefits, SEPA has looked to see where the focus of coastal flood risk management studies coincides with areas of high susceptibility to coastal erosion. Subsequent detailed studies and scheme design will need to consider how coastal erosion in these areas.
- **Coastal flood modelling.** The information on coastal flooding used to set objectives and identify actions is based on SEPA modelling using simplified coastal processes and flooding mechanisms at work during a storm. Wave overtopping cannot be accurately modelled at a national scale due to the importance of local factors such as prevailing wind conditions, the depth and profile of the near shore seabed or the influence of any existing defences or management structures. As a result, coastal flood risk may be underestimated in some areas. Conversely, in locations with wide and flat floodplains, the modelling may overestimate flood risk. To address this, in several locations where more detailed local models were available, they have been incorporated into the development of the Flood Risk Management Plan. Where wave overtopping has been specifically identified as a concern – but where no further detailed modelling is available – particular compensation has been made in the selection of appropriate actions to address coastal flood risk.

Commonly used terms

Below are explanatory notes for commonly used terms in flood risk management. A glossary of terms is also available.

- **Reference to flood risk.** During the development of the Strategy and Plan, flood risk has been assessed over a range of likelihoods. For consistency in reporting information, unless otherwise stated, all references to properties or other receptors being 'at risk of flooding' refer to a medium likelihood flood (up to a 1 in 200 chance of flooding in any given year). By exception, references will be made to high or low risk flooding, which should be taken to mean a 1 in 10 chance/likelihood or 1 in 1000 chance/likelihood of flooding in any given year respectively.

Likelihood of Flooding	Return Period	Annual Exceedance Probability (chance of event occurring in any one year)
High	10 year	10%
Medium	200 year	0.5%
Low	1000 year	0.1%

- **Annual Average Damages** have been used to assess the potential economic impact of flooding within an area. Depending on its size or severity each flood will cause a different amount of damage to a given area. Annual Average Damages are the theoretical average economic damages caused by flooding when considered over a very long period of time. It does not mean that damage will occur every year: in many years there will be no damages, in some years minor damages and in a few years major damages may occur.
  High likelihood events, which occur more regularly, contribute proportionally more to Annual Average Damages than rarer events. Annual Average Damages incorporate economic damages to the following receptors: residential properties, non-residential properties, vehicles, emergency services, agriculture and roads. They have been calculated based on the principles set out in the Flood Hazard Research Centre Multi-Coloured Handbook (2010).

Flood risk management planning process

Flood risk management in Scotland aims to manage flooding in a sustainable way. Sustainable flood risk management considers where floods are likely to occur in the future and takes action to reduce their impact without moving the problem elsewhere. It considers all sources of flooding, whether from rivers, the sea or from surface water. It delivers actions that will meet the needs of present and future generations whilst also protecting and enhancing the environment.

The sustainable approach to managing flood risk works on a six-year planning cycle, progressing through the key stages outlined below.

- ***Identifying priority areas at significant flood risk***

The first step to delivering a risk based, sustainable and plan-led approach to flood risk management was SEPA's **National Flood Risk Assessment**, the most recent which was published in 2018. The assessment considered the likelihood of flooding from rivers, groundwater, and the sea, as well as flooding caused when heavy rainfall is unable to enter drainage systems or the river network. The likelihood of flooding was examined alongside the estimated impact on people, the economy, cultural heritage, and the environment. It significantly improved our understanding of the causes and consequences of flooding and identified areas most vulnerable to floods.

- ***Potentially Vulnerable Areas and Local Plan Districts***

Based on the National Flood Risk Assessment, SEPA identified areas where flooding was considered to be nationally significant. These areas are based on catchment units as it is within the context of the wider catchment that flooding can be best understood and managed. These nationally significant catchments are referred to as **Potentially Vulnerable Areas**.

A small number of Candidate Potentially Vulnerable Areas were identified after the National Flood Risk Assessment in light of new information that warranted further assessment and appraisal. They are included in the flood risk management planning process. The National Flood Risk Assessment will be updated to inform each subsequent planning cycle.

For flood risk management purposes, Scotland was divided into 14 Local Plan Districts. Each Local Plan District will have a Flood Risk Management Plan and a Local Flood Risk Management Plan.

- ***Improving the understanding of flooding***

SEPA developed **flood hazard and flood risk maps** between 2012 and 2014. These maps improved the understanding of flooding and helped inform the subsequent selection of actions to manage flood risk in Potentially Vulnerable Areas. The flood hazard maps show information such as the extent of flooding, water level, as well as depth and velocity where appropriate. The flood risk maps provide detail on the impacts on people, the economy, cultural heritage and the environment.

In 2012 SEPA also developed an **assessment of the potential for natural flood management**. The assessment produced the first national source of information on where natural flood management actions would be most effective within Scotland.

Flood hazard and flood risk maps and the assessment of the potential for natural flood management can be viewed on the SEPA website www.sepa.org.uk.

- ***Identifying objectives and selecting actions***

The objectives and actions to manage flooding will provide the long-term vision and practical steps for delivering flood risk management in Scotland.

Working collaboratively with local partnerships, SEPA has agreed the objectives for addressing the main flooding impacts. Actions that could deliver these agreed objectives have been appraised for their costs and benefits to ensure the right combinations are identified and prioritised. The actions considered in the development of this strategy include structural actions (such as building floodwalls, restoring flood plains, or clearance and repair works to rivers) and non-structural actions (such as flood warning, land use planning or improving our emergency response). Structural and non-structural actions should be used together to manage flood risk effectively.

An assessment of the potential for natural flood management was used to help identify opportunities for using the land and coast to slow down and store water. Natural flood management actions were recommended in areas where they could contribute to the management of flood risk. In such instances these actions were put forward as part of flood protection or natural flood management studies.

- ***Lead local authority***

The FRM Act requires a lead local authority to be identified for each Local Plan District. The lead local authority is crucial to the successful implementation of the FRM Act and, as such, must perform several important functions over and above the general duties and powers given to local authorities elsewhere in the FRM Act.

The lead local authority, having contributed with other local authorities to the production of the Flood Risk Management Plan, must prepare a Local Flood Risk Management Plan of co-ordinated actions to reduce flood risk within the Local Plan District. Although the lead local authority is responsible for the production of the plan, its content will be drawn from and agreed by all local authorities, other responsible authorities and SEPA within the Local Plan District.

- ***Surface Water Management Plans***

A Surface Water Management Plan (SWMP) is a best practice plan which outlines the preferred surface water management strategy in a given location. In this context surface water flooding describes flooding from sewers, drains, groundwater, and runoff from land, small water courses and ditches that occurs as a result of heavy rainfall.

A SWMP study is undertaken in consultation with key local partners who are responsible for surface water management and drainage in their area. Partners work together to

understand the causes and effects of surface water flooding and agree the most cost effective way of managing surface water flood risk for the long term. The process of working together as a partnership is designed to encourage the development of innovative solutions and practices.

A SWMP should establish a long-term action plan to manage surface water in an area and should influence future capital investment, drainage maintenance, public engagement and understanding, land-use planning, emergency planning and future developments.

The UK Government SWMP guidance seeks to provide a simplified overarching framework, which allows different organisations to work together and develop a shared understanding of the most suitable solutions to surface water flooding problems. The SWMP guidance has been written for local authorities to assist them as they co-ordinate and lead local flood risk management activities.

- ***Integrated Catchment Studies***

Integrated Catchment Studies (ICS) are led by Scottish Water in partnership with local authorities and SEPA. These studies will improve knowledge and understanding of the interactions between the above ground and below ground drainage network e.g. with the sewer network, watercourses and (where appropriate) the sea. This will improve the understanding of contributions these drainage networks play in local surface water flood risk.

- ***Natural flood management assessment and mapping of artificial and natural features***

The new approach to Flood Risk Management requires SEPA to consider whether techniques that restore, enhance or alter natural features and characteristics can contribute to managing flood risk. This means looking at the potential to work with natural hydrological and morphological processes.

Because the National Flood Risk Assessment provides only a strategic assessment of flood risk, further refined assessments may be required in Potentially Vulnerable Areas, including the mapping of artificial and natural features whose removal could increase flood risk.

The development of catchment characteristics and methodologies, to assess the potential for natural flood management, commenced in 2012 alongside work to identify natural flood management actions, that could contribute to the management of flood risk. The information was published in 2013. The assessment of natural flood management was a consideration in the setting of objectives and actions in the Flood Risk Management Plans. In January 2016 SEPA published the Natural Flood Management Handbook to provide practitioners with information on how best to implement natural flood management measures.

- ***Flood hazard and flood risk maps***

The production of flood hazard and flood risk maps has improved our understanding of flooding and helped inform the selection of actions required to manage flood risk in Potentially Vulnerable Areas. Work on production of these maps began in January 2012.

These maps show details of flood events for a range of probabilities and cover flooding from rivers, the sea, sewers, surface water run-off and groundwater.

A flood hazard map shows information that describes the nature of a flood, such as the extent of flooding, water level, depth and velocity where appropriate.

A flood risk map provides detail on the impacts on people, the economy, cultural heritage and the environment.

Further information regarding the development of the flood maps and providing a link to the maps, is available online on the SEPA website here – http://www.sepa.org.uk/environment/water/flooding/flood-maps/

Annex 4: Acknowledgments

The information described in this Annex relates to the Figures and Maps that have been generated by SEPA as part of the Flood Risk Management Strategy and have been reproduced in this Local Flood Risk Management Plan. The Highland & Argll Local Plan District Partners gratefully acknowledge the cooperation and input that various parties have provided, including inter alia, the following organisations:

SEPA

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British Geological Survey

Flood risk information has been derived from BGS digital data under licence. British Geological Survey ©NERC

Local authorities

Lead authorities acknowledge the provision of flood models and other supporting data and information from local authorities and their collaboration in the production of flood risk management information.

Scottish Water

Local authorities acknowledge the inclusion of surface water flooding data generated by Scottish Water in preparation of flood risk information.

Glossary

Actions - 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 has been based on a detailed assessment and comparison of economic, social and environmental criteria. The FRM Act uses the term 'measures' rather than 'actions'.

Annual Average Damages (AAD) - Depending on its size or severity, each flood will cause a different amount of damage to a flood prone area and we can calculate the cost of this damage. Annual Average Damages for an area are the average costs per year that would occur from flooding over a very long period of time. Scottish figures have been calculated based on the method set out in the Flood Hazard Research Centre's Multi-Coloured Handbook (2010).

Appraisal - Appraisal is the process of defining objectives, examining options and weighing up the costs, benefits, risks and uncertainties before a decision is made. The FRM Strategy appraisal method is designed to set objectives and identify the most sustainable combination of actions to tackle flooding from rivers, sea and surface water.

Awareness Raising - Public awareness, participation and community support are essential components of sustainable flood risk management. SEPA and the responsible authorities have a duty to raise public awareness of flood risk. This is undertaken both individually and collaboratively by a range of organisations. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.

Benefit Cost Ratio (BCR) - A benefit cost ratio summarises the overall value for money of an action or project. It is expressed as the ratio of benefits to costs (both expressed as present value monetary values). A ratio of greater than 1:1 indicates that the economic benefits associated with an action are greater than the economic costs of implementation; therefore this is taken as the threshold of economic viability. It should be acknowledged that it is not always possible to accurately estimate economic values for all elements of benefit, and BCR is just one of a number of techniques used in appraisal.

Candidate Potentially Vulnerable Area – A small number of Candidate Potentially Vulnerable Areas were identified after the National Flood Risk Assessment in light of new information that warranted further assessment and appraisal. They are included in the flood risk management planning process. The National Flood Risk Assessment will be updated to inform each subsequent planning cycle.

Catchment – The area of land drained by a drainage system – either natural or piped.

Category (CAT) 1 and 2 Responders – As defined by the Civil Contingencies Act 2004. Category 1 responders are 'core' responders: local authorities, police, fire and rescue services, ambulance service, NHS health boards, SEPA and the Maritime and Coastguard Agency. Category 2 responders are key co-operating responders in support of Category 1 responders. These include gas and electricity companies, rail and air transport operators, harbour authorities, telecommunications providers, Scottish Water, the Health and Safety Executive and NHS National Services Scotland.

Coastal Flooding – Flooding that results from sea level rise from a combination of high tides and stormy conditions. The term coastal flooding is used under the Flood Risk Management (Scotland) Act 2009, but in some areas it is also referred to as tidal flooding and covers areas such as estuaries and river channels that are influenced by tidal flows.

Combined Sewer - Combined sewers transport foul sewage from homes and industry as well as carrying surface water runoff from gutters, drains and some highways. Heavy or prolonged rainfall can rapidly increase the flow in a combined sewer until the amount of water exceeds sewer capacity.

Combined Sewer Overflow - Combined sewer overflows are purposely designed structures to ensure any excess water from sewerage systems is discharged in a controlled way and at a specific managed location.

Confluence - Where two or more rivers meet.

Conveyance - Conveyance is a measure of the carrying capacity of a watercourse. Increasing conveyance enables flow to pass more rapidly and reducing conveyance slows flow down. Both actions can be effective in managing flood risk depending on local conditions.

Cultural Heritage Site - Sites of particular cultural significance may be designated. The highest level of designation is a World Heritage Site. Historic Environment Scotland maintains lists of buildings of special architectural or historic interest; these buildings are referred to as 'listed buildings'.

Culvert - A pipe, channel or tunnel used for the conveyance of a watercourse or surface drainage water under a road, railway, canal or other obstacle.

Damages - Flood damages are categorised as direct or indirect i.e. as a result of the flood water itself, or subsequent knock on effects. Damage to buildings and contents caused by flood water are an example of direct damages, whilst loss of industrial production, travel disruption or stress and anxiety are indirect. Some damages can be quantified in monetary terms, and others can only be described. The potential damages avoided by implementation of a flood risk management action are commonly referred to as the benefits of that action. When comparing the effectiveness of different actions, it is useful to consider estimated damages and damages avoided across the lifespan of the action. Within the FRM Strategies, a 100 year appraisal period has been used as standard. This allows costs, damages and benefits across this time frame to be compared in present value terms. See also 'Annual Average Damages'.

Economic Impact - An assessment of the economic value of the positive and negative effects of flooding and / or the actions taken to manage floods.

Embankment – A flood embankment is an engineered earthfill structure designed to contain high river levels or protect against coastal flooding. They are commonly grass-covered, but may need additional protection against erosion by swiftly flowing water, waves or overtopping.

Emergency Plans / Response - Emergency response plans are applicable for all types of flooding. They set out the steps to be taken during flooding in order to maximise safety and minimise impacts where possible. Under the Civil Contingencies Act, Category 1 Responders

have a duty to maintain emergency plans. Emergency plans may also be prepared by individuals, businesses, organisations or communities.

Environmental Impact - A change in the environment as a result of an action or activity. Impacts can be positive or negative and may vary in significance, scale and duration.

Environmental Impact Assessment (EIA) - A process which identifies the potential environmental impacts, both negative and positive, of a proposal.

Estuary - A coastal body of water usually found where a river meets the sea; the part of the river that is affected by tides.

Flood - In the terms of the FRM Act, 'flood' means a temporary covering by water, from any source, of land not normally covered by water. This does not include a flood solely from a sewerage system, as a result of normal weather or infrastructure drainage. A flood can cause significant adverse impacts on people, property and the environment.

Flood Bund - A constructed retaining wall, embankment or dyke designed to protect against flooding to a specified standard of protection.

Flood defence - Infrastructure, such as flood walls, embankments or flood storage intended to protect an area against flooding to a specified standard of protection.

Flood Extent - The area that has been affected by flooding, or is at risk of flooding from one or more sources for a particular likelihood.

Flood Frequency - The probability that a particular size/severity of flood will occur in a given year (see likelihood).

Flood Hazard - In terms of the FRM Act, hazard refers to the characteristics (extent, depth, velocity) of a flood.

Flood Hazard Map - Flood hazard maps are required by the FRM Act to show information that describes the nature of a flood in terms of the source, extent, water level or depth and, where appropriate, velocity of water. Flood hazard and risk maps are referred to collectively as flood maps and are available on the SEPA website.

Flood Prevention / Protection Scheme - A flood protection scheme, as defined by the FRM Act, is a scheme by a local authority for the management of flood risk within the authority area. This includes defence measures (flood prevention schemes) formerly promoted under the Flood Prevention (Scotland) Act 1961.

Flood Protection Study - Flood protection studies aim to refine understanding of the hazard and risk associated with flooding in a particular area, catchment or coastline. They will involve detailed assessment of flood hazard and / or risk and may develop options for managing flood risk.

Flood Protection Works - Flood protection works can include the same flood defence measures that would make up a formal Flood Protection Scheme but without the legal process, protections and requirements that would come by delivering the works as a scheme.

Flood Risk - A measure of the combination of the likelihood of flooding occurring and the associated impacts on people, the economy and the environment.

Flood Risk Assessment - Flood Risk Assessments are detailed studies of an area where flood risk may be present. These are often used to inform planning decisions, may help to develop flood schemes and have also contributed to the National Flood Risk Assessment.

Flood Risk Management Plan - Sets out a long-term vision for the overall reduction of flood risk. Contains a summary of flood risk in each Local Plan District, together with information on catchment characteristics and a summary of objectives and actions for Potentially Vulnerable Areas.

Flood Risk Management (Scotland) Act 2009 (FRM Act) - The flood risk management legislation for Scotland. It transposes the EC Floods Directive into Scots Law and aims to reduce the adverse consequences of flooding on communities, the environment, cultural heritage and economic activity.

Flood Risk Management Cycle - Under the FRM Act flood risk management planning is undertaken in six year cycles. The first planning cycle is 2015 – 2021. The first delivery cycle is lagged by approximately 6 months and is from 2016 - 2022.

Flood Warning Scheme - A flood warning scheme is the network of monitoring on a coastal stretch or river, which provides SEPA with the ability to issue Flood Warnings.

Floodplain - Area of land that borders a watercourse, an estuary or the sea, over which water flows in time of flood, or would naturally flow but for the presence of flood defences and other structures where they exist.

Floodplain Storage - Floodplains naturally store water during high flows. Storage can be increased through natural or man-made features to increase flood depth or slow flows in order to reduce flooding elsewhere.

Green (Blue-Green) Infrastructure - The European Commission defines green infrastructure as “the use of ecosystems, green spaces and water in strategic land use planning to deliver environmental and quality of life benefits. It includes parks, open spaces, playing fields, woodlands, wetlands, road verges, allotments and private gardens. Green infrastructure can contribute to climate change mitigation and adaptation, natural disaster risk mitigation, protection against flooding and erosion as well as biodiversity conservation.”

Historic Environment Scotland - The new lead public body for the country’s historic environment. It brings together Historic Scotland and the Royal Commission on the Ancient and Historic Monuments of Scotland.

Habitats Regulations Appraisal - The Habitats Regulations require competent authorities to assess certain plans or projects which affect Natura sites. Any development proposal, which requires planning permission or other consent, is a 'project' which may require consideration under the Habitats Regulations.

Land Use Planning – The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups.

Lead Local Authority - A local authority responsible for leading the production, consultation, publication and review of a Local Flood Risk Management Plan.

Local Development Plan – A Local Development Plan (LDP) provides the vision for how communities will grow and develop in the future. The intention is that they provide certainty for communities and investors alike about where development should take place and where it should not and the supporting infrastructure required for growth. A LDP is required for each council area across Scotland.

Local Flood Risk Management Plan - Produced by lead local authorities, these will take forward the objectives and actions set out in Flood Risk Management Plans. They will provide detail on the funding, timeline of delivery, arrangements and co-ordination of actions at the local level during each six year FRM planning cycle.

Local Plan District - Geographical areas for the purposes of flood risk management planning. There are 14 Local Plan Districts in Scotland.

Local Plan District Partnerships - Each Local Plan District has established a local partnership comprised of local authorities, SEPA, Scottish Water and others as appropriate. These partnerships are distinct from the FRM Local Advisory Groups and they retain clear responsibility for delivery of the FRM actions set out in the Local Flood Risk Management Plans. It is the local partnership that makes decisions and supports the delivery of these plans.

Maintenance - Sections 18 and 59 of the Flood Risk Management (Scotland) Act 2009 put duties of watercourse inspection, clearance and repair on local authorities. In addition, local authorities may also be responsible for maintenance of existing flood protection schemes or defences.

National Flood Risk Assessment (NFRA) - A national analysis of flood risk from all sources of flooding which also considers climate change impacts. Completed in December 2011 this provides the information required to undertake a strategic approach to flood management that identifies areas at flood risk that require further appraisal. The NFRA will be reviewed and updated for the second cycle of FRM Planning by December 2018.

Natural Flood Management - A set of flood management techniques that aim to work with natural processes (or nature) to manage flood risk.

Non-Residential Properties - Properties that are not used for people to live in, such as shops or other public, commercial or industrial buildings.

Potentially Vulnerable Area - Catchments identified as being at risk of flooding and where the impact of flooding is sufficient to justify further assessment and appraisal. There were 243 Potentially Vulnerable Areas identified by SEPA in the National Flood Risk Assessment and these will be the focus of the first FRM planning cycle.

Property Level Protection - Property level protection includes flood gates, sandbags and other temporary barriers that can be used to prevent water from entering individual properties during a flood.

Q&S - Quality and Standards (Q&S) is the process, governing costs and outputs, through which the planning and delivery of improvements by Scottish Water to the public drinking water and sewerage services in Scotland is carried out.

Receptor - Refers to the entity that may be impacted by flooding (a person, property, infrastructure or habitat). The vulnerability of a receptor can be reduced by increasing its resilience to flooding.

Residual Risk - The risk that remains after risk management and mitigation. This may include risk due to very severe (above design standard) storms or risks from unforeseen hazards.

Resilience - The ability of an individual, community or system to recover from flooding.

Responsible Authority - Designated under the FRM (Scotland) Act 2009 and associated legislation as local authorities, Scottish Water and, from 21 December 2013, the National Park Authorities and Forestry Commission Scotland. Responsible authorities, along with SEPA and Scottish Ministers, have specific duties in relation to their flood risk related functions.

Return Period - A measure of the rarity of a flood event. It is the statistical average length of time separating flood events of a similar size.

River Basin Management Planning (RBMP) - The Water Environment and Water Services (Scotland) Act 2003 transposed the European Water Framework Directive into Scots law. The Act created the River Basin Management Planning process to achieve environmental improvements to protect and improve our water environment. It also provided the framework for regulations to control the negative impacts of all activities likely to have an impact on the water environment.

Runoff Reduction - Actions within a catchment or sub-catchment to reduce the amount of runoff during rainfall events. This can include intercepting rainfall, storing water, diverting flows or encouraging infiltration.

Scottish Advisory and Implementation Forum for Flooding (SAIFF) - The stakeholder forum on flooding set up by the Scottish Government to ensure legislative and policy aims are met and to provide a platform for sharing expertise and developing common aspirations and approaches to reducing the impact of flooding on Scotland's communities, environment, cultural heritage and economy.

Scottish Flood Forecasting Service - SEPA operates a network of over 250 rainfall, river and coastal monitoring stations throughout Scotland that generate data 24 hours a day. 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 flood guidance statements provide an assessment of the risk of flooding for a five day period allowing responders time to put preparations in place to reduce the impact of flooding. 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.

Self Help - Self help actions can be undertaken by any individuals, businesses, organisations or communities at risk of flooding. They are applicable to all sources, frequency and scales of flooding. They focus on awareness raising and understanding of flood risk.

Site Protection Plans - Site protection plans are developed to identify whether normal operation of a facility can be maintained during a flood. This may be due to existing protection or resilience of the facility or the network.

Site of Special Scientific Interest - Sites protected by law under the Nature Conservation (Scotland) Act 2004 to conserve their plants, animals and habitats, rocks and landforms.

Special Area of Conservation (SAC) - Strictly protected site designated under the European Habitats Directive. The Directive requires the establishment of a European network of protected areas which are internationally important for threatened habitats and species.

Strategic Environmental Assessment - A process for the early identification and assessment of the likely significant environmental effects, positive and negative, of activities. Often considered before actions are approved or adopted.

Strategic Flood Risk Assessment (SFRA) - A Strategic Flood Risk Assessment is designed for the purposes of specifically informing the Development Plan Process. A SFRA involves the collection, analysis and presentation of all existing and readily available flood risk information (from any source) for the area of interest. It constitutes a strategic overview of flood risk.

Standard of protection (SoP) - All flood protection structures are designed to be effective up to a specified flood likelihood (Standard of Protection). For events beyond this standard, flooding will occur. The chosen Standard of Protection will determine the required defence height and / or capacity.

Surface Water Management Plan (SWMP) - A plan that takes an integrated approach to drainage accounting for all aspects of urban drainage systems and produces long term and sustainable actions. The aim is to ensure that during a flood the flows created can be managed in a way that will cause minimum harm to people, buildings, the environment and business.

Surface Water Plan / Study - The management of flooding from surface water sewers, drains, small watercourses and ditches that occurs, primarily in urban areas, during heavy rainfall. FRM Strategy actions in this category include: Surface Water Management Plans, Integrated Catchment Studies and assessment of flood risk from sewerage systems (FRM Act Section 16) by Scottish Water. These have been selected as appropriate for each Potentially Vulnerable Area.

Sustainable Drainage Systems (SuDS) - A set of techniques designed to slow the flow of water. They can contribute to reducing flood risk by absorbing some of the initial rainfall and then releasing it gradually, thereby reducing the flood peak and helping to mitigate downstream problems. SuDS encourage us to take account of quality, quantity and amenity / biodiversity.

Sustainable Flood Risk Management - The sustainable flood risk management approach aims to meet human needs, whilst preserving the environment so that these needs can be

met not only in the present, but also for future generations. The delivery of sustainable development is generally recognised to reconcile three pillars of sustainability – environmental, social and economic.

Surface Water Flooding - Flooding that occurs when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead.

Vulnerability - A measure of how likely someone or something is to suffer long-term damage as a result of flooding. It is a combination of the likelihood of suffering harm or damage during a flood and the ability to recover following a flood (resilience).