Flood Risk Management
(Scotland) Act 2009:

Tweed Local Plan District
Local Flood Risk Management Plan
FINAL REPORT

Published by:

Scottish Borders Council
Lead Local Authority
Tweed Local Plan District
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In partnership with:

SOUTH LANARKSHIRE COUNCIL

SEPA
Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

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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 the first Flood Risk Management (FRM) Cycle as we now transition into the second FRM Cycle 2022 -2028.

"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."

(Tweed 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 Scottish Borders Council, as Lead Local Authority for the Tweed Local Plan District (LPD) - a partnership comprising 2 local authorities - Scottish Borders Council & South Lanarkshire Council, SEPA, Scottish Water; Scottish Forestry and Forestry & Land Scotland.

Individuals are the first line of defence against flooding and have responsibilities to protect themselves from flooding. Through self-help and property flood resilience, 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 second FRM cycle 2022 - 2028.

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 Tweed LFRMP;
- 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.

A copy of the Tweed LFRMP Plan can be found at the following link:
Tweed Local Flood Risk Management Plan 2016 - 2022

Review of the Plan

This section presents the review of the Plan including progress highlights, a statement on the planned actions not implemented, the significant challenges faced and the next steps to be taken forward during the second FRM planning cycle.

Key progress in reducing the impacts of flooding since publication

- Selkirk Flood Protection Scheme was officially opened on 27 February 2017.
- Hawick Flood Protection Scheme is under construction and is due for completion in 2023. .
- Jedburgh (Skiprunning Burn) Flood Protection Scheme was completed in spring 2016 and provides flood risk mitigation to the town centre of Jedburgh from the Skiprunning Burn.
- Peebles, Broughton & Innerleithen flood study completed with a flood scheme proposed in Peebles for delivery in the FRM Cycle 2022 – 2028
- Earlston flood study completed.
- A Property Level Protection Scheme was delivered to 39 properties in low-lying areas of Peebles, which are at high risk of flooding from the River Tweed.
- An Ettrick Valley Flood Study has been developed to assess the risk and appraise option to mitigate flood risk in the valley, in particular isolation during storm events.
- A flood study for Lindean has been developed to determine the existing flood risk and appraise options to mitigate that risk, public consultation due to take place in autumn 2022.
- A flood study has been progressed for the Slitrig Water in Hawick and inform the development of future flood risk management measures in the area.
- Successful repair of damaged gabion wall on the Galashiels Flood Protection Scheme.
- Successful Repair of leaking flood wall and flood windows on the Jedburgh (Richmond Row) Flood Protection Scheme.
- Awareness raising has been on-going in the Tweed LPD. Partnership working between responsible authorities has continued, informing the public of the flood risk in the LPD and what they can do to help themselves.

- Scottish Water has completed all 14, Section 16 Assessments that were programmed for the 2016 – 2022 FRM cycle.
- SEPA has continued to operate the Scottish Flood Forecasting Service Partnership with the Met Office. Daily, national flood guidance statements are issued to Category 1 and 2 agencies (such as emergency responders, local authorities and other organisations with flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding. SEPA has also continued to provide flood warning service to a number of locations within the Tweed Local Plan District.

Significant deviations from the plan

No significant deviations from the Plan are considered to have occurred

Significant challenges

Based on a review of the assessment of the progress of actions detailed in this report, the following key challenges and issues have been identified, some of which have had an impact on the delivery of actions to manage flood risk. Where these challenges have had an impact on the delivery of specific actions, this impact is detailed in the section headed Implementation of PVA-specific Actions.

Significant Weather Events

The Tweed LPD has been adversely affected by significant weather throughout the first FRM Cycle 2016 – 2022. There have been a number of named and un-named storms which have impacted on the delivery of actions. Storm Desmond and Storm Frank in December 2015 and adverse weather early 2016 caused flooding across the Local Plan District with significant property flooding, in Peebles, Hawick, Bonchester Bridge and Jedburgh. Many rural communities were isolated as a result of the flooding and there was significant impacts on the local road network. This in turn had a knock on effect on the initial delivery of actions in the Plan from June 2016 onwards with resources deployed to deal with the aftermath of the flooding.

Latterly Storms in February 2020 & February 2021 saw the same properties along the banks of the Slitrig flooded twice within a year and further damage caused to the road network and a local guest house destroyed as it fell into the River Teviot in Hawick.

COVID-19 Pandemic

The COVID pandemic has impacted the delivery of Cycle 1 actions including a requirement to suspend flood risk management construction works as part of the national effort to minimise the spread of the virus during the first national lockdown. The pandemic also disrupted flood risk

management studies and flood modelling due to the transition to home working and the challenges of effectively consulting and engaging with flood vulnerable communities. These impacts have resulted in higher implementation costs and programme delays.

Resources

Whilst the majority of actions have either been progressed in line or have advanced further than set out in the Plan, the primary reason for actions not progressing as far as intended was a challenging resource environment.

The available human resource, with the necessary skills to manage and develop solutions to reduce flood risk, has also constrained progress. Much of this human resource pressure has arisen from the increased level of investment in flood risk management across Scotland and the wider UK, leading to challenging recruitment. This pressure is compounded by flood risk management demanding particular technical skills. This human resource pressure has been observed within the authorities responsible for progressing individual actions and the engineering consultants that these authorities seek to engage to support the development of solutions.

Technical Complexity

Developing an understanding of how flooding occurs and the most appropriate combination of solutions to reduce flood risk is technically challenging, including the need to build complex computer models to understand how storm events, tides, watercourse geometry, topography, land use and climate change all interact to cause flooding. This challenge has impacted progress on a number of actions which has delayed progress on subsequent actions.

Cyber-attack on SEPA

On 24 December 2020, SEPA was subject to a serious and complex cyber-attack, which significantly impacted the organisation, staff, public and private partners, and the communities who rely on SEPA's services. Since the attack, SEPA has worked with Scottish Government, Police Scotland, the National Cyber Security Centre (NCSC) and the Scottish Business Resilience Centre (SBRC), to a clear recovery strategy. The incident has, however, temporarily impacted progress on a number of actions such as new flood warnings, mapping and modelling projects and some engagement activities. Many of these projects are still going ahead but the timescales for them have been adjusted.

Other Actions

- Facilitated the delivery of a property level protection scheme for the Peebles Tweed Green area. Funded from the flood grant money provided in the aftermath of Storms Desmond and Frank, this provides greater resilience to flooding for 39 properties in this area.

- Facilitated bank reinstatement & retaining wall works in the aftermath of Storms Desmond & Frank to the garden areas which bound the Rule Water to the rear of Weens Place, Bonchester Bridge.
- Storm damage repairs to significant stretches of banking at Liddesdale Crescent, Hawick which was impacting on properties as a result of erosion from the Slitrig Water.
- Flood works have been completed at Whitlaw and Crowbyres, Hawick on the banks of the Slitrig, providing flood mitigation to higher return period flood events.
- Upgrade of priority culvert inlet trash screen on the Bakehouse Burn, Galashiels to reduce the risk of flooding to the centre of Galashiels.
- Provided a floodgate to Malestroit Court, Jedburgh to complete the resident led flood works to protect three properties from flooding of the Jed Water.
- Worked with Scottish Borders Housing Association to provide property level protection to their housing stock in flood risk areas in Hawick and Bonchester Bridge.
- Successfully developed a formal flood protection scheme for Romannobridge to protect the Romannomill area, currently awaiting construction.
- Construction of collection sump and culvert to divert out of bank flows from small burn originating from Duns golf course, impacting road networks and housing estates.
- Re-instatement of collapsed river banking to rear of Bankend North Industrial Estate Jedburgh, reducing flood risk to local businesses, property and A68 Trunk Road.
- Installed river level sensor at Jedburgh Richmond Row flood gate to provide advanced warning of rising river levels.
- Small-scale ditching and culvert replacement to drainage channels adjacent to Forest Road, Bonchester Bridge to reduce surface water flood risk.
- New public sandbag store provided to Bonchester Bridge.
- Enhanced road drainage measures implemented on the A701 to mitigate surface water flooding to the centre of Broughton Village.

Tweed Forum Works

- Gala Water Catchment – Tweed Forum has now created 202ha of native riparian and hillslope woodlands and also the introduction of 16 pond and scrapes for flood water retention and wildlife habitats. Tweed Forum in partnership with SEPA also successfully undertook riverbank stabilisation works at two farms in the catchment. We are working with JBA on the NFM Scoping Study currently being carried out.
- Leader catchment – investigating NFM and bank protection works on the Leader and Cleekhimin Burn to reduce erosion and damage to land and infrastructure as well as slowing down out of bank flows.
- Teviot Catchment – Partners Tweed Forum have planted 142ha of riparian woodland and 4 ponds retention ponds across the following farms:

    - Bowanhill
    - Branxholme Braes
    - Broadhaugh
    - Commonside
    - Linhope

- Lymiecleuch & Gideonscleuch
- Northhouse
- Swinside Farm
- Whitchesters

and also in partnership with SEPA helped implement riverbank stabilisation at 1 farm.

- Bowmont Water Catchment – 59ha of riparian woodland planted across 5 farms and innovative trials undertaken of 4 types of bank stabilisation and log jams for catching sediment.
- Eddleston Water Catchment - Tweed Forum in partnership with key stakeholders are investigating the concept of NFM through a number of measures implemented in this catchment. To date the following NFM measures have been installed;
    - 209ha of riparian woodland created, which will help increase rainfall interception, evapotranspiration, soil infiltration and slow overland flow
    - 25km of fencing erected and just under 327,000 native trees planted
    - 2.9km of river re-meandered. This has increased river length, reduced the slope and speed of the water flow and provided more space for flood waters, as well as creating new habitats and improving the landscape.
    - 2.9 km of flood embankments removed
    - 136 'high flow restrictors' installed that will encourage out-of-bank flow and hold back water in the headwaters
    - 40 leaky ponds created (29,955 m2). These wetland features have a good deal of 'free board' built in so that they will store water during intense rainfall events.

Click here http://tweedforum.org/our-work/projects/the-eddleston-water-project/

- Biggar Water Catchment - Tweed Forum is working with SEPA, South Lanarkshire Council and SBC to investigate the potential of restoring a section of the Biggar Water and reducing flooding through Biggar and Broughton. An options appraisal has been completed and detailed designs will take place shortly. A considerable funding package amounting to some £400k has been secured.

The Next Planning Cycle

This report marks the completion of Cycle 1 and we are now transitioning into the second FRM Cycle. (Cycle 2)

The Tweed Local Flood Risk Management Plan 2022 – 2028, is scheduled for publication during December 2022.

Many of the Cycle 1 actions were to undertake studies that have led to the identification of further actions to be implemented in Cycle 2 and beyond. For example, a flood protection study may recommend that a community flood action group is set up to increase resilience to flooding, or that a Flood Protection Scheme is constructed.

Conclusions

Overall, delivery of the majority of actions in the Tweed LRMP has been successful, enhanced by the partnership working and data sharing throughout Cycle 1. The actions delivered have helped reduce flood risk and helped to inform future actions that will be progressed during Cycle 2 and subsequent cycles to reduce flood risk further. Whilst the majority of actions have either been progressed in line or have advanced further than set out in the Plan, some actions have not progressed as far or as quickly as intended these action will be continue to conclusion into Cycle 2.

In summary, the Tweed Local Plan District benefits from being mostly covered by the Scottish Borders Council area with the exception of Biggar in South Lanarkshire. As Lead Authority, we believe that this has been a significant contributing factor to the successful delivery of actions in the Tweed Local Flood Risk Management Plan 2016 – 2022.

Assessment of progress

This section sets out an assessment of the implementation of actions set out in the Tweed LFRMP.

There are actions that apply across the whole of the Tweed LPD and actions that are specific to each of the 13 Potentially Vulnerable Areas (as defined under Section 13 of the Act) in the Tweed LPD, which are shown below in Figure 1

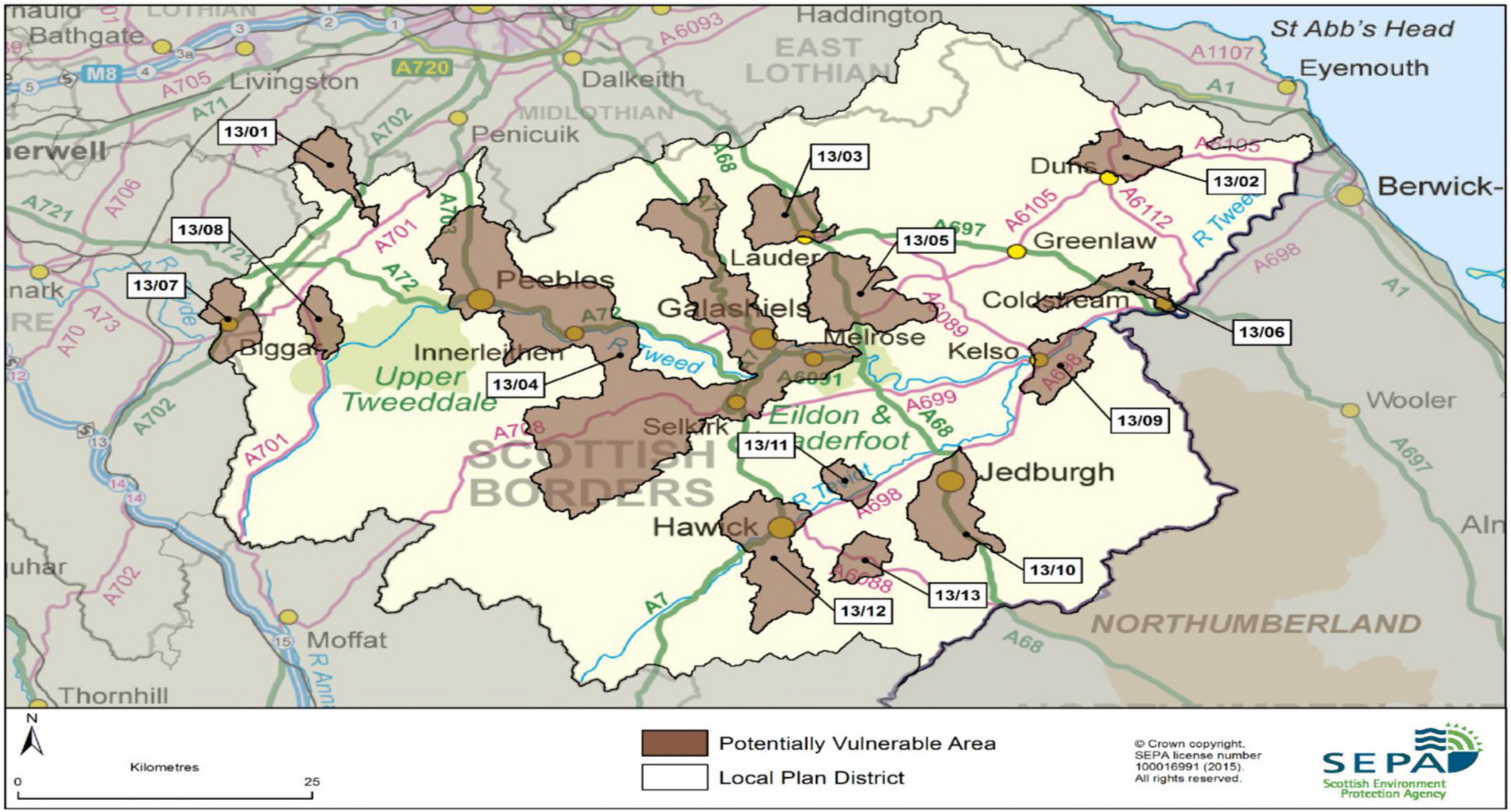


Figure 1: The Clyde and Loch Lomond Local Plan District with Potentially Vulnerable Areas identified

Reproduced from Tweed Local Plan District Flood Risk Management Strategy, SEPA (December 2015)

The actions that apply to individual PVA across the Tweed LPD are shown in Figure 2. The summary of the assessment of implementation is shown using the traffic light system, where each item is marked as Red, Amber or Green (RAG) and where:

- **GREEN** – Action has been delivered, is on programme and within budget;
- **AMBER** – Action is behind programme and/or over budget, but the key dates are still anticipated to be met.
- **RED** – Action is behind programme and/or over budget, with key dates unlikely to be met and/or the outputs unlikely to achieve what was anticipated by the LFRMP.

PVA	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
13/01 West Linton							G	A		G	G			G	G	G		G	G
13/02 Preston										G	G			G	G	G		G	G
13/03 Lauder							G	A	G		G			G	G	G		G	G
13/04 Eddleston/Peebles/ Innerleithen/Selkirk/Stow & Galashiels	G			G	G	G	G	A	G	G	G		G	G	G	G		G	G
13/05 Earlston				G			G	A	G	G	G			G	G	G		G	G
13/06 Coldstream							G			G	G			G	G	G		G	G
13/07 Biggar				A			G	A	G		G			G	G	G		G	G
13/08 Broughton				G			A				G			G	G	G		G	G
13/09 Kelso							G			G	G			G	G	G		G	G
13/10 Jedburgh							G		G	G	G	G	G	G	G	G		G	G
13/11 Denholm									G	G	G			G	G	G		G	G
13/12 Hawick	A				R	A	G	A		G	G		G	G	G	G		G	G
13/13 Bonchester Bridge											G			G	G	G		G	G

Figure 2: Summary of progress of actions to manage flood risk in the Potentially Vulnerable Areas of Tweed Local Plan District

Tweed LPD Wide Actions - Assessment of progress

This section sets out an assessment of the implementation of actions that apply across the whole of the Tweed LPD covering the six-year plan 2016 - 2022, this is presented in Figure 3 overleaf.

Action	Status	Description	Delivery Lead	Details of Action Delivery 2016 - 2022
Flood forecasting	**G**	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.	**SEPA**	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.
Self help	**G**	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.	**All Responsible Authorities**	**Scottish Borders Council** – throughout Cycle 1 continued to promote and deliver a subsidised Flood Product Scheme for the Scottish Borders allowing residents' access to affordable Property Level Protection. A Property Level Protection Scheme has been implemented by Scottish Borders Council to increase flood resilience at an area of frequent flooding in Peebles. Scottish Borders Council continues to promote and implement the Resilient Communities Scheme. **South Lanarkshire Council -** provide advice to those affected by flooding with regards to available property level flood protection products, techniques and potential funding opportunities to reduce flood risk. **South Lanarkshire Council -** will continue to offer advice and will work with Scottish Flood Forum in relation to Self Help requests from those affected by flooding.
Awareness raising	**G**	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.	**All Responsible Authorities**	**SEPA** - continues to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19. They will also continue to engage with communities through local participation in national initiatives, including partnership working with Neighbourhood Watch Scotland. In addition, SEPA will engage with local authorities and community resilience groups where possible. **Scottish Water** will continue to support SEPA and responsible authorities with their awareness raising activities as required and provide targeted flooding communications for Scottish Water specific activities. Scottish Water will raise awareness by producing and supplying targeted information to the public on large capital projects and detailed local studies. More general information and flooding guidance are available on the Scottish Water website. **Scottish Borders Council** - continues to work with resilient communities set up under the scheme throughout the Scottish Borders. The Council worked with FloodRE in some Border Towns to increase awareness of the new Flood RE Insurance Scheme which provides affordable insurance scheme for those properties at Flood Risk. Scottish Borders Council continues to work closely with flood action groups and resilience groups to encourage actions to raise awareness of flood risk within the Scottish Borders. This includes letter dropping and attending Community Council and Local Flood Group Meetings. **South Lanarkshire Council -** continue to work alongside Scottish Water and SEPA to raise public awareness of flood risk. SLC's annual Winter Awareness Campaign includes information on flooding and is cascaded to staff and the public via the Council's social media accounts.

				South Lanarkshire Council -will continue to work with Scottish Water and SEPA to raise public awareness of Flood Risk. SLC's annual Winter Awareness Campaign will continue to include information on flooding which will be cascaded to staff and the public via the Council's social media accounts. SLC will also continue to raise public awareness during the LFRMP 2 Consultation process.
Maintenance	**G**	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules of clearance and repair works and make these available for public inspection. Scottish Water undertake risk based inspection, maintenance 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.	**Local Authorities**	**Scottish Borders Council** - continues to undertake a regime of watercourse inspections on a risk-based approach, updating the Section 18 Clearance & Repair Schedule and undertaking the necessary repairs to reduce flood risk. This has included maintenance works on the Jedburgh (Richmond Row) FPS and maintenance to the Selkirk FPS (St Marys Loch) **South Lanarkshire Council –** will continue to assess and maintain watercourses within the SLC area. Continue to review the application of the SLC watercourse telemetry network. **South Lanarkshire Council -** undertake regular assessment and clearance of watercourses in our area. To monitor the water levels and debris accumulations at our most at-risk flood locations, a network of watercourse telemetry equipment is maintained to provide real-time flood warnings
Emergency plans/response	**G**	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. Scottish Water is a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.	**Category 1 & 2 Responders**	**All** - Responders will continue a co-ordinated approach to emergency situations to initiate relevant Emergency Plans as appropriate in relation to MET office weather warnings and SEPA flood warning information. **Scottish Borders Council -** will continue to revise and develop relevant Emergency Plans as new information becomes available. SBC will also continue to undertake duties as Category 1 responders under the Civil Contingencies Act 2004 and contribute towards Resilience Partnership groups at local and regional levels. **South Lanarkshire Council -** We have an Emergency Management Team, led by our Contingency Planning Officer and made up of senior managers representing each of our main departments, which takes responsibility for preparing for and responding to emergencies. The Council's Flood Risk Management Team are represented on the Council's EMT. **South Lanarkshire Council -** is a Category 1 responder who works on a day-to-day basis with emergency services including Police, Fire and the NHS to ensure the safety and wellbeing of our communities during emergencies.
Planning Policy	**G**	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.	**Planning Authority**	**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. **Scottish Borders Council** – will continue to provide advice to the planning authority on local planning publications within the Scottish Borders. This included the Housing Supplementary Guidance and the Main Issues Report, which supplements the Local Development Plan 2, ensuring that these assess all aspects of flood risk, encourage sustainable flood risk management and comply with Scottish Planning Policy and the FRM Act 2009. **South Lanarkshire Council** - The Council's Flood Risk Management team are consulted regularly to review planning applications in relation to flood risk. The Council's Local Development Plan also outlines the Council's flood risk requirements for proposed developments.
Strategic mapping and modelling (surface water)		SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately	**SEPA**	**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.

		2,100km² of improved data is currently available within this Local Plan District.		

Figure 3: Progress with LPD-wide Actions for the Tweed LPD

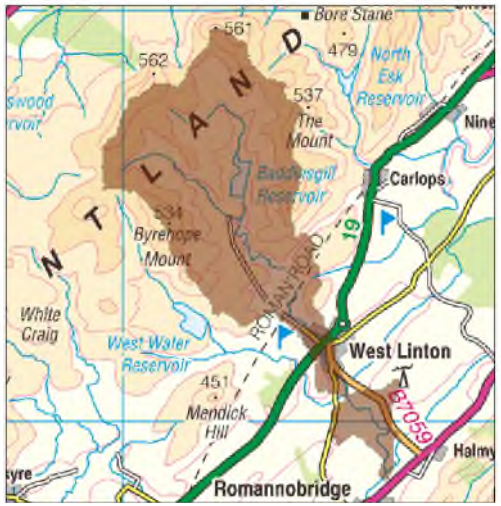
Implementation of PVA-specific Actions

This chapter is focused on the actions delivered in each Potentially Vulnerable Areas to manage flood risk.

The Potentially Vulnerable Area level action tables below set out the flood management actions that were to be achieved, provide a description of the action, identify who was responsible for the delivery, the implementation timescales of when the actions was undertaken and if the action was successfully delivered or not. The Local Plan District wide actions noted in Section 4 apply to all Potentially Vulnerable Areas.

West Linton (Potentially Vulnerable Area 13/01)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Lyne Water



Reproduced from Tweed Flood Risk Management Strategy, SEPA (December 2015).

Summary of Progress for West Linton

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £4,200.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/01.

Key Progress

- West Linton is now an active Resilient Communities Group.

Overview of actions to manage flooding in West Linton

PVA	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
13/01							G	A		G	G			G	G	G		G	G

Summary of actions delivered to manage flood risk in West Linton (PVA 13/01)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Strategic mapping and modelling	**A**	Surface water mapping developments: improved data areas across LPD.	SEPA	01/06/16	31/12/16	See Tweed LPD Wide Actions – Assessment of progress
Strategic mapping and modelling	**A**	Fluvial mapping developments: Upper Tweed Catchment	SEPA	01/06/16	31/12/17	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Strategic mapping and modelling	**G**	Assessment of flood risk in West Linton sewer catchment	Scottish Water	01/01/16	31/12/18	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	**G**	Maintain the Romannobridge to Lyne Station flood warning area.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD

Preston (Potentially Vulnerable Area 13/02)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Whiteadder

Summary of Progress for Preston

There are approximately 30 residential properties at risk of flooding. The Annual Average Damages are approximately £140,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/02.

Key progress

Preston is now an active Resilient Community as part of the Abbey St Bathans/Bonkyl/Preston Community Council Area.

Overview of actions to manage flooding in Preston

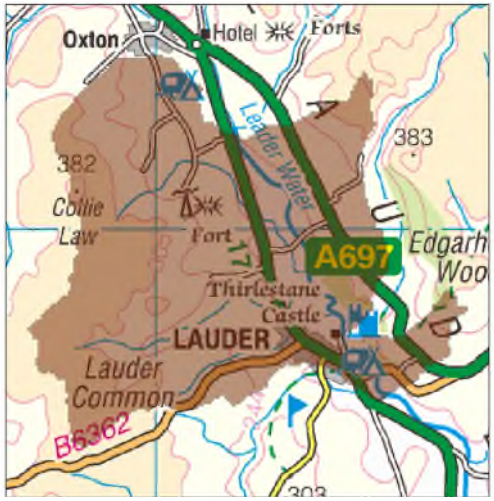
PVA	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
13/02									G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Preston (PVA 13/02)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						These columns represent the progress to date on the delivery of each action in this PVA which makes up the INTERIM REPORT for the Tweed LFRMP
Action	**Status**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Maintain Flood Warning	**G**	Maintain the Preston to Paxton flood warning area.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Flood Forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self Help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness Raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Lauder (Potentially Vulnerable Area 13/03)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Leader Water



Summary of Progress for Lauder

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £5,900.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/02.

Overview of actions to manage flooding in Lauder

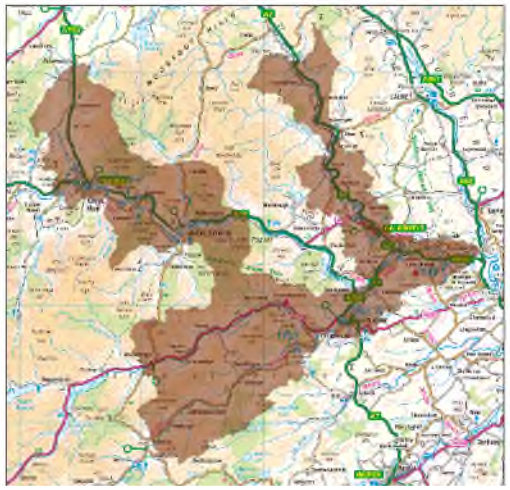
PVA	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling		Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
13/03							G	A	G		G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Lauder (PVA 13/03)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Strategic mapping and modelling	**A**	Fluvial mapping developments: Leader Water area.	SEPA	01/06/16	31/12/20	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Strategic mapping and modelling	**G**	Assessment of flood risk in Lauder sewer catchment	Scottish Water	01/01/16	31/12/19	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.
Maintain Flood Protection Scheme	**G**	Continue to maintain the Lauder Station Yard Flood Protection Scheme.	Scottish Borders Council	Ongoing	-	Inspections of Lauder Station Yard FPS, June 2016, June 2017, July 2018 & July 2019.
Flood Forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self Help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness Raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Eddleston, Peebles, Innerleithen, Selkirk, Stow and Galashiels (Potentially Vulnerable Area 13/04)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Tweed



Summary of Progress for Eddleston, Peebles, Innerleithen, Selkirk, Stow and Galashiels

There are approximately 1,900 residential properties and 1,000 non-residential properties at risk of flooding. The Annual Average Damages are approximately £6.5 million.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/04.

Key Progress

- Selkirk Flood Protection Scheme was completed in 2016 and officially opened 27th February 2017.
- A Flood Study for Peebles, Innerleithen & Broughton was completed and preferred flood risk management measures presented at public exhibitions.
- Other actions – A property level protection scheme was completed in the Tweed Green area of Peebles providing resilience to flooding to 39 properties.
- Other actions – Repairs to failing gabion baskets on the Galashiels Flood Protection Scheme have been successfully completed.
- Other actions – Flood studies for Lindean and the Etrrick Valley have been carried out, detailing existing flood risk and possible flood risk management measures.

Overview of actions to manage flooding in Eddleston, Peebles, Innerleithen, Selkirk, Stow and Galashiels

PVA	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
13/04	G			G	G	G	G	A	G	G	G		G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Eddleston, Peebles, Innerleithen, Selkirk, Stow & Galashiels (13/04)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Flood protection scheme/works	**G**	Deliver Selkirk Flood Protection Scheme	Scottish Borders Council	01/01/14	27/02/17	Construction Complete, Scheme officially opened 27th February 2017.
Flood protection study	**G**	Undertake Flood Study for Peebles, Broughton and Innerleithen to assess current flood risk and determine potential mitigation measures.	Scottish Borders Council	16/01/17	31/12/20	Flood Studies are complete with actions proposed Cycle 2.
Natural flood management study	**G**	Undertake a Natural Flood Management Study for the Gala Water catchment	Scottish Borders Council	01/03/23	30/06/23	The NFM study started in Spring 2022 and is scheduled for completion in June 2023
Surface water plan/study	**G**	Surface Water Management Plan to be developed for Peebles and Galashiels. Integrated Catchment Study (ICS) also to be developed for Galashiels.	Scottish Borders Council/Scottish Water	01/01/17	01/01/20	**Peebles** – Surface Water Management Plan, complete and South Peebles Surface Water Flood Study complete **Galashiels** – Surface Water Management Plan complete. **Galashiels** – Study was stopped at scoping stage as there was limited interaction found between sewers and watercourses.
Strategic mapping and modelling	**A**	Fluvial mapping developments: Gala Water, Ettrick Water, Upper Tweed, Eddleston Water and Biggar Burn areas.	SEPA	01/01/18	31/12/21	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are

						undertaken is being conducted to develop a more effective method of regional and national updates.
Strategic mapping and modelling	**A**	Surface water mapping developments: improved data areas across Local Plan District and use of Peebles area and Galashiels area Surface Water Management Plan and Integrated Catchment Study results if appropriate.	SEPA	01/01/18	31/12/16	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Strategic mapping and modelling	**G**	Assessment of flood risk in Galashiels; Melrose; Peebles; Selkirk & Walkerburn sewer catchments	Scottish Water	01/01/16	31/12/20	The Scottish Water assessment of flood risk within the individual sewer catchments has been completed and has been shared with the Local Authority.
Maintain flood protection scheme	**G**	Maintain flood protection schemes in Galashiels; Innerleithen; Peebles and Selkirk	Scottish Borders Council	Ongoing	Ongoing	**Galashiels** – Inspection of Galashiels Flood Prevention Scheme completed in June 2018 and maintenance to mill lade inlet completed in September 2018 and damaged gabions repaired in September 2021. **Innerleithen** – Inspection of Innerleithen (Hall St) Flood Prevention Scheme completed August 2017, June 2018, July 2019, July 2020, September 2021 & May 2022. **Peebles** – Inspection of Edderston Burn Flood Prevention Scheme completed in June 2018 & July 2019. **Selkirk** – Selkirk Flood Protection Scheme is now complete and a walkover survey of the scheme was completed in May 2018 with further inspection completed on various parts of the FPS in 2019, 2020, & 2022.

Maintain flood warning	**G**	Continue to maintain all flood warning areas in PVA 13/04	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Community flood action groups	**G**	Maintain Selkirk Long Philip Burn and Galashiels Bakehouse Burn Flood Warning Group	Scottish Borders Council	Ongoing	Ongoing	The Selkirk Long Philip Burn warning group has been finished due to the presence of the Selkirk FPS. The Galashiels Bakehouse Burn warning system is still active and operating from the Scottish Borders Council standalone water level monitoring system.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Earlston (Potentially Vulnerable Area 13/05)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Leader Water

Summary of Progress for Earlston

There are fewer than 70 residential properties and 50 non-residential properties at risk of flooding. The Annual Average Damages are approximately £640,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/05.

Key Progress

- A Flood Study for Earlston was completed and preferred flood risk management measures presented at public exhibitions.
- Earlston is now an active Resilient Communities Group.

Overview of actions to manage flooding in Earlston

PVA	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
13/05				G			G	A	G	G	G			G	G	G		G	G

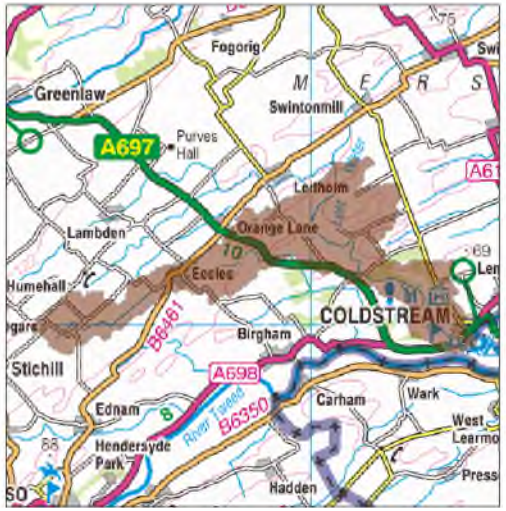
Summary of progress of actions to manage flood risk in Earlston (PVA 13/05)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Flood protection study	**G**	Undertake Flood study for Earlston to assess current flood risk and determine potential mitigation measures.	Scottish Borders Council	16/01/17	31/12/20	Flood Study is complete with study finding being used to inform flood risk management in Earlston, for example the redevelopment of the primary school.
Strategic mapping and modelling	**A**	Fluvial mapping developments: Leader Water Area	SEPA	01/06/16	31/12/20	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates
Strategic mapping and modelling	**A**	Surface water mapping developments: improved data areas across LPD.	SEPA	01/06/16	31/12/16	For planned actions on surface water mapping, see progress with Local Plan District wide actions.
Strategic mapping and modelling	**G**	Assessment of flood risk in the Earlston sewer catchment	Scottish Water	01/01/16	31/12/17	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	**G**	Maintain the Earlston Flood Warning Area	SEPA	Ongoing	Ongoing	Continued operation of the flood warning service
Maintain flood protection scheme	**G**	Continue to maintain the existing Turfford Burn Flood Prevention Scheme.	Scottish Borders Council	Ongoing	Ongoing	Inspections of the Turfford Burn Flood Prevention Scheme were undertaken July 2016, June 2017, June 2018, November 2021.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD

Coldstream (Potentially Vulnerable Area 13/06)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	River Tweed



Summary of Progress for Coldstream

There are fewer than 10 residential properties and non-residential properties at risk of flooding. The Annual Average Damages are approximately £51,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/06.

Key Progress

- Coldstream is now an active Resilient Communities Group.
- Vegetation clearance of confluence of Leet Water and River Tweed.

Overview of actions to manage flooding in Coldstream

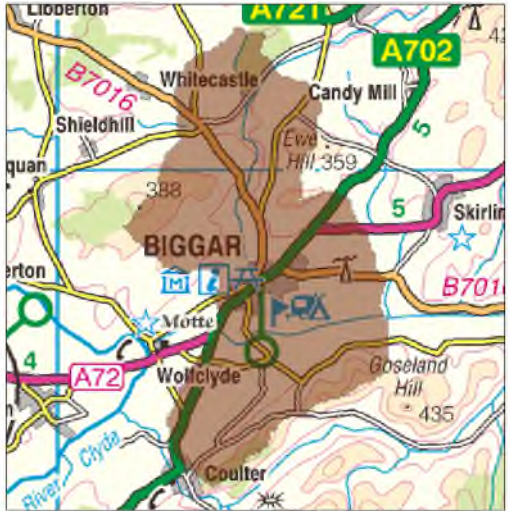
	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
13/06							G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Coldstream (PVA 13/06)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Strategic mapping and modelling	**G**	Assessment of flood risk in the Coldstream sewer catchment	Scottish Water	01/01/16	31/12/19	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	**G**	Maintain the Earlston Flood Warning Area	SEPA	Ongoing	Ongoing	SEPA has continue to operate the flood warning service
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Biggar (Potentially Vulnerable Area 13/07)

Local Plan District	Local authority	Main catchment
Tweed	South Lanarkshire Council	Biggar Water



Summary of Progress for Biggar

There are approximately 40 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £120,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/07.

Overview of actions to manage flooding in Biggar

	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
13/07				A			G	A	G		G			G	G	G		G	G

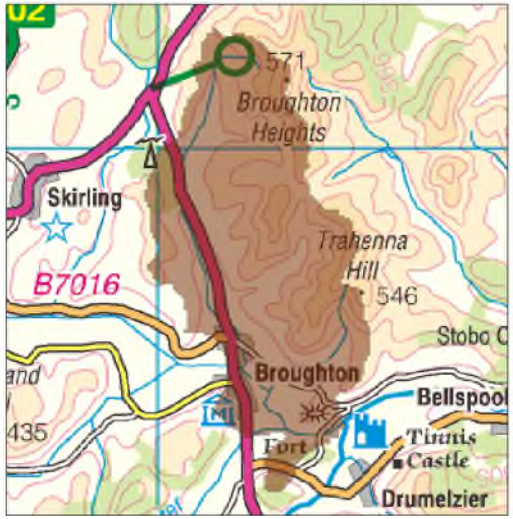
Summary of progress of actions to manage flood risk in Biggar (PVA 13/07)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Flood protection study	**A**	Undertake Flood study for Biggar to assess current flood risk and determine potential mitigation measures.	South Lanarkshire Council	April 2019	2020	South Lanarkshire Council has had discussion with SEPA and the Tweed Forum regarding the Study. The study is now programmed to take place 2019/20 subject to available resources.
Strategic mapping and modelling	**G**	Assessment of flood risk in the Biggar sewer catchment	Scottish Water	01/01/16	31/12/18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.
Strategic mapping and modelling	**A**	Fluvial mapping developments: Upper Tweed, Eddleston Water and Biggar Burn	SEPA	01/06/18	31/12/21	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Maintain flood protection scheme	**G**	Maintain existing flood accommodation system at Biggar High School	South Lanarkshire Council	Ongoing	Ongoing	Continue maintenance programme.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD

Broughton (Potentially Vulnerable Area 13/08)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	River Tweed



Summary of Progress for Broughton

There are approximately 40 residential properties and fewer than 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £160,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/08.

Key Progress

- A Flood Study for Peebles, Innerleithen & Broughton was completed and preferred flood risk management measures presented at public exhibitions.
- Broughton is now an active Resilient Communities Group.
- Enhanced road drainage measures implemented on the A701 to mitigate surface water flooding to the centre of Broughton Village.

Overview of actions to manage flooding in Broughton

	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
13/08				G			A			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Broughton (PVA 13/08)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Flood protection study	**G**	Undertake Flood Study for Peebles, Broughton and Innerleithen to assess current flood risk and determine potential mitigation measures.	Scottish Borders Council	16/01/16	31/12/20	Flood Study is complete with study finding being used to inform flood risk management in Broughton.
Strategic mapping and modelling	**A**	Fluvial mapping developments: Gala Water, Ettrick Water, Upper Tweed, Eddleston Water and Biggar Burn areas.	SEPA	01/06/16	31/12/17	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Kelso (Potentially Vulnerable Area 13/09)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	River Tweed

Summary of Progress for Kelso

There are approximately 90 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £120,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/09.

Overview of actions to manage flooding in Kelso

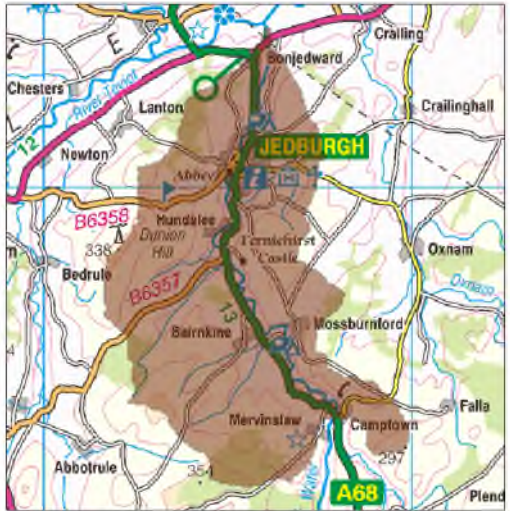
	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
13/09							G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Kelso (PVA 13/09)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Strategic mapping and modelling	**G**	Assessment of flood risk in Kelso sewer catchment	Scottish Water	01/01/16	31/12/20	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	**G**	Maintain Kelso to Coldstream Flood Warning Area	SEPA	Ongoing	-	SEPA has continued to operate the flood warning service.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Jedburgh (Potentially Vulnerable Area 13/10)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Jed Water



Summary of Progress for Jedburgh

There are approximately 130 residential properties and 140 non-residential properties at risk of flooding. The Annual Average Damages are approximately £720,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/10.

Key Progress

- The Jedburgh Skiprunning Burn Flood Protection Scheme was completed in 2016.
- Jedburgh is now an active Resilient Communities Group.

Overview of actions to manage flooding in Jedburgh

	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
13/10							G	G	G	G	G	G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Jedburgh (PVA 13/10)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Strategic mapping and modelling	**G**	Assessment of flood risk in Jedburgh sewer catchment	Scottish Water	01/01/16	31/12/20	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.
Maintain flood protection scheme	**G**	Maintain Jedburgh Richmond Row FPS and Skiprunning Burn FPS	Scottish Borders Council	Ongoing	Ongoing	Inspections of the Jedburgh Richmond Row and Jedburgh Skiprunning Burn Flood Protection Schemes were undertaken August 2017, May 2018, August 2019, April 2021 & August 2022.
Maintain Flood Warning	**G**	Maintain the Camptown to Jedburgh and the Jedburgh to Jedfoot Bridge flood warning areas.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Property level protection scheme	**G**	Property Level Protection implemented as part of the Skiprunning Burn FPS	Scottish Borders Council	Ongoing	Ongoing	The property level protection scheme remains in place and is maintained by the landlords at this location.
Community flood action groups		Maintain Jedburgh Skiprunning Burn Flood Warning Group.	Scottish Borders Council	Ongoing	Ongoing	The Flood Warning remains active in informing residents of flood risk from the Skiprunning Burn
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD

Denholm (Potentially Vulnerable Area 13/11)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	River Teviot

Summary of Progress for Denholm

There are fewer than 10 residential and non-residential properties at risk of flooding. The Annual Average Damages are approximately £25,000.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/11.

Key Progress

- Denholm is now an active Resilient Communities Group.

Overview of actions to manage flooding in Denholm

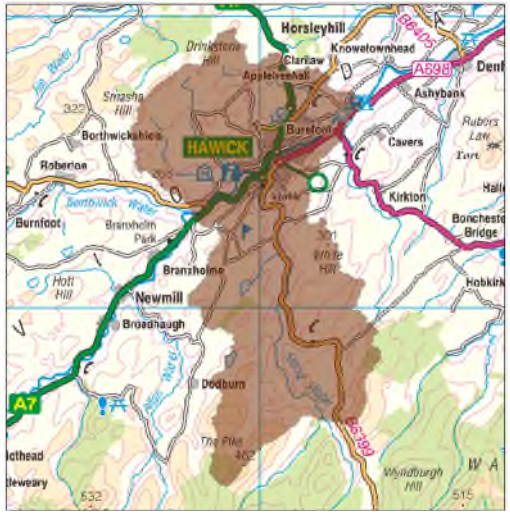
	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
13/11								G	G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Denholm (PVA 13/11)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Maintain flood protection scheme	**G**	Maintain Denholm Flood Prevention Scheme	Scottish Borders Council	Ongoing	Ongoing	Inspections of the Denholm Flood Protection Scheme were undertaken August 2017, June 2018, August 2019, February 2021 & April 2022.
Maintain Flood Warning	**G**	Maintain the Hawick to Monteviot flood warning area.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Hawick (Potentially Vulnerable Area 13/12)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	River Teviot



Summary of Progress for Hawick

There are approximately 600 residential properties and 440 non-residential properties at risk of flooding. The Annual Average Damages are approximately £2.5 million.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/12.

Key Progress

- Construction of the Hawick Flood Protection Scheme has now commenced and is due for completion by December 2023.
- The Hawick Flood Group are very proactive in the town and work closely with Scottish Borders Council to prepare for flooding and assist during times of flooding.
- Hawick is also an active Resilient Communities Group.
- A Flood study has been developed to inform the potential for a future flood protection scheme for the Slitrig in Hawick.
- Small scale flood works have been completed at Whitlaw & Crowbyres to reduce the impacts of flooding.

Overview of actions to manage flooding in Hawick

	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
13/12	A				R	A	G	A		G	G		G	G	G	G		G	G

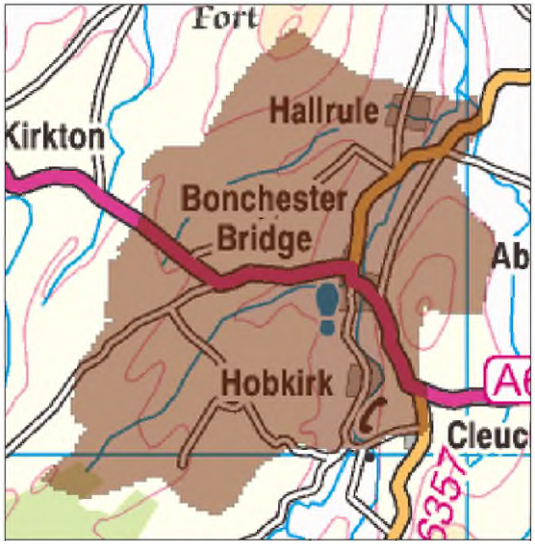
Summary of progress of actions to manage flood risk in Hawick (PVA 13/12)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action Delivery 2016 - 2022**
Flood protection scheme works	**A**	Develop a flood protection scheme for Hawick to mitigate the risk of flooding in the town centre from a 1:75 year event from the River Teviot.	Scottish Borders Council	2020	2023	Construction of the Hawick FPS commenced in the summer of 2020 and is due for completion by December 2023.
Natural flood management study	**R**	Undertake a Natural Flood Management Study for the catchment above Hawick covering the Teviot, Slitrig and Borthwick Waters.	Scottish Borders Council	01/11/16	31/12/20	The development of Natural Flood Management Study has been delayed due to resources being deployed on the Hawick FPS, this is now scheduled to begin in Spring 2023.
Surface water plan/study	**A**	Surface Water Management Plan to be developed for Hawick	Scottish Borders Council	03/03/17	31/12/19	SWMP is ongoing taking into consideration the Hawick FPS and Active Traffic Travel Network, currently under construction. SWMP due for completion Q1 2023.
Strategic mapping and modelling	**G**	Assessment of flood risk in Hawick sewer catchment	Scottish Water	01/01/16	31/12/20	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority.
Strategic mapping and modelling	**A**	Fluvial mapping developments: River Teviot area.	SEPA	01/01/16	31/12/18	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.

Maintain Flood Warning	**G**	Maintain the Hawick (Slitrig) flood warning area and the Hawick (Teviot) and the Hawick to Monteviot flood warning areas.	SEPA	Ongoing	Ongoing	SEPA has continued to operate the flood warning service.
Community flood action groups		Continue to work and support the Hawick Flood Group.	Scottish Borders Council	Ongoing	Ongoing	Scottish Borders Council has continued to support the Hawick Flood Group in any activities which help raise resilience and awareness of flooding to the general public in Hawick.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

Bonchester Bridge (Potentially Vulnerable Area 13/13)

Local Plan District	Local authority	Main catchment
Tweed	Scottish Borders Council	Rule Water



Summary of Progress for Bonchester Bridge

There are approximately 40 residential properties and fewer than 10 non-residential properties at risk of flooding.

Further information can be found in the Tweed Local Flood Risk Management Plan under PVA 13/13.

Key Progress

- Other Actions – Flood damage repair to river bank undertaken to rear of gardens on Weens Place.
- New public sandbag store provided.
- Small Culvert replacement and re-forming of ditch to alleviate surface water flooding to properties on Forest Road.
- New drainage system constructed to relieve surface water flooding to properties around Laidlaw Memorial Hall.

Overview of actions to manage flooding in Bonchester Bridge

	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
13/13							A			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Bonchester Bridge (PVA 13/13)

Information in these columns represents what was proposed as an action in the Tweed LFRMP to manage flood risk in this PVA during the first Flood Risk Management Cycle 2016 - 2022						
Action	**Status (Red; Amber; Green)**	**Description**	**Delivery Lead**	**Start date**	**End date**	**Details of Action delivery 2016 - 2022**
Strategic mapping and modelling (new action)	**A**	SEPA will seek to develop flood mapping in the Rule Water area to improve understanding of flood risk, commencing in the second flood risk management cycle. The extent and timing of improvements will depend on detailed scoping and data availability. Where this work coincides with local authority studies, SEPA will work collaboratively to ensure consistent modelling approaches are applied.	SEPA	01/06/16	31/12/17	SEPA began working on river mapping updates in this area but upon review of the available information it is not appropriate to complete the update at this time. A review of how modelling and mapping updates are undertaken is being conducted to develop a more effective method of regional and national updates.
Flood forecasting	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Self help	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Awareness raising	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Maintenance	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Emergency plans/response	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				
Planning Policy	**G**	LPD Wide Action see above - Figure 3: Progress with LPD-wide Actions for the Tweed LPD				

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.

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.

Forestry Scotland

Scottish Forestry was designated in 2013 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.
- **NatureScot** has provided general and local advice in the development of this Flood Risk Management Strategies. Flooding is seen as a natural process that can maintain the features of interest at many designated sites, so NatureScot helps to ensure that any changes to patterns of flooding do not adversely affect the environment. NatureScot 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: 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 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 up 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 Strategies 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 actionsis 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 sea bed 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 a number of locations where more detailed local models were available they have been incorporated into the development of the Flood Risk Management Strategies. 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).

Annex 3: 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**, which was published in 2011. 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**.

In Scotland, 243 Potentially Vulnerable Areas were identified. They are estimated to contain 92% of the total number of properties at risk.

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 Strategy 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 Strategy, 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.

Five ICS's were undertaken in Scotland during SR10 (2010-2015), to Modelling and Flood Risk Assessment stage, which have provided a fuller understanding of the sources and mechanisms of flooding across these catchments. These studies are expected to undertake an Optioneering phase between 2015-2021. This will identify the actions to reduce flood risk across the catchments, with the outputs feeding into the Local Authority led Surface Water Management Planning process.

Fifteen ICS's will begin in Scotland during SR15 (2015-2021). These studies will go through the Scoping and Modelling phases, which culminates in defining the sources and mechanisms of flooding in the catchment, and an understanding of the impacts of that flooding. It is expected that the ICS partnerships will remain and it is anticipated that the Optioneering phase for these studies will be initiated directly after the preceding phases. Within this Local Plan District, ICS's are being carried out in the following areas; Inverclyde (including Greenock and Port Glasgow), Erskine (including Inchinnan and Linwood) and East Kilbride.

- ***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 Strategies. 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 Clyde and Loch Lomond 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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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 Strategy - 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 Strategies. 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).