

# Flood Risk Management (Scotland) Act 2009:

Final Report:

Local Flood Risk Management Plan

Tay Local Plan District



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NATIONAL PARK AUTHORITY  
ÙGHDARRAS PÀIRC NÀISEANTA A'  
MHONaidh Ruaidh

## Foreword

This Final Report on the Tay Local Flood Risk Management Plan shows the progress made in delivering the actions to avoid and reduce the risk of flooding and prepare and protect us and our communities across the Local Plan District. The report also marks the completion of Cycle 1 (2016 - 2022) as we now transition into Cycle 2 (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.”*

(Tay Local Flood Risk Management Plan, June 2016)

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

This Final Report is published by Perth & Kinross Council on behalf of a partnership comprising Angus Council, Fife Council, Stirling Council, SEPA, Scottish Water, Loch Lomond and the Trossachs National Park Authority, Cairngorms National Park Authority and Scottish Forestry.

Individuals are the first line of defence against flooding and have responsibilities to protect themselves from flooding. Through self-help and property level protection, awareness raising and signing up to Floodline, individuals, businesses and communities can, and have, made key contributions to the delivery of the actions in the Tay Local Flood Risk Management Plan, which are detailed in this Final Report.

Since the publication of the Tay Local Flood Risk Management Plan in June 2016, public sector finances in Scotland have continued to be under considerable pressure. This places an even greater responsibility on SEPA, local authorities, Scottish Water and other responsible authorities to deliver their flood risk management responsibilities and, in particular the actions in the Plan, to manage flooding in a sustainable way. During Cycle 1, we have also had to respond to the challenges of the Covid-19 pandemic as well as significant flood events and staffing shortages.

SEPA, local authorities, Scottish Water and other responsible authorities will continue to work collaboratively to implement the actions set out in the Cycle 2 Local Flood Risk Management Plans to its conclusion in June 2028.

We would like to thank all those who contributed to the development of this Report which will help shape the way in which floods and their impacts are managed across the Tay Local Plan District.

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## Chapter 1 - Background

This Final Report is a legal requirement of the Flood Risk Management (Scotland) Act 2009 (Section 38) and, following recent Ministerial Direction, is required to be published no later than 31 December 2022. The Final Report includes:

- An assessment of the progress made towards implementing the Tay Local Flood Risk Management Plan published in 2016 (the 'Plan').
- a summary of the planned actions which were not implemented, with reasons for their non-implementation; and
- a description of any other actions implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the objectives.

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

A copy of the published Tay Local Flood Risk Management Plan can be found at the following link:

[www.pkc.gov.uk/frmplans](http://www.pkc.gov.uk/frmplans)

## Chapter 2 – Summary of the Progress of Actions in the Plan

This section sets out a summary of the progress of actions as detailed in the published Tay Local Flood Risk Management Plan. It draws upon the assessment of progress of actions presented in the subsequent Chapter 3.

A summary of the planned actions which were not implemented, with reasons for their non-implementation is provided in Section 2.4.

A description of the other actions implemented since the Plan was finalised which have contributed to the achievement of the objectives is provided in Sections 2.2 and 3.3.

### 2.1 Key Progress in Reducing the Impacts of Flooding since Publication

The following key progress has been made on the actions set out in the published Tay Local Flood Risk Management Plan: -

- Partnership Working - the introduction of the Flood Act had resulted in a more modern and coordinated approach to flood risk management and SEPA and responsible authorities were working more closely together than ever before. However, the Covid-19 pandemic, remote working and the SEPA cyber-attack of December 2020 have had an impact on the FRM planning process as well as various on-going projects. While the vast majority of these issues have now been resolved, the delays to Cycle 1 work will have an impact on the delivery of actions in Cycle 2.
- Overall Progress – following a slow start, good progress was made on the identified actions across the Tay Local Plan District (LPD). However, progress has been significantly affected by the Covid-19 pandemic, staffing shortages and the severe flooding experienced in many areas of the Tay LPD in August 2020 and September 2022. Out of the 182 selected actions, 156 have a green status, 22 amber and 4 actions have a red status. This is very similar to the overall status at the time of the Interim Report in March 2019. The majority of actions have a green status, and the majority of the remaining actions will continue into and be delivered within Cycle 2, as set out in Chapter 3 of this report.
- Almondbank Flood Protection Scheme - substantially completed in September 2018 benefitting 31 homes and 48 businesses.
- Comrie Flood Protection Scheme – confirmed in August 2021; construction works commenced in late August 2022.
- Perth Integrated Catchment Study - Scottish Water and Perth & Kinross Council worked in partnership to complete a city-wide model. Further investigations have been concluded in high priority areas.
- Flood Studies –

- Studies in Pitlochry, Aberfeldy, Dunkeld, Kirriemuir and Forfar have been completed and have identified flood risk management measures within these towns.
  - Work to develop the Perth Surface Water Management Plan is underway.
  - In Perth, the Craigie Burn Flood Study is also underway.
  - The Alyth Natural Flood Management Study is underway.
  - Work to develop the Blairgowrie & Rattray Surface Water Management Plan is underway.
  - Work to design flood protection works at Bridgend, Perth is on-going.
  - The Scone Flood Protection Study and Surface Water Management Plan will commence early 2023.
- Flood Mapping and Modelling Improvements - a number are on-going in the Tay Local Plan District by SEPA and other organisations. This will continue to improve the understanding of flood risk across this area.
  - Flood Forecasting - SEPA has continued 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 Category 1 and 2 agencies (such as emergency responders, local authorities and other organisations with flooding management duties) 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. 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. SEPA has also continued to provide a flood warning service to a number of locations within the Tay Local Plan District.
  - Self Help - Perth & Kinross Council's Housing Service has rolled out property flood protection measures for 90 Council properties in Aberfeldy, Alyth, Comrie, Kinross and Perth.
  - Awareness Raising - Community engagement and awareness raising activities have been carried out across the Tay Local Plan District, specifically in Potentially Vulnerable Areas (PVA's) where significant actions are underway or have been undertaken (i.e., flood studies and schemes).
  - Maintenance - local authorities have continued to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They have also continued to maintain existing flood protection schemes and defences. Scottish Water has continued to undertake risk based inspection, maintenance and repair on the public sewer network.
  - Emergency Plans/Response - Perth & Kinross Council further developed its Flooding Emergency Response Plan to take more account of the areas at highest risk of flooding and the severe flooding of August 2020. This included a review of out of hours emergency arrangements and flood gate closures.
  - Planning Policies - Planning authorities have continued to apply existing planning policies and SEPA and Scottish Water have provided flood risk advice with a view to avoiding flood risk.



## 2.2 How Current is the Plan?

The Tay Local Flood Risk Management Plan was published in June 2016 to supplement the Tay Flood Risk Management Strategy published by SEPA in December 2015. The Plan detailed how the actions identified in the Strategy were to be implemented over the period from 2016 to 2022. The Strategy and Plan were based on the National Flood Risk Assessment and the designated PVAs at that time.

Since the identification of the actions in the Plan, there have and continue to be advancements in our knowledge and methods of assessment. These include the publication by SEPA of an updated National Flood Risk Assessment and PVAs in December 2018 and the subsequent introduction of Objective Target Areas. These advancements may continue to inform the delivery of the actions in the Plan and will be used in the development of future Strategies and Plans.

It is therefore considered that this is the Final Report for the current Tay Local Flood Risk Management Plan, albeit the planned delivery and actual delivery dates have changed for some actions. This is further detailed in Chapter 3 of this report.

## 2.3 Significant Challenges

Based on a review of the progress of actions detailed in this Final Report, the following key challenges and issues have had an impact on the delivery of actions to manage flood risk. Arrangements planned to deliver the remaining actions are described below. Where these challenges have had an impact on the delivery of specific actions or actions across the Local Plan District, this is detailed in Chapter 3.

The overall delivery of actions in the Plan has not been impacted by funding, although significant resource issues have been noted.

### **Significant Weather Events**

The Tay LPD was adversely affected by significant weather events in late 2015 and early 2016 (Storms Desmond and Frank), which had knock on impacts on the delivery of actions in the Plan from June 2016 onwards. For example, Perth & Kinross Council and Angus Council resources were deployed to deal with the emergency events at that time as well as the follow up activities and necessary works, which were still being delivered into the 2020/21 financial year. This has caused consequential delays in the planned delivery of some actions as staff resources that would have been delivering planned actions have been delivering emergency actions.

A further significant weather event affecting the Tay LPD was the ‘Beast from the East’ which resulted in extremely low temperatures and high levels of snow fall across much of the Plan area in March 2018. Fortunately, there was not much significant flooding associated with this event, as a gradual thaw limited the impacts of snowmelt.

Significant flooding occurred during the storm of 11/12 August 2020 and a number of smaller flood events in the months that followed. This has had a considerable impact on the delivery of planned actions, as Councils had to divert significant resources to deal with the aftermath of the flooding. This was the most severe flood event in Perth & Kinross in almost 30 years and occurred during the Covid-19 pandemic (see below). The response made up a significant proportion of Perth & Kinross Council flooding team’s workload for a year following the initial flood event. The Scottish Flood Forum provided support to responsible authorities and local communities who sadly flooded during this extreme weather event. Despite covid lockdown restrictions, the Scottish Flood Forum were still able to provide individual and group support, both face to face and online, by delivering recovery consultations, household property flood resilience assessments, community resilience group start-up advice and support for local authorities and key stakeholders with online community information events. Key topics covered included insurance, reinstatement, and future property flood resilience.

Further significant flooding occurred in Perth and some surrounding areas on 8 September 2022. This led to further delays to the delivery of planned actions as well as the development of this Final Report and the Cycle 2 Tay Local Flood Risk Management Plan.

Arrangements planned to deliver the remaining actions affected by significant weather events are described below and in Chapter 3.

## **Covid-19 Pandemic**

The Covid-19 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, schemes and flood modelling work due to the transition to home working and the challenges of effectively consulting and engaging with flood affected communities. The pandemic resulted in flooding staff being redeployed elsewhere to assist with Covid response efforts. These impacts have resulted in higher implementation costs and programme delays.

## **Funding**

*“The lists of prioritised actions to meet agreed goals and objectives in the first six-year cycle considered what would be achievable assuming a similar level of funding for flood risk management activities from The Scottish Government. However, given the timing of spending reviews and annualised financial settlements for local government, the actual ability to deliver all the actions set in the Strategies in December 2015 and detailed in this*

*Plan will be dependent on the availability of the necessary funding in each year of the six year Plan.”*

(Tay Local Flood Risk Management Plan, June 2016).

The level of funding from Scottish Government for flood risk activities for the first years of the six-year Plan has generally been at the levels anticipated.

However, the Scottish Government and CoSLA are undertaking a review of capital funding for flood risk management. At present funding is available for the Council's proposed flood scheme in Comrie and work on this continues. However, as a result of the funding review, the proposed flood scheme, on the Annaty Burn in Scone, has been paused. While this scheme will still progress in the future, it may take longer to implement due to these funding limitations. The conclusion of the national review into capital funding for flood risk management is awaited. A statement on funding is awaited from the Scottish Ministers.

### **Allocation of Resources**

The availability and retention of skilled and experienced staff to deliver flood risk actions has been a very limiting factor. Much of this human resource pressure has arisen from the increased level of investment in flood risk management across the country, leading to pressure on the limited pool of those with the required specialist technical skills. This pressure has not only been observed within the authorities responsible for progressing individual actions, but also within the consulting engineers engaged to support the development of solutions.

The increased workload created by the Covid-19 pandemic and the significant weather events noted above has put more pressure on those limited staff resources. This has caused consequential delays in the planned delivery of actions.

Arrangements planned to deliver the remaining actions affected by allocation of resource issues are described below and are detailed in Chapter 3.

### **Procurement and Use of Consulting Engineers and Contractors**

The availability of consulting engineers has been a limiting factor in some areas. In the period following publication of the Plan, Perth & Kinross Council were initially unable to engage consulting engineers and underwent repeated procurement exercises. The market response to tender opportunities has since improved.

The Council has also encountered some initial issues in engaging site supervision staff for the Almondbank Flood Protection Scheme and, more recently, project management staff for the Comrie Flood Protection Scheme. These resource issues have caused consequential delays in the planned delivery of actions and have led to increased costs.

Arrangements planned to deliver the remaining actions affected by the use of consulting engineers are described below and are detailed in Chapter 3.

## SEPA Cyber-Attack

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 the 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.

Arrangements planned to deliver the remaining actions affected by the use of consultants are described below and are detailed in Chapter 3.

## Other Actions

Perth & Kinross Council has carried out additional actions, out with the actions identified within the Tay Local Flood Risk Management Plan. These actions include:

- Delivering on previous commitments to complete investigations into flood schemes (at Comrie, Bankfoot and Coupar Angus) and carrying out the associated public consultation events in late 2016.
- Riverbank erosion protection works, as well as repairs to a surface water outfall, have been carried out on the River Almond at Inveralmond, Perth.
- Works to address surface water flooding have been carried out at Perth Harbour.
- The completion of previous flood study work for the small burns to the southeast of Pitlochry in the vicinity of Middlehaugh of Dalshian, Easthaugh of Ballyoukan and the Altrory Burn.
- Works to install a sheet piled cut off wall to prevent ground water seepage during future flood events have been completed on the North Muirton Flood embankment.
- In response to the severe flooding of 11 & 12 August 2020:
  - A coordinated response from various Council services and partner organisations involving investigations, advice and support.
  - Continued work with public agencies and local resilience groups to investigate and respond to the impact of the flooding, focusing on homes and businesses most affected.
  - Responses to over 650 enquiries received via the Council's dedicated web page and generic e-mail address.
  - Nine online community meetings were held.
  - On the ground works in the most affected areas to respond to, and support, emergency works.
  - Emergency clearance works on the Craigie Burn, the Alyth Burn and the Dunning Burn.
  - CCTV camera surveys of drainage systems and culverts.

- Works to make safe a collapsed retaining wall on the Deich Burn in Bridge of Earn.
- A report to the Council's Environment and Infrastructure Committee on 18 August 2021, including a summary of identified short, medium, and long-term actions. These actions were consistent with the Tay Local Flood Risk Management Plan.
- A review of the Council's Out of Hours Emergency Service and flood gate closure procedure.
- In November 2020, Scottish Water and the Council carried out the replacement of all 8 pumps (4 foul & 4 surface water) in the South Inch Pumping Station, as part of planned maintenance work. The remaining pumps and telemetry systems on the Perth Flood scheme between Inveralmond and South Inch, were replaced over the last year.

Further details on these actions are provided within Section 3.3 of this document.

## 2.4 Summary of Actions Not Implemented

The significant challenges set out in Section 2.3 have resulted in delays to some planned actions and as a result, some actions have not yet been implemented, or may not be implemented at all.

The following four actions were not implemented during Cycle 1 (2016 - 2022):

### Tyndrum & Crianlarich PVA 08/09

Action ID	Delivery Lead	Planned Dates	Reasons Why Action Not Implemented
Strategic Mapping and Modelling (80410016)	SEPA	2018-2019	A detailed screening exercise has been undertaken to identify those outstanding modelling and mapping actions with potential multi benefits for Flooding, River Basin Management Planning 2027 priorities and development pressures. The outcome of this review has indicated that this catchment is not within a 2021 Objective Target Area and doesn't provide any multiple benefits. A decision has therefore been made not to progress this action any further.

**Scone PVA 08/11**

Action ID	Delivery Lead	Planned Dates	Reasons Why Action Not Implemented
Flood Protection Scheme/ Works (80230006)	Perth & Kinross Council	2018-2021	The Council's programme of flood protection schemes has been delayed due to the reasons listed in Section 2.3 of this Final Report. The flood protection scheme was programmed for completion in 2024/25, but that is now subject to capital grant funding.
Flood Protection Study (80230005)	Perth & Kinross Council	2020-2022	The Council's programme of flood studies has been delayed due to the reasons listed in Section 2.3 of this Final Report. However, the Scone Flood Protection Study is programmed for completion in the 2023/24 financial year.
Surface Water Plan/ Study (80210018)	Perth & Kinross Council	2020-2022	The Council's programme of flood studies has been delayed due to the reasons listed in Section 2.3 of this Final Report. However, the Scone surface water management plan is programmed for completion in the 2023/24 financial year.

As these four actions have not been completed in Cycle 1, they have been allocated a red RAG status in Chapter 3. However, three out of the four actions listed (in the Scone PVA 08/09) will be delivered in Cycle 2. Further information on these actions can be found in Chapter 3.

## 2.5 Arrangements Planned to Deliver Remaining Actions

The actions in the Plan will continue to be delivered over the remainder of the Cycle 2 period from 2022 to 2028. This will be as per the published Plan, subject to revisions in delivery dates as detailed in Chapter 3 of this Final Report.

In general, most of the remaining actions in the Plan will be delivered in Cycle 2, subject to funding. Where specific measures are required to address a delay and ensure an action is completed then this is described against the relevant action. In addition, where remaining actions have not been delivered, planned contingencies have been considered, which are described against the relevant action.

## 2.6 Prioritisation of Actions for Next Plan Cycle

Any actions that were not put forward for inclusion in the next Tay Local Flood Risk Management Plan by December 2019 have been deferred for consideration until Cycle 3 (2028-2034). The background to this is explained below.

Many actions contained in the current Plan involve undertaking investigations (e.g., flood studies) to assess the need for further action to manage flood risk. If further action is found to be required, then it may be implemented in a future Local Flood Risk Management Plan. For example, a flood protection study may recommend that a community flood action group is set up to increase resilience to flooding, or that flood defences are constructed. The community flood action group or flood defences may be implemented as part of the next Local Flood Risk Management Plan covering the period between 2022-2028.

However, for any new actions to be considered and included in the next Local Flood Risk Management Plan (from 2022-2028), the responsible authorities had to fully detail and submit them for consideration as actions. The deadline date for the submission of such actions to SEPA was set as December 2019. Any actions submitted have been assessed and prioritised against the FRM objectives and were consulted upon ahead of the publication of the second cycle of Flood Risk Management Plans in December 2021 and Local Flood Risk Management Plans in December 2022. Any actions that missed the December 2019 deadline have been deferred for consideration until the third cycle of Plans covering the period from 2028-2034.

## 2.7 Next Steps

This Final Report on the Plan will be published by 31 December 2022 and marks the completion of Cycle 1 (2016-2022) and the commencement of Cycle 2 (2022-2028) of the on-going flood risk management planning process.

The Tay Flood Risk Management Plan has been updated for Cycle 2 and was published by SEPA in December 2021 and can be accessed at:

[www2.sepa.org.uk/frmplans/documents/lpd8-tay-frmp-2021.pdf](http://www2.sepa.org.uk/frmplans/documents/lpd8-tay-frmp-2021.pdf)

The Cycle 2 Tay Local Flood Risk Management Plan is scheduled to be published by 31 December 2022.

In the meantime, to find out more about how flood risk is being managed please refer to your local responsible authority's website:

[Angus Council Website - Flooding](#)

[Fife Council - Flooding](#)

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[Perth & Kinross Council - Flooding](#)

[Stirling Council - Flooding](#)

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[Cairngorms National Park Authority](#)

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## 2.8 Conclusions

This report sets out an assessment of progress made towards implementing the actions set out in the published Tay Local Flood Risk Management Plan. The report also sets out a summary of any actions that have not been implemented, with reasons for their non-implementation, and a description of other actions implemented since the Plan was published.

The introduction of the Flood Act has initially led to improved partnership working and data sharing between SEPA and the responsible authorities. However, this has been affected by the Covid-19 pandemic and the cyber-attack on SEPA.

The published Tay Local FRM plan has remained current and relevant. Since its publication in June 2016, in general good progress had been made over the first 4 years of the first cycle, despite a relatively slow start. Progress on the initial actions was delayed by the response required to Storms Frank and Desmond, the staff resources required to complete investigations into flood schemes (in Comrie, Bankfoot and Coupar Angus) and the procurement of sufficient consultancy services initially also proved problematic. However, with relatively few flood events between early 2016 and 2019, more steady progress was made in delivering the selected actions. However, this changed in March 2020 with the start of the national Covid-19 lockdowns, and the severe flooding of August 2020 further exacerbated this situation.

All of the identified flood studies are complete or are currently on-going, with only two to be commenced. The progress on the larger and more complex flood protection schemes has been further delayed. However, a large flood protection scheme in Almondbank was substantially completed in 2018 and the construction of a major flood scheme in Comrie has commenced.

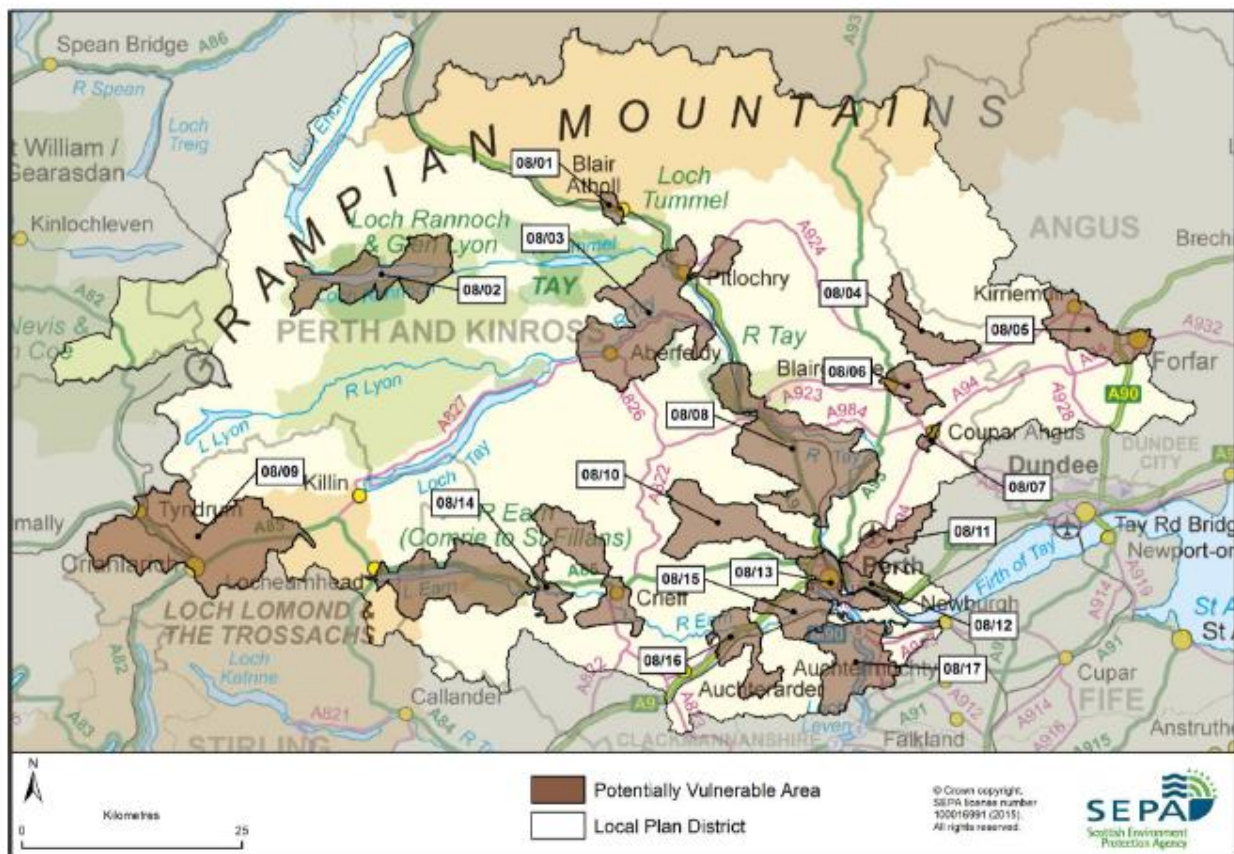
The delivery of the actions set out in the Cycle 1 Plan has reduced flood risk and informed future actions that will reduce flood risk in subsequent cycles.

It should be noted that the responsible authorities involved in delivering the actions for the Tay LPD are also involved in delivering actions in other local plan districts and their resources have been split accordingly.

## Chapter 3 - Assessment of Progress of Actions

This section sets out an assessment of the progress made towards implementing the actions set out in the Plan.

There are actions that apply across the whole of the Tay Local Plan District and actions that are specific to each of the 17 PVA's (as defined under Section 13 of the Act) within the Tay Local Plan District, which are shown below in Figure 1.



**Figure 1: The Tay Local Plan District with Potentially Vulnerable Areas**

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

The actions that apply across the Tay LPD are shown in Tables 1 and 2 while the actions that apply to individual PVAs are summarised in Table 3.

The summary of the assessment of progress is shown using the traffic light system, where each item is marked as Red, Amber or Green (RAG) and where:

- **GREEN** – Action has been completed.
- **AMBER** – Action has commenced but has not progressed as quickly as the planned delivery period in the Plan.
- **RED** – Action has not commenced.

### 3.1 Progress with General Actions to Manage Flood Risk Across the Tay LPD

This section sets out an assessment of the progress made towards implementing the actions that apply across the whole of the Tay Local Plan District over the six-year Plan. This assessment is presented in Table 1 below.

**Table 1: Summary of Progress for General Actions to Manage Flood Risk that Apply Across the Tay Local Plan District**

Action	RAG Status
Flood Forecasting	<b>G</b>
Self Help	<b>G</b>
Awareness Raising	<b>G</b>
Maintenance	<b>G</b>
Emergency Plans / Response	<b>G</b>
Planning Policies	<b>G</b>

These general actions are also set out in more detail in Table 2 below which provides further information including the RAG Status; who is responsible for the delivery and implementation of the actions; the progress made and the work to be undertaken to complete the action.

Table 2: Progress with General Actions to Manage Flood Risk that Apply Across the Tay Local Plan District

Action (ID)	RAG Status	Description	Delivery Lead	Progress Made	Planned Actions to Complete
<b>FLOOD FORECASTING</b> (80410009)	<b>G</b>	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The 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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>SELF HELP</b> (80410011)	<b>G</b>	Everyone is responsible for protecting themselves and their property from flooding. 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. 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 Initiative, and ensuring that properties and businesses are insured against flood damage.	-	Local authorities have engaged and supported their local communities to become more resilient to emergency situations, including flood events. Advice has been given on how to prepare for flooding, install property level protection and the Resilient Communities Initiative. In Perth & Kinross, communities have been engaged through the multi-agency Local Resilience Partnership Community and Business Resilience Group, led by the Council. The Council's Housing Service has taken action to protect 90 Council properties within Aberfeldy, Alyth, Kinross, Comrie and Perth. Further details are provided within the relevant areas of Section 3.2 of this report. The Council also provided a considerable amount of advice and assistance following the severe flood events of 11/12 August 2020 and 8 September 2022. Angus Council's Roads supervisors have been advised of the corporate message on flooding and the Council's Flood Team seek feedback from them following flood incidents to assess the impact of Council's message and actions. Stirling Council's Resilience team are able to work with communities to develop community resilience plans. If a resilience group exists, Stirling Council have committed to providing a flood pod as part of flood risk management, where materials can be stored and distributed. Stirling Council's flood team, in conjunction with the resilience team, host annual online information sessions on resilience groups. The Scottish Flood Forum provided support and advice to 5 communities (Bankfoot, Aberfeldy, Alyth, Blairgowrie and Comrie) to help people protect themselves and their property. This includes advice to	Local authorities will continue to support communities to become more resilient to flooding and to develop community resilience groups and emergency plans. Perth and Kinross Council's Housing Service will undertake a review of properties and areas that have experienced recent flooding to consider the installation of further property flood protection products. This will be supported by communications via the Council's social media platforms to raise awareness and let tenants know where they can find information. The Housing Service will support and encourage tenants to be prepared in advance of flooding.



				<p>residents on PLP assessments and advice on insurance and developing community resilience to prepare for flooding. The Forum continues to:</p> <ul style="list-style-type: none"> <li>• Promote FloodRE affordable insurance and the Build Back Better insurance initiative.</li> <li>• Support the Property Flood Resilience (PFR) Delivery Group that aims to mainstream PFR and help property owners take action to make their properties more resilient against the impacts of flooding.</li> <li>• Offer independent impartial advice on the Property Flood Resilience and promote the CIRA standards and code of practice on PFR. This includes the Forum’s PFR assessments to individuals, communities and agencies who request support.</li> </ul>	
<p><b>AWARENESS RAISING</b> (80410013)</p>	<p><b>G</b></p>	<p>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. From 2016 SEPA will undertake flood risk education and awareness raising activities. In addition, SEPA will engage with community resilience groups and participate in property level protection events delivered by the Scottish Flood Forum where possible.</p> <p>Across Scotland, SEPA will create and share communication and education resources with other responsible authorities. These resources will include awareness campaigns, media and marketing activity and promotion of SEPA's flood forecasting and warning services (Floodline). Where they exist, SEPA will engage with community resilience groups and community safety partnerships.</p> <p>Local authorities will be undertaking additional awareness raising activities when developing any specific project proposals and will engage with community resilience groups and local communities. As a responsible authority, Scottish Water will support SEPA and responsible authorities with 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 will be available on the website</p>	<p>Responsible authorities</p>	<p>SEPA continued to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships, and improving the flood warning and forecasting service. Many of SEPA's awareness raising activities will continue. The focus will be on promoting the flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Local Authorities have undertaken awareness raising activities around specific project proposals and have engaged with community resilience groups and local communities. Local authorities have also developed their websites and social media to provide more advice and information on flood risk management. Those local authorities affected by the flooding of August 2020 and September 2022 also provided a considerable amount of advice to raise awareness of flood risk in affected communities.</p> <p>Stirling Council use SEPA’s flood alerts to deliver targeted flood awareness information. The Council are developing an annual programme of attending local events to deliver awareness raising objectives. The Council also works with the Scottish Fire and Rescue Service to deliver joint flooding messages at annual fire station open days.</p> <p>Scottish Water support SEPA and responsible authorities with their awareness raising activities as required and provide targeted communications for Scottish Water sewer flooding programme activities. Scottish Water raise awareness by producing and supplying targeted information to the public on large capital projects and detailed local studies.</p> <p>Scottish Forestry (SF) continues to engage with responsible authorities to make sure that the contribution of woodlands and forestry is recognised when natural flood management measures are promoted. Interactions with the public are sought at</p>	<p>Local Authorities will continue with awareness raising activities when developing proposals for the remaining actions in the Tay Local Flood Risk Management Plan.</p> <p>Stirling Council will continue its efforts to increase the number of active local flood groups in the Stirling Council area, as well as ensuring existing groups are adequately supported to remain viable and active.</p> <p>Scottish Water are continuing to support SEPA and Local Authorities in their awareness raising activities. General awareness raising is carried out through the Scottish Water website and national advertising campaigns to increase public awareness of the implications of their actions on sewer flooding. For site specific capital projects and local studies, targeted public engagement is being carried out at a local level.</p> <p>Scottish Forestry will continue to:</p> <ol style="list-style-type: none"> <li>improve their regional knowledge on flood risk and the PVAs.</li> <li>identify opportunities for forestry projects across the country.</li> <li>engage with local communities through the revision of Land Management Plans.</li> </ol>

		<p>at <a href="https://www.scottishwater.co.uk/you-and-your-home/your-home/flooding-information">https://www.scottishwater.co.uk/you-and-your-home/your-home/flooding-information</a>.</p>		<p>public National events (for example the Royal Highland Show) and regional/local events (for example the Turiff Show) to highlight the role that trees, and woodland have in contributing to managing flood risk. This includes working with facilitators (from the charitable sectors and businesses) to help partnership initiatives that aim to improve public resilience to flood risk and to make sure that the communities have access to information and help/support. SF continue to work on partnership initiatives to spatially identify where woodland can be planted and managed - these include the local communities. Forest Enterprise Scotland (the agency of Forestry and Land Scotland Scotland) engages with communities, NGOs and statutory stakeholders on the revision of Land Management Plans. Flooding is part of these catchment-focused discussions where SF's planners raise awareness of the benefits that trees and forestry can bring to flooding and the associated reduction of peak flows through: -</p> <ol style="list-style-type: none"> <li>1) Evaporation of rainfall from canopy and.</li> <li>2) Transpiration of heavy rain into the forest soils and geology.</li> </ol> <p>Following the August 2020 flooding, the Scottish Flood Forum has raised awareness within four affected communities (Perth, Dunning, Kinross and Alyth) by answering 86 individual queries and arranging 5 mobile surgeries. The Forum continues to support awareness raising activities to increase understanding of flood risk and flood risk management actions with communities and agencies. The Forum continues to engage flood risk communities and partners through their community newsletter and peer to peer networking events to build links and share experience on key flood risk management issues.</p>	
<p><b>MAINTENANCE</b> (80410007)</p>	<p><b>G</b></p>	<p>Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules of clearance and repair works and make these available for public inspection. Scottish Water will 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. Section 18 and 59 of the Flood Risk Management (Scotland) Act 2009 place duties of watercourse assessment, clearance and repair on local authorities. In addition, local authorities may also be responsible for maintenance of existing flood protection schemes or defences.</p>	<p>Local Authority, asset / land managers</p>	<p>Local authorities have continued to inspect and assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. This has included producing schedules of clearance and repair works and making these available for public inspection.</p> <p>In Perth &amp; Kinross, the Council's routine watercourse inspections are carried out either annually, six monthly or quarterly, depending on the flood risk associated with each watercourse. Further reactive inspections have been carried out when issues have been highlighted or during times of flooding. Where a flood risk is identified, and clearance and repair works would substantially reduce that flood risk, then those works are included on the Council's clearance and repair schedule and carried out.</p> <p>Significant examples of clearance and repair works are noted within various PVAs in this report. Culvert</p>	<p>Local authorities will continue to inspect and assess watercourses and carry out clearance and repair works where this would substantially reduce flood risk. Reactive maintenance will also continue to be undertaken where issues are identified.</p> <p>Perth &amp; Kinross Council will also continue to maintain the formal flood schemes within its area, as per the existing inspection and maintenance regime. Road gullies will continue to be monitored and cleared as per the gulley monitoring programme.</p> <p>Stirling Council will continue to inspect watercourses to identify flood risks and to carry out the regular inspection and clearance regime of identified sensitive assets which has resulted in a reduction in localised and repeat flooding incidents. Budgets have however been reduced</p>

				<p>replacement works were also carried out at Westhaugh of Dalshian, Pitlochry in 2016. A significant amount of emergency clearance works (on the Craigie Burn, Alyth Burn and the Dunning Burn) were carried out following the August 2020 flood. Emergency works were also carried out to make safe a collapsed retaining wall on the Deich Burn in Bridge of Earn.</p> <p>The Council has also continued to inspect and maintain existing flood protection schemes.</p> <p>Perth &amp; Kinross Council also operates a monitoring programme for the inspection and maintenance of road gullies. Each gulley is inspected, and cleared if required, once per year. The monitoring programme identifies gullies that are more at risk from blockage so that they can be checked more frequently. It also enables the Council to reduce the frequency of inspections where gullies are found to require less frequent maintenance. Through this monitoring, the Council is developing a more strategic and sustainable approach to gully maintenance. The public can also contact the Council to highlight issues with any road gullies.</p> <p>In Angus, the Council's maintenance contract is let and managed on yearly basis. Reactive maintenance is also undertaken where issues are identified.</p> <p>Stirling Council has a successful watercourse inspection regime in place which identifies risks. Where the problems reside in private property the Council notifies landowners of their riparian responsibilities. A letter will be sent to landowners to inform them of the need to undertake works, as well as the grading and risk of identified obstructions within the watercourse. If the flood risk will affect any roads, an enforcement letter can be issued under the Roads (Scotland) Act 1984.</p> <p>The Council also has a maintenance regime in place where key hot spot locations of assets such as grilles/inlets have been identified and are inspected at a regular frequency. This work is carried out by contractors and managed by the Council's flooding team. Any additional works identified are added to a schedule of works and prioritised based on risk and the available budget.</p> <p>Scottish Water have carried out risk-based inspection, maintenance and repair on the public sewer network.</p>	<p>therefore the volume of clearance and repair works have reduced. Maintenance will continue to be carried out on a risk-based approach and cyclic maintenance scheduled on assets at time intervals based on risk posed/known sites of interest or known issues. There is an annual consideration and refinement in maintenance schedules. The Council will continue to seek methods of continuing a sustainable level of maintenance activities through resilience groups and a risk-based approach to asset management. Scottish Water will continue to carry out risk-based inspection, maintenance and repair on the public sewer network</p>
<p><b>EMERGENCY PLANS / RESPONSE</b> (80410014)</p>	<p><b>G</b></p>	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is coordinated through regional</p>	<p>Category 1 and 2 Responders</p>	<p>Local authorities have developed emergency plans. Perth &amp; Kinross Council further developed its Flooding Emergency Response Plan to take more account of the areas at highest risk of flooding and the severe flooding of August 2020. The Plan is designed to ensure that contingency measures are in place for a coordinated and flexible response to flooding incidents to mitigate the effects of flooding emergencies on people, property</p>	<p>Local authorities will continue to review, develop and implement their emergency plans. Where no incidents have occurred in Perth &amp; Kinross within a 12-month period a tabletop exercise will be conducted to test the response plan. This exercise may include consideration of flooding incidents, severe weather, widespread flooding, storm events, etc.</p>



		<p>and local resilience partnerships. This response may be supported by the work of voluntary organisations. 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.</p> <p>Scottish Water is a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required.</p>		<p>and infrastructure. During recent flood events, the Council's Housing service has worked with Tayside Contracts to provide sandbags to tenants and residents within housing localities and provided wellbeing checks and support for tenants who have been at risk or affected by flooding. The Council's Housing Repairs Centre set up flooding FAQ's and is able to advise and support tenants calling at the time of flood events. Angus Council has developed emergency plans that take account of new information received and the plans are constantly under review. Angus Council continue to support resilience partnerships whenever requested to do so.</p> <p>Over and above civil contingencies planning, in June 2017 Stirling Council established a formal Flood Partnership Group between the Scottish Fire &amp; Rescue Service, the Scottish Flood Forum, SEPA, Emergency Planning Officers and the flooding teams from each Local Authority and Scottish Water. There is potential to expand the working group to include other agencies or the voluntary sector. The group continued to operate until March 2021 but ceased during the covid pandemic.</p> <p>Fife Council's updated Flood Emergency Plan was published in November 2016 and will be updated again in 2023-24.</p> <p>As a Category 2 Responder, Scottish Water has continued to support regional and local resilience partnerships as required.</p> <p>The SFF continue to offer bespoke flood recovery services to agencies and communities impacted by flooding.</p>	<p>Angus Council will continue to review emergency plans to ensure that they are relevant and fit for purpose. They will also continue to provide support to resilience partnerships.</p> <p>Stirling Council will re-engage with a partnership working model and embed communications links between key group stakeholders and also to expand group membership to other potential partners (e.g., volunteer sector, TCV, etc)</p> <p>Fife Council's Flood Emergency Plan is due to be updated in the 2023/34 financial year.</p> <p>As a Category 2 Responder, Scottish Water will continue to support regional and local resilience partnerships as required.</p>
<p><b>PLANNING POLICIES</b> (80010001)</p>	<p><b>G</b></p>	<p>The Scottish Planning Policy (SPP) 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 SPP 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 generally be avoided.</p> <p>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 Flood Risk Management (Scotland) Act 2009. SEPA also has a duty to co-operate with planning authorities in the preparation of development plans.</p>	<p>Planning authority</p>	<p>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.</p> <p>The current Perth &amp; Kinross Local Development Plan (LDP2) contains planning policy and development</p>	<p>For Perth &amp; Kinross Council, key milestones in the LDP3 review will be the policy and place discussions which will take place during 2023/24, culminating in the preparation of an Evidence Report in 2024, whilst preparation of the Proposed Plan is programmed for 2024/25. To inform this process, the Council is undertaking a Strategic Environmental Assessment (SEA) and will prepare an Environmental Report to identify, describe and evaluate the likely significant effects on the environment. The SEA includes the consideration of flood risk in site assessment and policy work and will involve engagement with SEPA and the Council's flooding team.</p> <p>Angus Council's Flood Team will continue to provide the current level of support to Planning colleagues.</p> <p>Stirling Council will continue to work closely with both planning authorities in the development and implementation of local development plans, to</p>



	<p>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 <a href="http://www.sepa.org.uk/environment/land/planning/">http://www.sepa.org.uk/environment/land/planning/</a>. Current national planning policies, the Scottish Planning Policy and accompanying Planning Advice notes restrict development within the floodplain and limit exposure of new receptors to flood risk. Planning authorities are responsible for implementing this policy guidance when preparing Local Development Plans and when considering individual planning applications. In addition to national policies, local planning policies may place further requirements within their area of operation to restrict inappropriate development and prevent unacceptable risk. Scottish Water is a statutory consultee within the planning legislation. They provide advice to planning authorities during the preparation of Local Development Plans and are required to comment on all outline or full planning applications which are referred by a planning authority.</p>	<p>allocations which ensure that new development at medium to high risk of flooding is avoided (unless flood protection measures to the appropriate standard (1:200 years) already exist and are maintained, are under construction, or are a planned measure in a current flood risk management plan). SEPA and Perth &amp; Kinross Council's flooding team input to the planning application process as necessary to implement flood risk policy and ensure there is an appropriate assessment and mitigation of flood risk as detailed development proposals come forward. The Council's flooding team has reviewed approximately 1,300 planning applications since the start of the 2019/20 financial year as a consultee in the planning process. The Council's flooding team has also provided additional advice on flood risk management to the Planning Authority out with these formal consultations. Perth &amp; Kinross Council has started a review of LDP2 (which was adopted in November 2019) to produce LDP3. The initial work on the LDP3 review has been centred on data gathering and settlement audit work. However, the work carried out since the adoption of LDP2 has largely been focussed on preparing, consulting on, revising and adopting the Flood Risk and Flood Risk Assessment Supplementary Guidance, which was adopted in March 2021, and responding to Scottish Government consultations on the draft National Planning Framework 4 (NPF4), and Local Development Planning regulations. The main updates to the Flood Risk and Flood Risk Assessment Supplementary Guidance related to climate change; and the requirements for sustainable urban drainage systems (SuDS) and the ongoing maintenance responsibilities, including information on potential maintenance agreements with Scottish Water under Section 7 of the Sewerage (Scotland) Act.</p> <p>Angus Council's Flood Team provide responses to all Planning Applications where there is potential for flood risk or surface water management systems to ensure that Scottish Planning Policy and suitable design criteria are met.</p> <p>Within Stirling Council, flood risk information, including the local flood risk management plan, feed into the local development plan. Planning authorities are kept informed of new developments internally through flooding teams and through attendance of local advisory group meetings.</p> <p>Loch Lomond &amp; Trossachs National Park have a number of flooding policies in their local development plan which are used by development management during the assessment of planning applications. Their</p>	<p>incorporate the latest flood risk management objectives into the process from the outset. Once approved, any policies from the Fourth National Planning Framework (NPF4) will be incorporated also. The next planned publication date for LDP is currently estimated to be mid-2025 at the earliest.</p>
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			<p>usage is being monitored as part of the monitoring of the Local Development Plan.</p> <p>Fife Council's Planning Policy has been amended in the Strategic Plan to ensure that flooding is considered at the outset in line with current SPP. A Planning Policy is in place to ensure a flood risk assessment, SuDs details and any other relevant information is provided with the submission of a Planning Application; otherwise, the application is returned as incomplete. Fife's Flooding Team are providing direct input to the creation of LDP2, focussing on the avoidance principle first, before allocation of land is undertaken.</p>	
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### 3.2 Progress with Specific Actions to Manage Flood Risk Within PVAs

This section sets out an assessment of the progress towards implementing actions that are specific to each of the 17 PVAs shown in Table 3. Assessments of the progress of actions within each PVA are presented.

**Table 3: Summary of Progress of Specific Actions to Manage Flood Risk Within PVA's During 2016-2022**

PVA	Location	Flood protection scheme/ works	Flood protection study	Maintain flood protection scheme*	Natural flood management study	Natural flood management works	Strategic mapping and modelling	New flood warning	Maintain flood warning*	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/ response	Planning policies
08/01	Blair Atholl			N/A			G		N/A	G	G	G	G			G		G	G
08/02	Kinloch Rannoch			N/A					N/A	G		G	G			G		G	G
08/03	Aberfeldy & Pitlochry		G	G			AG		G	G	G	G	G			G		G	G
08/04	Alyth			N/A	A		AG		N/A	G		G	G			G		G	G
08/05	Kirriemuir & Forfar		G	G			AG		N/A	G		G	G		G	G		G	G
08/06	Blairgowrie			N/A			G		G	G		G	G		A	G		G	G
08/07	Coupar Angus			N/A			G		N/A	G		G	G			G		G	G
08/08	Luncarty, Stanley, Bankfoot, Dunkeld & Birnam		A	N/A			AG		G	G		G	G			G		G	G
08/09	Tyndrum & Crianlarich			N/A			R		N/A	G		G	G			G		G	G
08/10	Almondbank	G		G			AG		G	G		G	G			G		G	G
08/11	Scone	R	R	N/A			G		N/A	G		G	G		R	G		G	G
08/12	Perth to Kinfauns (north of A90)	A		G			G		G	G		G	G		AG	G		G	G
08/13	Perth Centre		A	G			AG		G	G	G	G	G		AG	G		G	G
08/14	Comrie	A		G			AG		G	G	G	G	G			G		G	G
08/15	Forteviot			N/A			AA		G	G		G	G			G		G	G
08/16	Dunning			N/A			AG		G	G		G	G			G		G	G
08/17	Bridge of Earn			G			AG		G	G	G	G	G			G		G	G

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


There are no specific actions identified for 'property level protection scheme' and 'site protection plans' actions. Consideration of property level protection schemes will be included in the 'flood protection study', 'surface water plan/study' and/or 'emergency

plans/response' actions. Site protection plans will be identified through these same 'study' actions and also 'planning policies' action.

## 3.2.1 Blair Atholl PVA 08/01

Local Plan District	Local Authority	Main Catchment
Tay	Perth & Kinross Council	River Garry (River Tay)

## Summary of Progress Within PVA

	<p>There are fewer than 10 residential properties and non-residential properties at risk of flooding in the Blair Atholl PVA. The Annual Average Damages are approximately £14,000. Further information can be found in the <a href="#">Tay Local FRM Plan</a> under PVA 08/01.</p> <p>This PVA has been exposed to recent significant weather events including Storms Desmond and Frank in December 2015 and January 2016, which resulted in flooding in the Tay and Garry catchments. There have been no significant flooding events since.</p> <p>Key progress has been made through engagement with the community council which has established a community resilience group, developed a resilience plan and installed a RiverTrack Community Flood Alerting System.</p> <p>SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.</p> <p>Whilst there is no specific action within this PVA for a flood protection study, the Blair Atholl Estate commissioned a consultant to investigate the potential for any flood works to reduce risk to properties on its land at Garryside, however no cost-effective options were identified.</p>
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## Selected Actions in the Blair Atholl PVA 08/01

PVA	Flood protection scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management study	Natural flood management works	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/01						<b>G</b>			<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>			<b>G</b>		<b>G</b>	<b>G</b>

## Summary of Progress of Actions to Manage Flood Risk in Blair Atholl (PVA 08/01)

Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Strategic Mapping and Modelling (80410016)	<b>G</b>	SEPA will seek to develop flood mapping in the River Garry area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016-2017	This action is complete. Updated river flood hazard mapping was published on the SEPA web site in 2020.	This action is complete.
Flood Forecasting (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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	The Scottish Flood Forecast 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.

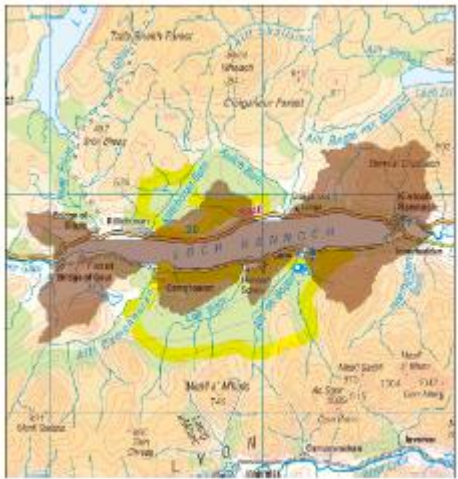
					developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding.	The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Community Flood Action Groups</b> (80020012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups. Blair Atholl Community Council operates in this area. The community council is currently in the process of developing a community resilience plan which includes plans to mitigate the impact of flooding.	Community	Ongoing	Blair Atholl and Struan Community Resilience Group is established in this area and their resilience plan has been tested. This group forms part of the A9 Resilience Plan. The Scottish Flood Forum, with support from SSEN, Perth & Kinross Council and SEPA, supported the Community Resilience Group and Blair Atholl Estates to install a RiverTrack Community Flood Alerting System.	Perth & Kinross Council will continue to coordinate with Blair Atholl and Struan Community Council on a priority needs basis where resources allow. The Scottish Flood Forum will carry out further engagement as required.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible Authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made in the Blair Atholl PVA. Perth & Kinross Council held a de-briefing with the Blair Atholl Community Resilience Group following the flooding experienced in December 2015. The local landowner (Blair Atholl Estate) has explored potential ways of managing flood risk to their properties. They undertook a high level flood options study and were advised by Perth & Kinross Council during this process. 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.	Further to the planned awareness raising activities described in Table 2 of this report, the responsible authorities will continue with awareness raising activities when developing any proposals for the remaining actions set out in the Tay Local Flood Risk Management Plan.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans / Response</b>	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



(80410014)						
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a>	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.2 Kinloch Rannoch PVA 08/02

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	Loch Rannoch (River Tay)

Summary of Progress Within PVA	
	<p>There are approximately 30 residential properties and 20 non-residential properties at risk of flooding in the Kinloch Rannoch PVA. The Annual Average Damages are approximately £94,000. Further information can be found in the <a href="#">Tay Local FRM Plan</a> under PVA 08/02.</p> <p>There have been no significant weather events in this PVA since the publication of the Tay Local FRM Plan.</p> <p>The Scottish Flood Forum has been involved in supporting the community to become more resilient to the effects of flooding. The responsible authorities will continue with awareness raising activities when developing any proposals for the remaining actions set out in the Tay Local FRM Plan.</p>
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Selected Actions in the Kinloch Rannoch PVA 08/02																		
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/02									G		G	G			G		G	G


Summary of Progress of Actions to Manage Flood Risk in the Kinloch Rannoch PVA						
Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood forecasting (80410009)	G	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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.	The Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges



					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.	associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the Awareness Raising actions described in Table 2 of this report, some additional progress has been made in the Kinloch Rannoch PVA. 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.	Further to the planned awareness raising activities described in Table 2 of this report, the responsible authorities will continue with awareness raising activities when developing any proposals for the remaining actions set out in the Tay Local Flood Risk Management Plan.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	Further to the Self-Help actions described in Table 2 of this report, some additional progress has been made in the Kinloch Rannoch PVA. The Scottish Flood Forum's (SFF) community engagement within this PVA has included PLP exhibitions, selection, surveys and providing appropriate and relevant information to enable clients to make the right decisions. The SFF has also provided ongoing community PLP training, training for Flood Wardens and resilience group promotion.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans / Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.3 Aberfeldy and Pitlochry PVA 08/03

Local Plan District	Local Authority	Main Catchment
Tay	Perth & Kinross Council	River Tay

Summary of Progress Within PVA	
	<p>There are approximately 240 residential properties and 130 non-residential properties at risk of flooding in the Aberfeldy and Pitlochry PVA. The Annual Average Damages are approximately £1.2 million. Further information can be found in the <a href="#">Tay Local FRM Plan</a> under PVA 08/03.</p> <p>This PVA has been exposed to recent significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016, which resulted in flooding in the Tay and Tummel catchments. Surface Water flooding was experienced at various locations in Aberfeldy in January 2018, August 2019 and February 2020 (Storm Dennis).</p> <p>Key progress has been made with the two identified Flood Protection Studies within this PVA. The Pitlochry flood study was completed in October 2018. The Aberfeldy Flood Study was completed in October 2019. The Aberfeldy Flood Study also informed a related action - maintenance of the existing Weem Flood Protection Scheme (ID 80060017) - by reviewing the condition and standard of flood protection offered by the scheme.</p> <p>There have been no significant changes affecting progress, but it is worth noting that there may be future catchment changes due to the A9 Dualling project.</p> <p>SEPA have also made progress on strategic mapping and modelling to improve the existing flood maps for the Pitlochry area. Scottish Water have completed sewer flooding assessments in Pitlochry and Aberfeldy.</p>
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Selected Actions in the Aberfeldy and Pitlochry PVA 08/03																		
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/03		G	G			A G		G	G	G	G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in the Aberfeldy and Pitlochry PVA						
Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Study (80040005)	G	A flood protection study has been recommended for Pitlochry to assess whether flood storage, sediment management, modification of conveyance and installation/ modification of fluvial control structures could reduce flood risk. The study should also consider property relocation. The study should build on the previous study carried out by Perth & Kinross Council in 2007 and consider flooding from small watercourses as	Perth & Kinross Council	2016 – 2018	The Pitlochry flood study was completed in October 2018 and recommended a flood scheme involving a collection of actions to reduce flood risk in the area. The proposed scheme would protect a total of 104 properties, providing a 1 in 200-year standard of flood protection, including a further allowance for future climate change. The study findings were disseminated via local community drop-in sessions held on 20 & 27 February 2019.	This action is complete. The delivery of the recommended flood scheme is subject to prioritisation and inclusion in the next Tay Local FRM Plan and funding being made available. The scheme may then proceed to outline design, the statutory process required by the Flood Act, detailed design, procurement and construction.

		well as the main river. The study should take a catchment approach and consider the potential benefits and dis-benefits and interaction between actions upstream and downstream.			The Scottish Flood Forum supported the Council's consultation events for the flood study.	
<b>Flood Protection Study</b> (80050005)	<b>G</b>	A flood protection study has been recommended for Aberfeldy to assess whether installation/modification of fluvial control structures, direct flood defences and sediment management could reduce flood risk. The study should take a catchment approach and consider the potential benefits and dis-benefits and interaction between actions upstream and downstream.	Perth & Kinross Council	2017 – 2019	The Aberfeldy flood study was completed in October 2019 and recommended a flood scheme involving new flood defences on the River Tay, the Moness Burn and culvert improvements on the Tomchulan Burn. The proposed scheme would protect a total of 164 properties, providing a 1 in 200-year standard of flood protection. The study findings were disseminated to the local community via drop-in sessions on 20 and 25 June 2019.	This action is complete. The delivery of the recommended flood scheme is subject to prioritisation and inclusion in the next Tay Local FRM Plan and funding being made available. The scheme may then proceed to outline design, the statutory process required by the Flood Act, detailed design, procurement and construction.
<b>Maintain Flood Protection Scheme</b> (80060017)	<b>G</b>	Continue to maintain the existing Weem Flood Protection Scheme. The scheme was completed in 2006 and includes a flood embankment and pumping station. The scheme has a design standard of protection of 1 in 100 years.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing Weem Flood Protection Scheme. Maintenance works are carried out as required. Recent works include maintenance and repairs to the pumping station, clearance of the non-return valve and vegetation management. The Weem Flood Protection Scheme was also re-assessed as part of the Aberfeldy Flood Study (Action ID 80050005). This included a condition assessment and a review of the standard of protection provided by the existing flood scheme.	Routine inspections will continue to be carried out as part of the Council's statutory duties. Inspections will be undertaken on an annual basis and following flood events. The maintenance works recommended by the Aberfeldy flood study will be carried out, subject to funding.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the River Tummel and River Tay areas to improve understanding of flood risk. The extent and timing of improvements will depend on details scoping and data availability. Where this work coincides with local authority studies, SEPA will work collaboratively to ensure consistent modelling approaches are applied.	SEPA	2016 – 2017	Action partially complete. Updated river flood hazard mapping for Pitlochry was published on the SEPA web site in November 2020.	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will undertake further investigation and modelling in the Aberfeldy and Pitlochry sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Aberfeldy 2016 – 2017  Pitlochry 2016 – 2019	The Scottish Water assessment of flood risk within the Aberfeldy sewer catchment was delivered in January 2020  The Scottish Water assessment of flood risk within the Pitlochry sewer catchment was delivered in August 2018.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Aberfeldy, Ballinluig to Logierait, Logierait to Victoria Bridge, Pitlochry to Ballinluig, River Tummel in Pitlochry and the Upper Tay (from Taymouth Castle to Logierait) flood warning areas which are part of the Tay river flood warning scheme.  When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.



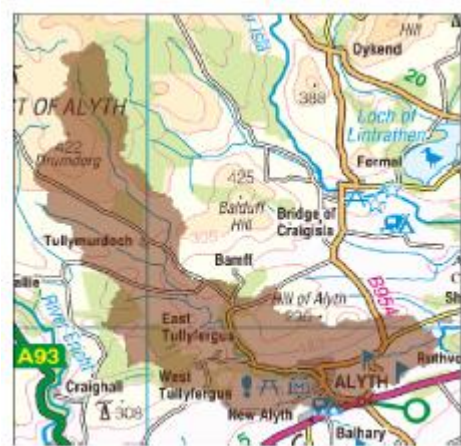
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and 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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Community Flood Action Groups</b> (80040012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups. Pitlochry Resilience Group operates in this area. The group is in the process of developing a community resilience plan which includes mitigating the impact of flooding.	Community	Ongoing	The Pitlochry and Moulin Community Resilience Group is established in this area. This group forms part of the A9 Resilience Plan. The Community Council is in the process of developing a community resilience plan which includes mitigating the impact of flooding. The Scottish Flood Forum has supported the establishment of the Pitlochry Flood Group. At present the Group is currently inactive.	Perth & Kinross Council will continue to coordinate with Pitlochry and Moulin Community Resilience Group on a priority needs basis where resources allow. The Scottish Flood Forum will engage further with the Pitlochry Flood Group to re-start the Group and help develop a community flood plan.
<b>Community Flood Action Groups</b> (80050012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups. Aberfeldy Resilience Group operates in this area. Membership of the group includes Perth & Kinross Council, SEPA, Tayside Fire and Rescue and the Scottish Flood Forum. The group aims to help reduce flooding to businesses and communities within the Aberfeldy area, improve joint working before, during and after flooding and increase community resilience.	Community	Ongoing	The Aberfeldy Resilience Group is established in this area. The Tayside Waders Group also operate within the Aberfeldy area, focussing on flood risk in the Tayside Place/Crescent areas. They have set up a store of flood resilience equipment (pumps, sandbags, etc) with support from the Scottish Flood Forum. Sandbags were donated to the group from the local distillery. The Scottish Flood Forum continue to support the Tayside Waders Flood Action Group who have a local community flood plan and resources to respond to flooding.	Perth & Kinross Council will continue to coordinate with the Aberfeldy Resilience Group and the Tayside Waders on a priority needs basis where resources allow. The Scottish Flood Forum will follow up on engagement with Hillcrest Housing Association, Perth & Kinross Council and Tayside Waders on property flood resilience. The Forum will engage further with the Tayside Waders to assess any further support required.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made in the Aberfeldy and Pitlochry PVA. Following flooding in December 2015/January 2016, Perth & Kinross Council held de-briefing sessions with the Aberfeldy Resilience Group, Tayside Waders and Pitlochry Resilience Group.	Further to the planned actions described in Table 2 of this report, Perth & Kinross Council will continue with awareness raising activities when developing proposals for the remaining actions in its local flood risk management plans.

					The findings from the Pitlochry flood study (Action ID 80040005) were disseminated to the local community in February 2019. The findings from the Aberfeldy flood study (Action ID 80050005) were disseminated to the community in June 2019. Working alongside other responsible authorities, SEPA carried out awareness raising activities in this location at the community drop-in sessions for the Pitlochry Flood Study in 2019. Some planned activities were impacted by the Covid-19 pandemic.	
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	Further to the self-help activities described in Table 2 of this report, some additional activity has been carried out in this PVA. The Council's Housing Service has fitted flood protection products to 28 Council properties within Aberfeldy (no Council properties are affected by flooding in Pitlochry). The Scottish Flood Forum carried out 10 property flood resilience assessments in Pitlochry; further engagement is required to evaluate the action taken.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset/ land managers	Ongoing	Further to the maintenance actions described in Table 2 of this report, some additional activity has been carried out in this PVA. Maintenance work has been carried out to the Weem Flood Protection Scheme as described above (Action ID 80060017).	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

## 3.2.4 Alyth PVA 08/04

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	Alyth Burn (River Tay)

## Summary of Progress within PVA



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There are approximately 50 residential properties and 20 non-residential properties at risk of flooding in the Alyth PVA. The Annual Average Damages are approximately £160,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/04.

This PVA has been exposed to several recent significant weather events including Storms Desmond and Frank in December 2015 and January 2016. Although this did not result in any significant flooding of properties, several roads and low-lying agricultural land were affected. This followed on from an extreme flood event in July 2015 which affected approximately 59 properties in Alyth. Following the 2015 flood event, emergency works were carried out by Perth & Kinross Council to remove debris from the burn and replace collapsed structures. Perth & Kinross Council, SEPA and SNH produced a joint investigation report, which was disseminated to the public, as well as holding various public events to improve awareness and promote resilience within the community. The Scottish Flood Forum also attended these events and has continued to support the community through advice to the community council and residents.

In August 2020 a slow-moving storm impacted eastern Scotland, resulting in flooding from the Alyth and Johnshill Burns. Approximately 18 properties were affected by flooding. The Council carried out works on the Alyth Burn (to remove sediment and other debris deposited following the flood event) and repaired two collapsed sections of culvert on the Johnshill Burn. The Doctors Burn also flooded in August 2020 and twice in October 2020 as a result of high-water levels breaching a damaged length of agricultural embankment; this was subsequently repaired by the landowner.

There have been no significant changes within the catchment during the first LPD cycle, and a natural flood management (NFM) study commenced in January 2022 and is on-going.

## Selected Actions in the Alyth PVA 08/04

	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
PVA 08/04					A	A			G		G	G			G		G	G

## Summary of Progress of Actions to Manage Flood Risk in Alyth (PVA 08/04)

Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Natural Flood Management Study (80070003)	A	A natural flood management study has been recommended for Alyth to assess whether river/floodplain restoration and sediment management could help reduce flood risk. The study should take a catchment approach and	Perth & Kinross Council	2020-2021	The Alyth natural flood management study commenced in January 2022 and is on-going. The contract was awarded to consulting engineers, AECOM Ltd.	Once available, the draft study findings will be disseminated via local community drop-in sessions. The NFM study is programmed for completion in 2023.



		consider the potential benefits and disbenefits and interaction between actions upstream and downstream				
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 900km <sup>2</sup> of improved surface water data is currently available within this Local Plan District.	SEPA	2016-2017	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer considered appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will undertake further investigation and modelling in the Alyth sewer catchment to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	2016-2018	The Scottish Water assessment of flood risk within the Alyth sewer catchment was completed in January 2020.	This action is complete.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made in the Alyth PVA. Following a severe flooding event in Alyth in July 2015, Perth & Kinross Council, SEPA and SNH produced a joint investigation report into the mechanisms of the event. This was made publicly available and disseminated to the local community. Newsletters were also produced providing updates to residents regarding emergency works being carried out, as well as available support and advice about improving resilience for future flooding events. Following further flooding in August 2020, the Council issued flood bulletins, responded to correspondence and held an online community meeting to raise awareness of flood risk. This	Further to the planned awareness raising activities described in Table 2 of this report, Perth & Kinross Council will undertake further awareness raising in conjunction with the Alyth Natural Flood Management Study (Action ID 80070003) which is programmed for completion in 2023.

					<p>included liaison with the Community Council, the Alyth Community Support Group and the Alyth Development Trust.</p> <p>The Scottish Flood Forum also engaged with the local community following the previous flood incident. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding.</p> <p>The Alyth (Town Hall) Community Resilience Group has developed a community emergency plan which is generic in nature and available to support other affected communities.</p> <p>Working alongside other responsible authorities, SEPA carried out awareness raising activities in this location, attending the post-flood online community event in October 2020. Some planned activities were impacted by the Covid-19 pandemic.</p>	
<b>Self-Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	<p>Further to the self-help actions described in Table 2 of this report, some additional progress has been made in the Alyth PVA.</p> <p>The Council's Housing Service has fitted flood protection products to 34 Council properties within Alyth.</p> <p>The Scottish Flood Forum (SFF) are supporting the development of Scotland's first Retained Flood Team in Alyth through training and learning opportunities and implementing the community flood plan.</p> <p>The SFF held property flood resilience (PFR) exhibitions and carried out 25 PFR assessments in Alyth to support individual and community responses to flooding.</p> <p>The SFF delivered the Alyth Community Flood Alerting System and are supporting its use with Alyth Retained Flood Team.</p> <p>Alyth Development Trust secured National Lottery funding to develop the Alyth Retained Flood Team. Seven people recruited and SFF supporting the development of a training and induction programme, review of community flood plan and integrating RiverTrack into response plans. A number of properties have PFR and this needs to be mapped better and linked to better community resources.</p>	Refer to planned actions described in Table 2 of this report. The Council's Housing Service are planning to fit flood protection products to a further 10 Council properties within Alyth. The Scottish Flood Forum are planning training sessions on natural flood management and an introduction to FRM in late 2022.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council,	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

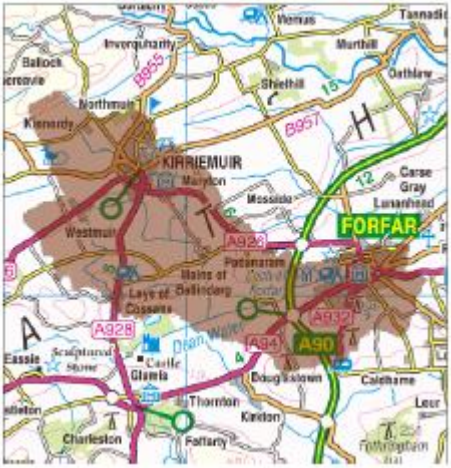


			asset / land managers		Following the August 2020 flooding, the Council carried out emergency clearance works on the Alyth Burn (to remove sediment and other debris deposited following the flood event) and repaired two collapsed sections of culvert on the Johnshill Burn.	
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/response actions have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning authority	Ongoing	No additional planning policies activities have been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.5 Kirriemuir & Forfar PVA 08/05

Local Plan District	Local authority	Main catchment
Tay	Angus Council	River Tay

Summary of Progress within PVA



There are approximately 150 residential properties and 80 non-residential properties at risk of flooding in the Kirriemuir and Forfar PVA. The Annual Average Damages are approximately £950,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/05. The PVA has been experienced significant weather events including Storms Desmond and Frank in December 2015 and January 2016, which resulted in flooding in the upper Tay catchment. Key progress has been made with the completion of a flood protection study for Kirriemuir and Forfar. SEPA have also made progress on strategic mapping and modelling undertaking a screening exercise to characterise the catchments of the Dean Water and Gairie Burn. This will be completed pending a review of how modelling and mapping updates are undertaken to develop a more effective method of regional and national updates.

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Selected Actions in Kirriemuir & Forfar PVA 08/05																		
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/05		G	G			A G			G		G	G		G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Kirriemuir and Forfar (PVA 08/05)						
Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Study (80110005)	G	Angus Council will undertake a flood protection study for Forfar to be delivered by financial year 2019/20. This will assess whether flood storage, modification of conveyance, direct flood defences, sediment management and natural flood management could reduce flood risk. The study will also consider the viability of property level protection and will include surface water investigations in partnership with Scottish Water. The study will take a catchment approach considering the interactions between both upstream and downstream.	Angus Council	2016 - 2020	The fluvial/NFM studies for Forfar were incorporated within the scope of Angus Council's Kirriemuir and Forfar Flood Protection Study. The study is complete.	This action is complete.


		Angus Council will coordinate the study with Scottish Water, SEPA and Landowners, etc.				
<b>Flood Protection Study</b> (80100005)	<b>G</b>	A flood protection study has been recommended for Kirriemuir to assess whether flood storage, sediment management, modification of conveyance, direct flood defences and natural flood management could reduce flood risk. Natural flood management options that should be considered include floodplain restoration and sediment management. The study should also consider the viability of property level protection and property relocation. The study will take a catchment approach considering the interactions between both upstream and downstream. Angus Council will coordinate the study with Scottish Water, SEPA and Landowners, etc.	Angus Council	2016 - 2020	The fluvial/NFM studies for Kirriemuir were incorporated within the scope of Angus Council's Kirriemuir and Forfar Flood Protection Study. The study is complete.	This action is complete.
<b>Maintain Flood Protection Scheme</b> (80100017)	<b>G</b>	The existing Kirriemuir Flood Prevention Scheme provides protection from the Gairie Burn. Angus Council will maintain the existing Flood Protection Scheme ensuring works are coordinated and infrastructure is fully assessed. This will be done by undertaking routine, reactive, programmed, regulatory and emergency response inspections. This work will be carried out by Angus Council engineers on a priority needs basis as resource allows. The general maintenance standard target is to conduct watercourse inspections annually and structural inspections biennially.	Angus Council	2016 - 2022	The existing Kirriemuir - Gairie Burn flood prevention scheme is inspected within Angus Council's watercourse inspection programme. Remedial work is identified and programmed with other identified priorities. Recent improvements have included the repair and reinstatement of a flood wall following inspection.	Angus Council will continue to inspect the Kirriemuir - Gairie Burn Flood Protection Scheme and prioritise its maintenance to ensure the maximum possible level of protection is maintained. Angus Council will continue to engage with J and D Wilkies on a regular basis as the main receptor of flooding to seek their views on the efficiency of the scheme.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the Dean Water and Gairie Burn areas to improve understanding of flood risk. 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	2017-2018	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling within the Kirriemuir & Forfar sewer catchments to improve knowledge and understanding of surface water flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Forfar 2016-2019  Kirriemuir 2016-2019	The Scottish Water assessment of flood risk within the Forfar sewer catchment was completed in January 2017.  The Scottish Water assessment of flood risk within the Kirriemuir sewer catchment was completed in June 2019.	This action is complete.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	2016 - 2022	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding.	The Scottish Flood Forecast 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.

					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. 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 surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	2016 - 2022	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made in the Kirriemuir and Forfar PVA. Angus Council held public consultations as part of the Kirriemuir and Forfar flood study. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	2016 - 2022	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Surface Water Plan/Study</b> (80080018)	<b>G</b>	Angus Council will prepare Surface Water Management Plans (SWMPs) to cover Forfar. This will identify the most sustainable measures to manage urban drainage and the risk of surface water flooding, as well as sources of flooding such as the sewer network, watercourses and sea. This will establish a long-term action plan for each area to manage surface water and influence future capital investment, drainage maintenance, land-use planning, emergency planning etc. Angus Council will co-ordinate this work with Scottish Water and SEPA through the Local Plan District partnership with delivery of the SWMP by 2019/2020.	Angus Council	Forfar 2016 - 2020  Kirriemuir 2016 - 2020	The Kirriemuir and Forfar Flood Protection Study – which incorporated this SWMP - is complete.	This action is complete.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Angus Council, asset / land managers	2016 - 2022	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 responders	2016 - 2022	No additional emergency plans/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning authority	2016 - 2022	No additional planning policy activities have been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



3.2.6 Blairgowrie PVA 08/06

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	River Ericht (River Tay)

Summary of Progress within PVA	
	<p>There are approximately 30 residential properties and 60 non-residential properties at risk of flooding in the Blairgowrie PVA. The Annual Average Damages are approximately £120,000. Further information can be found in <a href="#">Tay Local FRM Plan</a> under PVA 08/06.</p> <p>This PVA has been exposed to significant weather events including Storms Desmond and Frank in December 2015 and January 2016, although this did not result in any significant flooding of properties. However, more recent flooding occurred in August 2020 and in October 2021, resulting in flooding to a small number of properties.</p> <p>Scottish Water have delivered an assessment of flood risk within the Blairgowrie sewer catchment. SEPA has continued to operate a flood warning and flood forecasting service in this PVA.</p> <p>Perth &amp; Kinross Council has supported the Blairgowrie Community Resilience Group to develop its community emergency plan.</p> <p>There have been no significant changes within the catchment during the first LPD cycle. A Surface Water Management Plan (SWMP) commenced in October 2022 and is on-going.</p>
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Selected Actions in the Blairgowrie PVA 08/06																		
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/06						G		G	G		G	G		A	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Blairgowrie (PVA 08/06)						
Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
<b>Strategic Mapping and Modelling</b> (80410019)	G	Scottish Water will undertake further investigation and modelling in the Blairgowrie sewer catchment to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	2016-2018	The Scottish Water assessment of flood risk within the Blairgowrie sewer catchment was completed in July 2018.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	G	Continue to maintain the Blairgowrie to the River Isla flood warning area which is part of the Ericht river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.

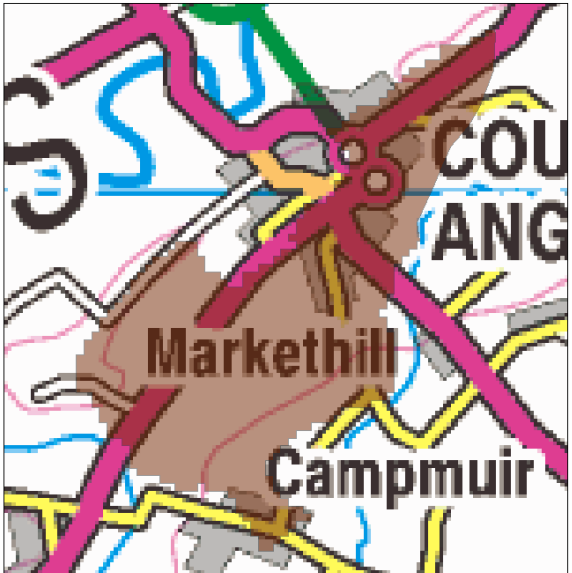
		use feedback and post-event data to ensure that our flood warning service is timely and accurate.				
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with 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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made in the Blairgowrie PVA. Blairgowrie Community Resilience Group has developed a community emergency plan which is generic in nature and is available to support other affected communities. Perth & Kinross Council issued community bulletins and answers to frequently asked questions following the flooding in August 2020 and October 2021 in order to provide advice and raise awareness of flooding in the local community. 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.	Further to the awareness raising described in Table 2 of this report, Perth & Kinross Council will carry out awareness raising activity as part of the Blairgowrie Surface Water Management Plan (Action ID 80120018) which commenced in October 2022.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Surface Water Plan/Study</b> (80120018)	<b>A</b>	The area must be covered by a surface water management plan or plans that set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives. Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data (as applicable) and, where available, outputs of Section 16 or integrated catchment studies, to assist with the surface water management planning process	Perth & Kinross Council	2020-2022	The Blairgowrie surface water management plan (SWMP) commenced in October 2022 and is ongoing. The contract was awarded to consulting engineers, RSK Environmental Ltd. Scottish Water have provided Section 16 outputs to support the SWMP.	Once available, the findings from the draft surface water management plan will be disseminated via local community drop-in sessions. The surface water management plan is programmed for completion in 2024.



<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning authority	Ongoing	No additional planning policies activities have been carried out in this PVA, beyond those described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.7 Coupar Angus PVA 08/07

Local Plan District	Local Authority	Main River Catchment
Tay	Perth & Kinross Council	Coupar Burn (River Tay)

Summary of Progress within PVA	
	<p>There are approximately 10 residential properties and fewer than 10 non-residential properties at risk of flooding in the Coupar Angus PVA. The Annual Average Damages are approximately £26,000. Further information can be found in <a href="#">Tay Local FRM Plan</a> under PVA 08/07.</p> <p>The PVA was exposed to significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016 respectively, with several roads affected in the Coupar Angus area. The 'Beast from the East' (March 2018) brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt.</p> <p>Flood hazard mapping improvements have been made in this area by SEPA. Scottish Water has delivered an assessment of flood risk within the Coupar Angus sewer catchment.</p> <p>SEPA, Perth &amp; Kinross Council and the Scottish Flood Forum have engaged with the community in this PVA. The Coupar Angus Community Resilience Group had previously developed a community emergency plan, but the Group is currently understood to be inactive.</p>
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Selected Actions in the Coupar Angus PVA 08/07																		
	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
PVA 08/07						G			G		G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in Coupar Angus (PVA 08/07)						
Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Strategic Mapping and Modelling (80410016)	G	SEPA will seek to develop flood mapping in the Burrelton Burn area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016	Following a screening exercise to characterise the catchment, no changes to the existing flood mapping were deemed necessary for the Burrelton Burn. Within the wider PVA, improvements to the river hazard mapping for the Coupar, Kettins and Kinnochtry Burns were undertaken in 2015 with the inclusion of a local authority study.	This action is complete.
Strategic Mapping and Modelling (80410019)	G	Scottish Water will undertake further investigation and modelling in the Coupar Angus sewer catchments to improve knowledge and understanding of flood risk in this area as required	Scottish Water	2016 - 2022	The Scottish Water assessment of flood risk within the Coupar Angus sewer catchment was completed in July 2018.	This action is complete.

		under Section 16 of the Flood Risk Management (Scotland) Act 2009				
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within the Coupar Angus PVA. Community drop-in sessions were arranged in Coupar Angus in September 2016 following the completion of a flood scheme feasibility study. These events were attended by the Council, SEPA and the Scottish Flood Forum. These sessions highlighted to the community that a flood scheme was not economically viable and how on-going flood risk would be managed (via the other actions identified in the Tay Local Flood Risk Management Plan). This activity was coordinated with the Coupar Angus Community Resilience Group. The Scottish Flood Forum (SFF) also engaged with the local community following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding. 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.	Refer to the planned actions described in Table 2 of this report
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	Further to the emergency plans/response actions described in Table 2 of this report, some additional progress has been made within the Coupar Angus PVA.	Refer to planned actions described in Table 2 of this report. The Scottish Flood Forum has identified Coupar Angus as a potential site for a

					The Scottish Flood Forum's (SFF) community engagement within this PVA has previously included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion. The Coupar Angus Community Resilience Group is currently inactive. The Group had previously developed a community emergency plan which was generic in nature and was available to support other affected communities.	community flood alerting system. Further engagement is required with the local community as the Community Resilience Group is currently inactive.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

**3.2.8 Luncarty, Stanley, Bankfoot, Dunkeld & Birnam PVA 08/08**

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	River Tay

**Summary of Progress within PVA**



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There are approximately 360 residential properties and 130 non-residential properties at risk of flooding in this PVA. The Annual Average Damages are approximately £740,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/08.

This PVA has been exposed to significant weather events including Storms Desmond and Frank in December 2015 and January 2016, which resulted in localised surface water flooding in Bankfoot. Further flooding occurred in February 2018, August 2020 and February 2021 in Bankfoot and Dunkeld. However, only a small number of properties were affected by these events.

Following previous investigations into a flood scheme in Bankfoot, community drop-in events were held in 2016 to raise awareness of how flood risk would be managed in future within the PVA. The events were attended by Perth & Kinross Council, SEPA, Scottish Water and Scottish Flood Forum. Perth & Kinross Council carried out clearance and repair works in Bankfoot in 2017, to improve channel conveyance and reduce surface water issues.

Scottish Water has delivered two assessments of flood risk within the Bankfoot and Dunkeld sewer catchments.

A number of Community Resilience Groups within the PVA have developed emergency plans which can be activated during significant flood events. This includes Auchtergaven Community Council and Bankfoot Resilience Group, who communicate with the Council and receive updates regarding any flood risk management activities in the area.

There have been no significant changes affecting progress but it is worth noting that the A9 Dualling project is still ongoing, which may result in some future catchment changes.

The Dunkeld flood study commenced in January 2020 and is on-going, with completion anticipated by the end of 2022.

**Selected Actions in the Luncarty, Stanley, Bankfoot, Dunkeld & Birnam PVA 08/08**

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/08		A				A G		G	G		G	G			G		G	G

**Summary of Progress of Actions to Manage Flood Risk in Luncarty, Stanley, Bankfoot, Dunkeld & Birnam (PVA 08/08)**

Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
<b>Flood Protection Study (80170005)</b>	A	A flood protection study has been recommended for Dunkeld to assess whether modification of conveyance, direct flood defences and sediment management could reduce flood risk. The study should build on previous studies and take a staged approach to allow collaboration with SEPA	Perth & Kinross Council	2019 - 2021	The Dunkeld Flood Protection Study commenced in January 2020 and is nearing completion. The contract was awarded to consulting engineers, AECOM Ltd.	Once available, the draft study findings will be disseminated via local community drop-in sessions. The study is programmed for completion by the end of 2022.



		on strategic mapping and modelling for the Tay. The study should take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream.				
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the River Tay area to improve understanding of flood risk. 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	2016 onwards	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Bankfoot and Dunkeld sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Bankfoot 2016 - 2018  Dunkeld 2016 - 2017	The Scottish Water assessment of flood risk within the Bankfoot sewer catchment was completed in May 2018.  The Scottish Water assessment of flood risk within the Dunkeld sewer catchment was completed in February 2018.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Boat of Murthly, Caputh to Kinclaven, Dalguise, Dunkeld and Burnmouth Road, Logierait to Victoria Bridge and the Stanley Mills flood warning areas which are part of the Tay river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible Authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Community drop-in sessions were arranged in Bankfoot in September 2016 following the completion of a flood scheme feasibility study.	Further to the awareness raising described in Table 2 of this report, Perth & Kinross Council will continue with awareness raising activities when developing proposals for the remaining actions in the Tay Local Flood Risk Management Plan. This will be

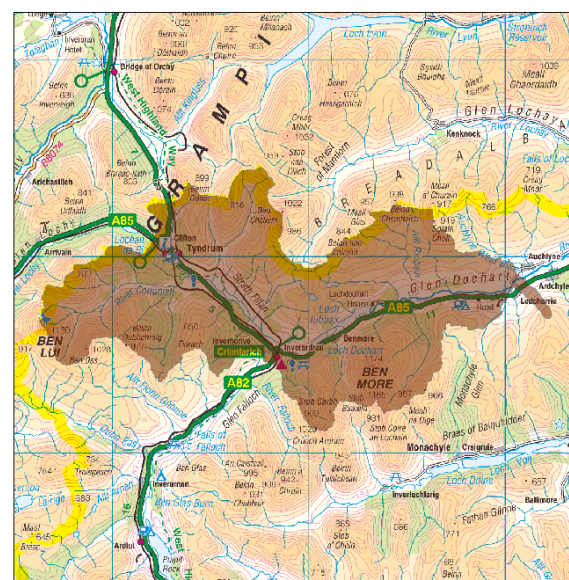
					<p>These events were attended by the Council, SEPA, Scottish Water and the Scottish Flood Forum. These sessions highlighted to the community that a flood scheme was not economically viable and how on-going flood risk would be managed (via the other actions identified in the Tay Local Flood Risk Management Plan).</p> <p>Perth &amp; Kinross Council engaged in on-going communications with Bankfoot Community Council and the Bankfoot Community Resilience Group. Updates on clearance and repair works carried out in the Bankfoot area have been provided to both of these groups.</p> <p>The Scottish Flood Forum also engaged with the local community in Bankfoot following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding.</p> <p>Stanley, Bankfoot, Dunkeld &amp; Birnam Community Resilience Groups have developed community emergency plans which are generic in nature and are available to support other affected communities.</p> <p>Working alongside other responsible authorities, SEPA carried out awareness raising activities in this location. Some planned activities were impacted by the Covid-19 pandemic.</p>	extended to the other communities at risk of flooding in this PVA in the Cycle 2 Tay Local FRM Plan.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	<p>Further to the self-help actions described in Table 2 of this report, some additional progress has been made within this PVA.</p> <p>The Scottish Flood Forum's (SFF) community engagement within this PVA has included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion.</p> <p>The Scottish Flood Forum supported the Bankfoot Community Resilience Group but understand they are currently inactive.</p> <p>The SFF have provided property flood resilience advice to a few residents in Bankfoot impacted by flooding.</p>	Refer to planned actions described in Table 2 of this report. The Scottish Flood Forum has identified Bankfoot as a potential site for a community flood alert system. Further engagement is required to assess feasibility.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council,	Ongoing	Further to the maintenance actions described in Table 2 of this report, some additional progress has been made within this PVA.	Refer to planned actions described in Table 2 of this report.

			asset / land managers		Significant clearance and repair works were carried out in Bankfoot. In 2017, road drainage improvements were made at Tulliebelton Road (to reduce the risk of surface water flooding issues at this location) and sediment management works were carried out at two locations on the Glenshauch Burn. Perth & Kinross Council carried out further road drainage improvements at Dunkeld Road, Bankfoot in 2019.	
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

### 3.2.9 Tyndrum and Crianlarich PVA 08/09

Local Plan District	Local authority	Main catchment
Tay	Stirling Council	River Tay

#### Summary of Progress Within PVA



There are approximately 20 residential properties and 10 non-residential properties at risk of flooding in the Tyndrum and Crianlarich PVA. The Annual Average Damages are approximately £160,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/09.

This PVA has been exposed to recent significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016 respectively. More recently the 'Beast from the East' (March 2018) brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt. Stirling Council is actively undertaking watercourse inspections to identify areas of high risk of localised flooding. Where problems are identified and are within Council land, remedial works are identified. These works are prioritised annually on a clearance and repair schedule based on the level of risk and on the annual maintenance budget. Where problems are identified within private ownership the Council will notify the owner of the remedial works required.

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#### Selected Actions in the Tyndrum & Crianlarich PVA 08/09

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/09						R			G		G	G			G		G	G

#### Summary of Progress of Actions to Manage Flood Risk in Tyndrum & Crianlarich (PVA 08/09)

Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Strategic Mapping and Modelling (80410016)	R	SEPA will seek to develop flood mapping in the River Fillin area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2018-2019	A detailed screening exercise has been undertaken to identify those outstanding modelling and mapping actions with potential multi benefits for Flooding, River Basin Management Planning 2027 priorities and development pressures. The outcome of this review has indicated that this catchment is not within a 2021 Objective Target Area and doesn't provide any multiple benefits. A decision has therefore been made not to progress this action any further.	This action will not progress any further.



<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Stirling Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



3.2.10 Almondbank PVA 08/10

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	River Almond (River Tay)

Summary of Progress Within PVA



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There are approximately 50 residential properties and 110 non-residential properties at risk of flooding in the Almondbank PVA. The Annual Average Damages are approximately £1.2 million. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/10.

There have been significant weather events in this PVA since the publication of the Tay Local FRM Plan. Water levels on the River Almond were high during flood events on 12 August 2020, 31 October 2021 and 8 September 2022 but the flood defences protected properties. Some minor flooding occurred in August 2020 at Lochty Industrial Estate.

Significant progress has been made in the PVA since the publication of the Tay Local FRM Plan. The Almondbank Flood Protection Scheme is substantially complete and operational. The scheme has reduced flood risk to approximately 31 residential and 48 non-residential properties and has delivered additional benefits to the community through improvements to leisure facilities and the national cycle network.

Awareness raising and community engagement were carried out in conjunction with the construction of the flood scheme and to keep the community updated on progress. The Scottish Flood Forum continues to support the community.

Following previous riverbank erosion, Perth & Kinross Council completed emergency erosion protection works and repairs to a drainage outfall on the River Almond at Inveralmond, Perth in 2017. Scottish Water also completed repairs to an adjacent drainage outfall.

SEPA have commenced flood mapping improvements in this area.

Scottish Water has completed assessments of flood risk within the Almondbank sewer catchment and the Perth City sewer catchment.

Selected Actions in the Almondbank PVA 08/10

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modeling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/10	G		G			A A G		G	G		G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in Almondbank (PVA 08/10)

Action (Action ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Scheme/ Works (80200006)	G	The Almondbank Flood Protection Scheme is currently under construction and is scheduled to be completed by summer 2017. The scheme will reduce the risk of flooding to Almondbank from the River Almond and East Pow Burn. The scheme includes flood defences, flood storage, bridge raising and surface water actions. The	Perth & Kinross Council	2016-2017	The flood scheme was substantially complete in September 2018. All works are complete with the exception of an electrical connection and commissioning of 5 pumping stations.	The flood scheme is substantially complete. The outstanding works to the pumping stations are programmed to be completed by early 2023.

		scheme will offer a 1 in 200 year standard of protection.				
<b>Maintain Flood Protection Scheme</b> (80200017)	<b>G</b>	Continue to maintain the existing flood protection schemes that protect Almondbank and Perth against flooding. The schemes include the Perth Flood Protection Scheme that was completed 2002 and Almondbank Flood Protection Scheme which is currently under construction and due to be completed in 2016.	Perth & Kinross Council	2016 - 2022	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing Perth Flood Protection Scheme and the Almondbank Flood Protection Scheme. Maintenance works are carried out as required. River bank erosion works and outfall repairs were completed at Inveralmond in 2017.	Routine inspections of the Perth Flood Protection Scheme and the Almondbank Flood Protection Scheme will continue to be carried out as part of the Council's statutory duties. Maintenance works will be carried out as required.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the River Almond area (from Newton to the River Tay confluence) to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2017	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.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 900km <sup>2</sup> of improved surface water data is currently available within this Local Plan District.	SEPA	2016 - 2017	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer considered appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Almondbank and Perth City sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Almondbank 2016 - 2018  Perth City 2016 - 2018	The Scottish Water assessment of flood risk within the Almondbank sewer catchment was completed in October 2017.  The Scottish Water assessment of flood risk within the Perth City sewer catchment was completed in April 2019.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Almondbank and the Inveralmond Industrial Estate flood warning areas which are part of the Almond (Perth) river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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.	The Scottish Flood Forecast 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.

					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. 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 surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible Authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Perth & Kinross Council carried out awareness raising activity during the implementation of the Almondbank Flood Protection Scheme. A project specific website was set up and regular newsletters issued to the community throughout the construction phase of the flood scheme. The Scottish Flood Forum (SFF) has also engaged with the local community following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	Further to the self-help actions described in Table 2 of this report, some additional progress has been made within this PVA. The Scottish Flood Forum's (SFF) community engagement within this PVA has included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	Further to the maintenance actions described in Table 2 of this report, some additional progress has been made within this PVA. Following previous riverbank erosion, Perth & Kinross Council completed erosion protection	Refer to planned actions described in Table 2 of this report.

					works and repairs to a drainage outfall on the River Almond at Inveralmond, Perth in 2017. Scottish Water also completed repairs to an adjacent drainage outfall in 2017.	
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



3.2.11 Scone PVA 08/11

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	Annaty Burn (River Tay)

Summary of Progress Within PVA



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There are approximately 40 residential properties and 50 non-residential properties at risk of flooding in the Scone PVA. The Annual Average Damages are approximately £320,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/11.

This PVA has been exposed to recent significant weather events. In May 2017, heavy rainfall led to roads in the area being flooded. Heavy rain on 11 and 12 August 2020 led to surface water flood water outside some properties to rise up to the level of airbricks. The most recent flood was recorded February 2021 when multiple areas across Perth and Kinross were affected, including Scone.

The commencement of the Scone Flood Protection Scheme has been deferred due to a pause in the capital grant funding. The commencement of the Scone Flood Study has been delayed but will commence in the 2022/23 financial year.

The Council has continued to carry out a biennial CCTV survey of the barrel drain. The Council also carried out sediment management and debris clearance works on the Annaty Burn (at the A94 Road Bridge) in 2017, 2020 and 2021.

Scottish Water has delivered an assessment of flood risk within the Scone sewer catchment and commenced a further assessment for the Perth City sewer catchment.

There have been no major changes to this catchment, although a housing development and road infrastructure improvement project are to be implemented at the northern extents of Scone.

Selected Actions in the Scone PVA 08/11

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/11	R	R				G			G		G	G		R	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Scone (PVA 08/11)

Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Scheme/ Works (80230006)	R	A flood protection scheme has been proposed to address the risk of river flooding to the Goshenbank Park and Burnside area in Scone from the Annaty Burn. The preferred option consists of raising existing footbridges and constructing riverside defences. The scheme would provide a 1 in 200 year standard of protection. Outline design development of the scheme is expected to commence in the 2018/19 financial year.	Perth & Kinross Council	2018 - 2021	The commencement of the outline design of the Scone (Annaty Burn) Flood Protection Scheme has been deferred due to a pause in capital grant funding.	The flood protection scheme was programmed for completion in 2024/25, but that is now subject to capital grant funding.



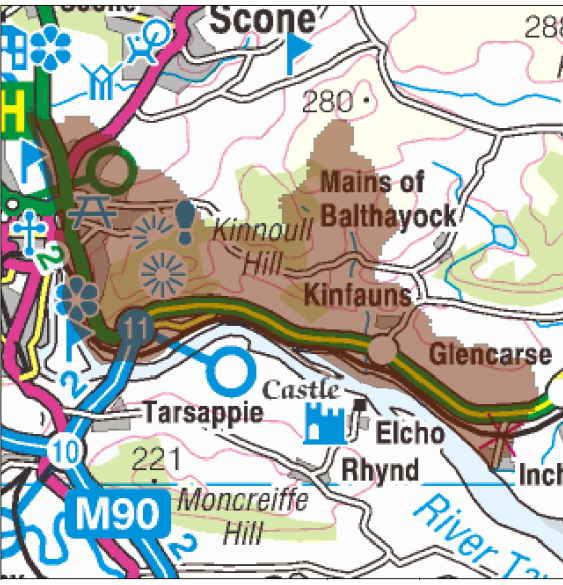
<b>Flood Protection Study</b> (80230005)	<b>R</b>	<p>A flood protection study has been carried out by Perth &amp; Kinross Council for the Annaty Burn, Scone in 2007. The study identified a viable flood protection scheme that is currently being progressed as a priority in the first flood risk management cycle. Further study has been recommended to supplement the previous investigations, looking at natural flood management and surface water flooding (see also Action ID 80210018). Natural flood management options that should be considered include river/floodplain restoration and sediment management. The study should also investigate the viability of property level protection. The study should take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream.</p> <p>Perth &amp; Kinross Council has also carried out a flood protection study for the barrel drain in Scone in 2007 which did not identify a viable flood protection scheme. However, the Perth &amp; Kinross Council intends to re-examine this previous study following recent drain failures and this will be carried out in conjunction with the studies identified above.</p>	Perth & Kinross Council	2020 - 2022	The Scone Flood Protection Study is programmed to commence in the 2022/23 financial year.	The study is programmed for completion in the 2024/25 financial year.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Perth City and Scone sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Perth City 2016-2019  Scone 2016 - 2019	The Scottish Water assessment of flood risk within the Perth City sewer catchment was completed in April 2019.  The Scottish Water assessment of flood risk within the Scone sewer catchment was completed in September 2017.	This action is complete.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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.  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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible Authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA.	Further to the planned awareness raising activities described in Table 2 of this report, Perth & Kinross Council will carry out

					Perth & Kinross Council has engaged with Scone community council. The Council carries out a bi-annual CCTV survey of the barrel drain in Scone and the results of this survey are shared with the Community Council. This helps to raise awareness of the responsibilities of landowners regarding the drain. Discussions were also held around the flooding and drainage proposals for the housing development in Scone (north). 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.	awareness raising activities in conjunction with the Scone (Annaty Burn) Flood Protection Scheme, the Scone Flood Protection Study and Surface Water Management Plan (Action IDs 80230005, 80230006 & 80210018) which are programmed to commence in 2022/23. The Council will continue to engage with the Community Council and local landowners regarding the results of future CCTV surveys of the barrel drain.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Surface Water Plan/Study</b> (80210018)	<b>R</b>	The area must be covered by a surface water management plan or plans that set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives. This surface water management plan will be delivered by Perth & Kinross Council as part of the flood protection study (Action ID 80230005). Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data (as applicable) and, where available, outputs of Section 16 or integrated catchment studies, to assist with the surface water management planning process.	Perth & Kinross Council	2020 - 2022	The Scone surface water management plan is programmed to commence in the 2022/23 financial year.	The surface water management plan is programmed for completion in the 2024/25 financial year.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	Further to the maintenance actions described in Table 2 of this report, some additional progress has been made within this PVA. Recent maintenance carried out by Perth and Kinross Council included sediment management and debris clearance works on the Annaty Burn (at the A94 Road Bridge) in 2017, 2020 and 2021. Perth & Kinross Council is also committed to carrying out a bi-annual CCTV inspection of the barrel drain, with any identified defects being referred to the relevant landowners for action.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



3.2.12 Perth to Kinfauns (north of A90) PVA 08/12

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	River Tay

Summary of Progress Within PVA	
	<p>There are approximately 80 residential properties and 20 non-residential properties at risk of flooding in this PVA. The Annual Average Damages are approximately £180,000. Further information can be found in <a href="#">Tay Local FRM Plan</a> under PVA 08/12. This PVA has been exposed to significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016 respectively, with several properties and roads affected. The 'Beast from the East' (March 2018) brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt. More recently Perth was affected by surface water flooding in August 2020, September 2022 and November 2022 although relatively few properties were affected in this PVA.</p> <p>Scottish Water and Perth &amp; Kinross Council worked in partnership on the Perth Integrated Catchment Study (ICS), which was completed in 2019. The optioneering phase (to consider potential solutions to the identified flooding issues in five high priority areas) is nearing completion.</p> <p>Scottish Water has completed assessments of flood risk within the Perth City and Scone sewer catchments.</p> <p>SEPA have continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.</p>
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Selected Actions in the Perth to Kinfauns (north of A90) PVA 08/12																			
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies	
08/12	A		G			G		G	G		G	G		A	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Perth to Kinfauns (north of A90) (PVA 08/12)						
Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Scheme/ Works (80240006)	A	Flood protection works have been proposed at Bridgend in Perth to reduce the risk of surface water flooding. The proposed works include a high capacity drainage channel and outfall to the River Tay. Outline design of the works will commence in 2019/20.	Perth & Kinross Council	2019 - 2021	Work to produce an economic appraisal, update the outline design and produce a detailed design for the Bridgend flood protection works commenced in March 2021. The contract was awarded to consulting engineers, RPS Consulting Ltd and the detailed design is anticipated to be completed in the 2022/23 financial year.	The flood protection works are programmed for completion in the 2023/24 financial year, subject to completion of detailed design and funding.
Maintain Flood	G	Continue to maintain the existing Perth Flood Protection Scheme along the east bank of the River Tay. The scheme was completed in 2002	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the	Routine inspections will continue to be carried out as part of the Council's statutory



<b>Protection Scheme</b> (80260017)		and includes major flood defence works such as embankments, walls, sluice gates, ponds and pumping stations.			existing flood defences in Perth. Maintenance works are carried out as required. Recent works have included repairs to flood gates, access improvements and trash screen maintenance. A full pseudo-closure of the flood gates on the Perth Flood Protection Scheme is carried out annually to test the operation of the scheme and ensure operatives are fully trained in the event of a flood. This also serves to highlight any maintenance issues that may require to be addressed.	duties. Inspections will be carried out on an annual basis and following flood events.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Perth City and Scone sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Perth City 2016 - 2018  Scone 2016 - 2019	The Scottish Water assessment of flood risk within the Perth City sewer catchment was completed in April 2019.  The Scottish Water assessment of flood risk within the Scone sewer catchment was completed in September 2017.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Basement Properties from North Inch to Friarton Bridge flood warning area which is part of the Tay river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Following widespread surface water flooding in Perth in August 2020, the Council issued flood bulletins, responded to correspondence and held a	Further to the planned awareness raising activities described in Table 2 of this report, Perth & Kinross Council will carry out further awareness raising activity in conjunction with the Perth Surface Water Management Plan and flood protection works at Bridgend (Action IDs 80240018 & 80240006).



					series of online community meetings to raise awareness of flood risk. 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.	
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Surface Water Plan/Study</b> (80240018)	<b>A</b>	The area must be covered by a surface water management plan (SWMP) or plans that set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives. Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data (as applicable) and, where available, outputs of Section 16 or integrated catchment studies, to assist with the surface water management planning process.	Perth & Kinross Council	2018 - 2020	Work on the Perth Surface Water Management Plan commenced in December 2021. The contract was awarded to consulting engineers, Amey Consulting Ltd.	The development of the Perth Surface Water Management Plan is on-going and is programmed for completion in 2023.
<b>Surface Water Plan/Study</b> (80240019)	<b>G</b>	An integrated catchment study covering the Perth City catchment will be carried out to support the surface water management planning process in the Perth surface water management priority area. The study 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 applicable) the sea. This will improve the understanding of local surface water flood risk. The stated timescales and funding arrangements between Scottish Water and Perth & Kinross Council will take the studies through the Scoping and Modelling phases to define the significant flooding issues in the catchment. After this has been completed, it is expected that the integrated catchment study partnerships will remain in place and will progress with the Optioneering phase to establish the preferred solution(s) to the significant flooding issues.	Scottish Water in partnership with Perth & Kinross Council	Perth City 2016 - 2019	The Perth Integrated Catchment Study commenced in November 2016. The contract was awarded to consulting engineers, ARC. A catchment flood assessment identified 32 flooding 'hotspots' (areas of higher flood risk) across the Perth sewer catchment area. The study was completed in December 2019. No options appraisal was carried out as part of the study, however further investigations at 5 of the hotspots in PVA 08/13 were taken forward through an IFOS (Internal Flooding due to Overloaded Sewers)(refer to Action ID 80240019 in PVA 08/13).	The Perth Integrated Catchment Study was completed in December 2019. This study provided an improved understanding of the flooding mechanisms in Perth. A further study to consider the other identified flooding hotspots in Perth has been included in the Cycle 2 Tay Local Flood Risk Management Plan.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b>	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

(80410014)						
<b>Planning Policy</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.13 Perth Centre PVA 08/13

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	Perth coastal

Summary of Progress Within PVA



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There are approximately 320 residential properties and 260 non-residential properties at risk of flooding. The Annual Average Damages are approximately £1.8 million. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/13.

This PVA has been exposed to significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016 respectively, with several properties and roads affected. The ‘Beast from the East’ (March 2018) brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt. More recently, Perth was affected by surface water flooding in August 2020, when approximately 165 properties were affected, and again in September 2022, when approximately 30 properties were affected.

Scottish Water and Perth & Kinross Council worked in partnership on the Perth Integrated Catchment Study (ICS), which was completed in 2019. The optioneering phase (to consider potential solutions to the identified flooding issues in five high priority areas) is nearing completion. Perth & Kinross Council have engaged consulting engineers to complete the Craigue Burn flood study and to develop the Perth Surface Water Management Plan and this work is on-going.

Perth & Kinross Council has carried out significant maintenance, clearance and repair works on the Perth Flood Protection Scheme, including works on the North Muirton Flood Embankment in 2019 and 2020. Substantial clearance and repair works were carried out along the Scouring and Craigue Burns following flooding in August 2020.

Scottish Water has completed assessments of flood risk within the Almondbank and Perth City sewer catchments.

SEPA have continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.

The Council coordinates the Perth & Kinross Local Resilience Partnership’s Community and Business Resilience Group in this PVA. Awareness raising activity has been carried out by the Council and the Scottish Flood Forum and will continue to be delivered through the projects noted above.

No significant changes have taken place within the PVA over the first FRM cycle so far, however there are a number of developments proposed or taking place around the Perth boundary.

Selected Actions in the Perth Centre PVA 08/13

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/13		A	G			A G		G	G	G	G	G		A G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Perth Centre (PVA 08/13)

Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Study	A	A flood protection study has been recommended for Perth and will consider flood risk from the Craigue Burn. The study will assess direct flood	Perth & Kinross Council	2016 - 2018	The Craigue Burn flood study commenced on programme in November 2016 as part of the Perth integrated catchment study (ICS) (Action ID's	Once available, the draft study findings will be disseminated via local community drop-in

(80290005)		defences and sediment management. The study should take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream. The study area (primarily Queens Avenue, Queen Street and Windsor Terrace) falls within the area of the Perth City integrated catchment study and surface water management plan (Action ID's 80240018 and 80240019). The study will therefore be integrated with the Perth integrated catchment study.			80240018 and 80240019). A hydraulic model of the Craigie Burn was produced as part of the wider ICS project. The remainder of the Craigie Burn Flood Study recommenced in November 2021 and is on-going. The contract was awarded to consulting engineers, Amey Consulting Ltd.	sessions. The Craigie Burn Flood Study is programmed for completion in 2023.
<b>Maintain Flood Protection Scheme (80290017)</b>	<b>G</b>	Continue to maintain the flood protection schemes that protect Perth against flooding. The schemes include the Perth Flood Protection Scheme that was completed 2002, including flood defences on the Perth Town Lade and Craigie Burn, and the Almondbank Flood Protection Scheme which is currently under construction and due to be completed in 2016.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing flood defences in Perth. Maintenance works are carried out as required. Works have included sediment management works on the Craigie Burn and clearance works on the flood storage pond at Broxden in 2017. A full pseudo-closure of the flood gates on the Perth Flood Protection Scheme is carried out annually to test the operation of the scheme and ensure operatives are fully trained in the event of a flood. This also serves to highlight any maintenance issues that may require to be addressed. The programme of routine inspections will be extended to the Almondbank Flood Protection Scheme in 2019.	Routine inspections will continue to be carried out as part of the Council's statutory duties. Inspections will be carried out on an annual basis and following flood events.
<b>Maintain Flood Protection Scheme (80300017)</b>	<b>G</b>	Continue to maintain the Perth Flood Protection Scheme. The scheme was completed in 2002 and includes major flood defence works such as embankments, walls, sluice gates, ponds and pumping stations.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing flood defences in Perth. Maintenance works are carried out as required. Works have included sediment management works on the Craigie Burn, works to address surface water flooding at Perth Harbour, repairs to the South Inch and Inveralmond pumping stations, repairs to flood gates, access improvements, trash screen maintenance and flood storage reservoir inspections. A full pseudo-closure of the Perth Flood Protection Scheme is carried out annually to test the operation of the scheme and ensure operatives are fully trained in the event of a flood. This also serves to highlight any maintenance that may be required. The Council installed a sheet piled cut off wall at the North Muirton Flood Embankment in 2019 and 2020 to reduce the risk of ground water seepage during future flood events. The Council arranged to replace the pumps in the South Inch pumping station in 2019, and the remaining pumps on the scheme were replaced over the last year.	Routine inspections will continue to be carried out as part of the Council's statutory duties. Inspections will be carried out on an annual basis and following flood events.



<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the River Almond area to improve understanding of flood risk. 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	2017	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Almondbank and Perth City sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Perth City 2016 - 2018  Almond - bank 2016 - 2018	The Scottish Water assessment of flood risk within the Perth City sewer catchment was completed in April 2019.  The Scottish Water assessment of flood risk within the Almondbank sewer catchment was completed in October 2017.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Almondbank and the Inveralmond Industrial Estate flood warning areas which are part of the Almond (Perth) river flood warning scheme. Continue to maintain the North Muirton Industrial Estate and the Basement Properties from North Inch to Friarton Bridge flood warning areas which are part of the Tay river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Community Flood Action Groups</b> (80290012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The	Community	Ongoing	The Perth & Kinross Local Resilience Partnership's Community and Business Resilience Group operates in this area. Resources have also been offered by various other local groups. The Scottish Flood Forum supported, and continues to engage with, the South Inch Flood	Perth & Kinross Council will continue to coordinate with the Local Resilience Partnership's Community and Business Resilience Group on a priority needs basis where resources allow. The Scottish Flood Forum will engage further with the South Inch Flood Group to




		<p>Scottish Flood Forum provides support for both new and existing groups.</p> <p>Perth Business Community Resilience Group operates in this area. Membership of the group includes Perth &amp; Kinross Council, SEPA, Tayside Fire and Rescue and the Scottish Flood Forum.</p> <p>The group aims to reduce flooding to businesses and communities within Perth city centre, improve joint working before, during and after flooding and develop ways of increasing community resilience against flooding.</p>			<p>Group after the flooding of August 2020. The Forum also provided flood recovery services to people impacted by flooding at this time. This included several online events organised by Perth &amp; Kinross Council to support communities.</p>	<p>build links, consider a community flood plan and assess the Forum's property flood resilience advice.</p>
<p><b>Awareness Raising</b> (80410013)</p>	<p><b>G</b></p>	<p>Refer to Description in <a href="#">Table 2</a>.</p>	<p>Responsible authorities</p>	<p>Ongoing</p>	<p>Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA.</p> <p>Awareness raising activity was carried out as part of the Perth Integrated Catchment Study (Action ID 80240019). Perth &amp; Kinross Council and Scottish Water have issued a newsletter to residents on Feus Road, Perth every three months to keep them informed. Following widespread surface water flooding in Perth in August 2020, the Council issued flood bulletins, responded to correspondence and held a series of online community meetings to raise awareness of flood risk. Similar activity was undertaken following the flooding of September 2022. The Perth IFOS (Internal Flooding due to Overloaded Sewers) study findings for the Feus Road area were disseminated via a local community drop-in session on 1 November 2022.</p> <p>The Scottish Flood Forum (SFF) has also engaged with the local community following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding. The SFF provided flood recovery services to people impacted by flooding in August 2020. This included several online events organised by PKC to support communities. 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.</p>	<p>Further to the planned awareness raising activities described in Table 2 of this report, Perth &amp; Kinross Council will carry out further awareness raising activity in conjunction the Craigie Burn Flood Protection Study and the Perth Surface Water Management Plan (Action ID's 80290005 &amp; 80240018). The Perth IFOS study is on-going and is programmed for completion in 2023 (Action ID 80240019). The study findings for the Cavendish Avenue area will be disseminated via local community drop-in sessions in early 2023.</p>

Self Help (80410011)	G	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	Further to the self-help actions described in Table 2 of this report, some additional progress has been made within the Perth Centre PVA. Following flooding in August 2020, Perth & Kinross Council's Housing Service fitted PLP products to some Council housing in the vicinity of Wallace Crescent, Perth. The Scottish Flood Forum's (SFF) community engagement within this PVA has included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion. More recently, the SFF has provided independent property flood resilience advice and carried out 15 PFR assessments to homes impacted by flooding.	Refer to planned actions described in Table 2 of this report.
Surface Water Plan/Study (80240018)	A	The area must be covered by a surface water management plan (SWMP) or plans that set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives. Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data (as applicable) and, where available, outputs of Section 16 or integrated catchment studies, to assist with the surface water management planning process.	Perth & Kinross Council	2018 - 2020	Work on the Perth Surface Water Management Plan commenced in December 2021. The contract was awarded to Amey Consulting Ltd.	The development of the Perth Surface Water Management Plan is on-going and is programmed for completion in 2023.
Surface Water Plan/Study (80240019)	G	An integrated catchment study covering the Perth City catchment will be carried out to support the surface water management planning process in the Perth surface water management priority area. The study 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 applicable) the sea. This will improve the understanding of local surface water flood risk. The stated timescales and funding arrangements between Scottish Water and Perth & Kinross Council will take the studies through the Scoping and Modelling phases to define the significant flooding issues in the catchment. After this has been completed, it is expected that the integrated catchment study partnerships will remain in place and will progress with the Optioneering phase to establish the preferred solution(s) to the significant flooding issues.	Scottish Water in partnership with Perth & Kinross Council	Perth City 2016 - 2019	The Perth Integrated Catchment Study commenced in November 2016. The contract was awarded to consulting engineers, ARC. A catchment flood assessment identified 32 flooding 'hotspots' (areas of higher flood risk) across the Perth sewer catchment area. The study was completed in December 2019. No options appraisal was carried out as part of the study, however further investigations at 5 of the hotspots were taken forward through an IFOS (Internal Flooding due to Overloaded Sewers) study. The hotspots were located at Feus Road, Cavendish Avenue, Marshall Place, Bells Sports Centre and South Street. The Feus Road and Cavendish Avenue hotspots were investigated jointly by Scottish Water and Perth & Kinross Council. The study findings for the Feus Road area were disseminated via a local community drop-in session on 1 November 2022. The IFOS study is currently on-going and is programmed for completion in 2023.	The Perth Integrated Catchment Study was completed in December 2019. This study provided an improved understanding of the flooding mechanisms in Perth. The IFOS study (and options appraisal) is on-going and is programmed for completion in 2023. The study findings for the Cavendish Avenue area will be disseminated via local community drop-in sessions in early 2023. Scottish Water will continue with study work on potential sewer improvements until summer 2023. A further study to consider the other identified flooding hotspots in Perth has been included in the Cycle 2 Local Flood Risk Management Plan.

<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	Following extreme flooding in August 2020, Perth & Kinross Council undertook emergency works within the Craigie Burn catchment. This included removing debris/blockages, sediment and vegetation management along the Scouring, Buckie and Craigie Burns. Further vegetation and sediment management works were carried out at Queens Avenue in March 2022. Further clearance works were undertaken following the flooding in September 2022.	Refer to planned actions described in Table 2 of this report.
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/ response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.14 Comrie PVA 08/14

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council, Stirling Council	River Earn

Summary of Progress Within PVA	
	<p>There are approximately 510 residential properties and 100 non-residential properties at risk of flooding. The Annual Average Damages are approximately £2.0 million. Further information can be found in <a href="#">Tay Local FRM Plan</a> under PVA 08/14.</p> <p>The PVA has also been exposed to significant weather events including Storms Desmond and Frank in Dec 2015 and Jan 2016 respectively, and more recently the 'Beast from the East' (March 2018) which brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt.</p> <p>Following on from the feasibility work and public consultation events in late 2016, the Comrie Flood Protection Scheme was published on 28 February 2020. Following a local hearing, the Scheme was confirmed on 18 August 2021 and the detailed design is nearing completion. In the meantime, advance works for the Scheme commenced in late August 2022.</p> <p>SEPA have commenced flood mapping improvements in the Upper Earn area. SEPA have also continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.</p> <p>Scottish Water has completed assessments of flood risk within the Comrie and Crieff sewer catchments.</p> <p>Awareness raising activity has been carried out by the Council and the Scottish Flood Forum and has been coordinated with the Comrie Community Resilience Group. This activity will continue to be delivered through the projects noted above.</p>

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Selected Actions in the Comrie PVA 08/14

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/14	A		G			A	G	G	G	G	G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in Comrie (PVA 08/14)

Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Flood Protection Scheme/ Works (80330006)	A	A flood protection scheme is underway for Comrie to reduce the combined flood risk from the Water of Ruchill, River Earn and River Lednock. The proposed scheme consists of flood walls and embankments. The scheme will provide a 1 in 200 standard of protection plus freeboard.	Perth & Kinross Council	2016 - 2020	The Comrie Flood Protection Scheme was published on 28 February 2020 and, following a local hearing, was subsequently confirmed without modification by the Council's Environment & Infrastructure Committee on 18 August 2021. Planning permission was granted on 16 December 2021. The detailed design for the main works is nearing completion. The advance works for the scheme were awarded to contractors, Balfour	Once the detailed design for the Comrie Flood Protection Scheme is complete, the main works contract will be tendered and awarded. The main works are currently programmed to commence on site in 2023. Substantial completion of the Scheme is currently programmed for late 2024.



					Beatty, and commenced in late August 2022 and are on-going. The Scottish Flood Forum supported the flood protection scheme consultation events with the Council and key agencies.	
<b>Flood Protection Scheme/ Works</b> (8303021)	<b>A</b>	Transport Scotland will carry out civil engineering work which will reduce the risk of flooding on identified sections of the trunk road. Transport Scotland will manage the reduction through the operation of the trunk road via the routine and cyclic maintenance programme. Transport Scotland maintains an on-going review of areas of known historic flood locations and should areas such as Comrie be identified as such an area, Transport Scotland will seek funding in due course based on a prioritised criteria to support the routine and cyclic maintenance programme at these locations.	Transport Scotland	Ongoing	Opportunities to alleviate flooding have been considered as part of on-going routine and cyclic maintenance. This included the recent essential carriageway resurfacing on two sections of the A85 Trunk Road East of Comrie and East of Dunira Estate (October 2016). December 2022 - no further update provided by Transport Scotland.	Transport Scotland flooding workshop planned for April 2019. Improvement opportunities will continue to be sought and included in forthcoming routine and cyclic maintenance schemes and programmes. Research project underway to determine how the CREW surface water flood forecasting system could be applied to linear transport corridors such as the trunk road network of Scotland. The flooding database will be reviewed to assess key locations for improvements. Detailed schemes will be developed as required. December 2022 - no further update provided by Transport Scotland.
<b>Maintain Flood Protection Scheme</b> (80330017)	<b>G</b>	Continue to maintain existing flood defences and flood protection works in Comrie. These include the Water of Ruchill Flood Protection Scheme (constructed in the 1960s) and the flood protection works carried out in 2013.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing flood defences in Comrie. Maintenance works are carried out as required.	Routine inspections will continue to be carried out as part of the Council's statutory duties.
<b>Maintain Flood Protection Scheme</b> (80350017)	<b>G</b>	Continue to maintain the Water of Ruchill Flood Protection Scheme (constructed in the 1960's) and the flood protection works carried out in 2013 that reduce the risk of river flooding to Dalginross.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing flood defences in Dalginross. Maintenance works are carried out as required.	Routine inspections will continue to be carried out as part of the Council's statutory duties.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the Upper Earn area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016-2017	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will carry out an assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Comrie and Crieff sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	Comrie 2016 - 2018  Crieff 2016 - 2017	The Scottish Water assessment of flood risk within the Comrie sewer catchment was completed in May 2018.  The Scottish Water assessment of flood risk within the Crieff sewer catchment was completed in December 2019.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Carse of Lennoch to Lochlane and the Crieff to Innerpeffray flood warning areas which are part of the Earn river flood warning scheme. Continue to maintain the Comrie flood warning area which covers properties at risk of flooding	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.



		from the Water of Ruchill and/or the River Earn as part of the Ruchill river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.				
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Community Flood Action Groups</b> (80330012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups. Comrie Resilience Group operates in this area. The membership includes Perth & Kinross Council, SEPA, Scottish Fire & Rescue and the Scottish Flood Forum. The group aims to reduce flooding of businesses and communities in Comrie. The resilience group was formed as a response to severe flooding in Comrie in August and November 2012.	Community	Ongoing	The Comrie Community Resilience Group has developed a Community Resilience Plan and Emergency Procedures for activation during flooding events. This will involve supporting vulnerable residents, deploying sandbags/aqua sacs from a community store and liaising with the Emergency Services. The Scottish Flood Forum supported the Comrie Community Resilience Group with their flood plan but understands they are currently inactive. The Forum is liaising with Perth & Kinross Council on potential property flood resilience advice to properties out with the Comrie Flood Scheme.	Perth & Kinross Council will continue to coordinate with the Comrie Community Resilience Group on a priority needs basis where resources allow. The Scottish Flood Forum will continue to liaise with the lead community contact for Comrie.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Perth & Kinross Council has carried out on-going awareness raising activity during the development of the proposals for the Comrie Flood Protection Scheme. Community drop-in sessions were arranged in Comrie in September 2016 following the completion of the flood scheme feasibility study. Further community drop-in sessions were held in April and May 2019 following the completion of the scheme outline design. These events were	Further to the awareness raising described in Table 2 of this report, Perth & Kinross Council will continue with awareness raising activities during the continuation of the Comrie Flood Protection Scheme and any other relevant actions set out in the Tay Local Flood Risk Management Plan.

					<p>attended by the Council, SEPA and the Scottish Flood Forum.</p> <p>Two further community drop-in sessions took place in June 2022 to update the local community about the scheme detailed design and advance works. These were attended by representatives from the project team including Perth and Kinross Council, SGN, Scottish Water, SSE, Sweco and Balfour Beatty.</p> <p>The Council has maintained its project specific website and regular newsletters have been issued to the community to keep them informed about the progress of the flood scheme. One-to-one meetings with land and property owners continue. This activity has been coordinated with the Comrie Community Council.</p> <p>The Scottish Flood Forum (SFF) has also engaged with the local community following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding.</p> <p>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.</p>	
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	-	Ongoing	<p>Further to the self-help actions described in Table 2 of this report, some additional progress has been made within this PVA.</p> <p>The Council's Housing Service has fitted flood protection products to 15 Council properties within Comrie.</p> <p>The Scottish Flood Forum's (SFF) community engagement within this PVA has included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion.</p> <p>The SFF have given independent PFR advice to a few properties in Crieff.</p>	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross and Stirling	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

			Council, asset / land managers			
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.15 Forteviot PVA 08/15

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	River Earn

Summary of Progress Within PVA



There are fewer than 10 residential properties and non-residential properties at risk of flooding in the Forteviot PVA. The Annual Average Damages are approximately £15,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/15. There have been no significant weather events in this PVA since the publication of the Tay Local FRM Plan. Widespread surface water flooding occurred during the storm of August 2020, and approximately 11 properties were affected in Forgandenny. SEPA have commenced flood mapping improvements in the Lower Earn area. SEPA have also continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.

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Selected Actions in the Forteviot PVA 08/15

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/15						A A		G	G		G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in Forteviot (PVA 08/15)

Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Strategic Mapping and Modelling (80410016)	A	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 900km <sup>2</sup> of improved surface water data is currently available within this Local Plan District.	SEPA	2016 - 2017	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer considered appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	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.



<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the Lower Earn area (from Forteviot Bridge to the River Tay confluence) to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016 - 2018	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.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Innerpeffray to Bridge of Earn flood warning area which is part of the Earn river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Widespread surface water flooding affected this area in August 2020, affecting properties in Forgandenny. The Council issued flood bulletins, responded to correspondence and held a series of online community meetings to raise awareness of flood risk. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council,	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.



			asset / land managers			
<b>Emergency Plans/ Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency plans/ response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.16 Dunning PVA 08/16

Local Plan District	Local authority	Main catchment
Tay	Perth & Kinross Council	Dunning Burn (River Earn)

Summary of Progress Within PVA



There are approximately 40 residential properties at risk of flooding in the Dunning PVA. The Annual Average Damages are approximately £120,000. Further information can be found in [Tay Local FRM Plan](#) under PVA 08/16.

Widespread surface water flooding occurred during the storm of August 2020, and approximately 11 properties were affected in Dunning.

Perth & Kinross Council undertook sediment management works to maintain channel conveyance along the Dunning Burn in August 2018. Significant clearance works on the Dunning Burn were also undertaken following the flooding of August 2020.

SEPA have commenced flood mapping improvements in the Middle Earn area. SEPA have also continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.

Scottish Water has delivered an assessment of flood risk within the Auchterarder sewer catchment.

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Selected Actions in the Dunning PVA 08/16

PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/16						A G		G	G		G	G			G		G	G

Summary of Progress of Actions to Manage Flood Risk in Dunning (PVA 08/16)

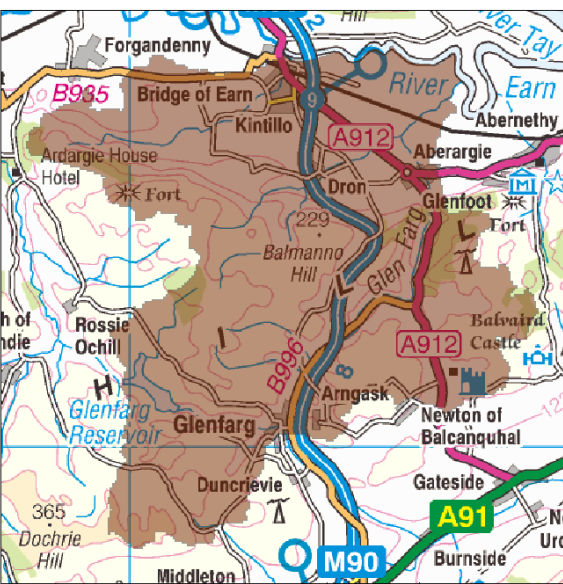
Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Strategic Mapping and Modelling (80410016)	A	SEPA will seek to develop flood mapping in the Middle Earn area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016 - 2017	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 (80410019)	G	Scottish Water will carry out an assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Auchterarder sewer catchments to improve knowledge and understanding of flood risk in this	Scottish Water	2016 - 2018	The Scottish water assessment of the Auchterarder sewer catchment was completed in February 2018.	This action is complete.

		area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.				
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Innerpefferay to Bridge of Earn flood warning area which is part of the Earn river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Widespread surface water flooding affected this area in August 2020, affecting properties in Dunning. The Council issued flood bulletins, responded to correspondence and held a series of online community meetings to raise awareness of flood risk. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	No additional self-help activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	Further to the maintenance actions described in Table 2 of this report, some additional progress has been made within this PVA. Perth & Kinross Council undertook sediment management works on the Dunning Burn in August 2018. Following the flooding of August 2020, the Council completed clearance works to remove	Refer to planned actions described in Table 2 of this report.

					timber debris from the Dunning Burn and the Latch Burn.	
<b>Emergency Plans/Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

3.2.17 Bridge of Earn PVA 08/17

Local Plan District	Local authority	Main catchment
Tay	Fife Council, Perth & Kinross Council	River Earn

Summary of Progress Within PVA	
	<p>There are approximately 50 residential properties and 20 non-residential properties at risk of flooding in the Bridge of Earn PVA. The Annual Average Damages are approximately £410,000. Further information can be found in <a href="#">Tay Local FRM Plan</a> under PVA 08/17.</p> <p>The PVA has been exposed to significant weather events including Storms Desmond and Frank in December 2015 and January 2016 respectively, with several properties and roads affected. In March 2018, the 'Beast from the East' brought about significant levels of snow fall across the PVA, although a gradual thaw limited any flooding issues resulting from snowmelt. Widespread surface water flooding occurred during the storm of August 2020 and again in September 2022.</p> <p>Perth &amp; Kinross Council has continued to maintain the existing flood scheme in Bridge of Earn and has carried out maintenance as required.</p> <p>SEPA have commenced flood mapping improvements in the Lower Earn area. SEPA have also continued to provide a flood forecasting service and operate their existing flood warning system in this PVA.</p> <p>Scottish Water have completed an assessment of flood risk in the Perth City sewer catchment.</p> <p>Awareness raising activity has been carried out by the Scottish Flood Forum.</p>
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Selected Actions in the Bridge of Earn PVA 08/17																		
PVA	Flood protections scheme/works	Flood protection study	Maintain flood protection scheme	Natural flood management works	Natural flood management study	Strategic mapping and modelling	New flood warning	Maintain flood warning	Flood forecasting	Community flood action groups	Awareness raising	Self help	Property level protection scheme	Surface water plan/study	Maintenance	Site protection plans	Emergency plans/response	Planning policies
08/17			<b>G</b>			<b>A A G</b>		<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>			<b>G</b>		<b>G</b>	<b>G</b>

Summary of Progress of Actions to Manage Flood Risk in Bridge of Earn (PVA 08/17)						
Action (ID)	Status (RAG)	Description	Delivery Lead	Planned Dates	Progress Made	Planned Actions to Complete
Maintain Flood Protection Scheme (80400017)	<b>G</b>	Continue to maintain the existing Bridge of Earn Flood Protection Scheme on the River Earn, the Deich Burn and the Yellow Burn. The scheme was completed in 2006 and includes flood walls and embankments.	Perth & Kinross Council	Ongoing	Perth & Kinross Council's Roads Maintenance Partnership carries out routine inspections of the existing flood defences in Bridge of Earn. Maintenance works are carried out as required.	Routine inspections will continue to be carried out as part of the Council's statutory duties. Inspections will be carried out on an annual basis and following flood events.
Strategic Mapping and Modelling (80410016)	<b>A</b>	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk, to be completed early in the first flood risk management cycle. Approximately 900km <sup>2</sup> of improved surface water	SEPA	2016 - 2017	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall	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



		data is currently available within this Local Plan District. SEPA will seek to develop flood mapping in the Lower Earn area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.			across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer considered appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	SEPA's flood risk assessments for the next flood risk management cycle.
<b>Strategic Mapping and Modelling</b> (80410016)	<b>A</b>	SEPA will seek to develop flood mapping in the Lower Earn area to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	2016 - 2018	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.
<b>Strategic Mapping and Modelling</b> (80410019)	<b>G</b>	Scottish Water will review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will undertake further investigation and modelling in the Perth City sewer catchments to improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009.	Scottish Water	2016 - 2018	The Scottish Water assessment of flood risk within the Perth City sewer catchment was completed in April 2019.	This action is complete.
<b>Maintain Flood Warning</b> (80410030)	<b>G</b>	Continue to maintain the Bridge of Earn and the Bridge of Earn to the River Tay flood warning areas which are part of the Earn river flood warning scheme. When flood events occur in an area with an existing flood warning service, SEPA will seek to verify the flood forecasts and warnings. SEPA will use feedback and post-event data to ensure that our flood warning service is timely and accurate.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b> (80410009)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	SEPA	Ongoing	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. 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 Scottish Flood Forecast 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. The development and wider roll-out of surface water flooding forecasts is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.
<b>Community Flood Action Groups</b> (80400012)	<b>G</b>	Community flood action groups are community based resilience groups which, on behalf of local residents and business, help to prepare for and minimise the effects of flooding. They reflect the interests of their local communities and may differ	Community	Ongoing	Glenfarg Community Resilience Group has been established and a review of their emergency plan is on-going.	Perth & Kinross Council will continue to coordinate with the Glenfarg Community Council on a priority needs basis where resources allow.

		in composition and remit. There are over 60 groups already established in Scotland. The Scottish Flood Forum provides support for both new and existing groups. Glenfarg Community Council operates in this area. The community council have prepared a community resilience plan to help prepare for and respond to emergencies..				
<b>Awareness Raising</b> (80410013)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .  From 2016 SEPA will engage with the community through local participation in national initiatives, including partnership working with Neighbourhood Watch Scotland. In addition, SEPA will engage with local authorities and community resilience groups where possible. Local authorities will be undertaking additional awareness raising activities. Further details will be set out in the Local FRM Plan.	Responsible authorities	Ongoing	Further to the awareness raising actions described in Table 2 of this report, some additional progress has been made within this PVA. Widespread surface water flooding affected this area in August 2020. The Council issued flood bulletins, responded to correspondence and held a series of online community meetings to raise awareness of flood risk. Following the flooding of September 2022, the Council liaised with Bridge of Earn Community Council. The Scottish Flood Forum (SFF) engaged with the local community following previous flooding. This included initial community engagement with both the Community Council and the wider community, exploring possible options regarding future SEPA and Local Authority engagement. The SFF provided a presentation and appropriate advice to support the short-term strategic development of the community to deal with flooding. 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.	Refer to planned actions described in Table 2 of this report.
<b>Self Help</b> (80410011)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	N/A	Ongoing	Further to the self-help actions described in Table 2 of this report, some additional progress has been made within this PVA. The Scottish Flood Forum's (SFF) community engagement within this PVA has included property level protection (PLP) exhibitions, selection, surveys and the provision of appropriate and relevant information to enable clients to make the right decisions. The SFF has provided ongoing community PLP training and Flood Warden and resilience group promotion.	Refer to planned actions described in Table 2 of this report.
<b>Maintenance</b> (80410007)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Perth & Kinross Council, asset / land managers	Ongoing	No additional maintenance activities have been carried out in this PVA, beyond those already described in Table 2 of this report. The Council completed works to make safe a collapsed retaining wall on the Deich Burn in Bridge of Earn following the flooding of August 2020.	Refer to planned actions described in Table 2 of this report.

<b>Emergency Plans/Response</b> (80410014)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Category 1 and 2 Responders	Ongoing	No additional emergency planning/response activities have been carried out in this PVA, beyond those already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.
<b>Planning Policies</b> (80010001)	<b>G</b>	Refer to Description in <a href="#">Table 2</a> .	Planning Authority	Ongoing	No additional planning policy activity has been carried out in this PVA, beyond that already described in Table 2 of this report.	Refer to planned actions described in Table 2 of this report.

### 3.3 Other Actions

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

Perth & Kinross Council have carried out additional actions, out with the actions identified within the Tay Local Flood Risk Management Plan. These actions include:

- Delivering on previous commitments to complete investigations into flood schemes (at Comrie, Bankfoot and Coupar Angus) and carrying out the associated public consultation events in late 2016. This included community drop-in sessions and presentations to provide these communities with further information on the risk of flooding; the outcome of the Council's investigations into flood schemes; work to raise awareness of flooding and help the community become more resilient to it and other action being taken on flood risk. The events were also attended by SEPA, Scottish Water and the Scottish Flood Forum.
- Riverbank erosion protection works, as well as repairs to a surface water outfall, have been carried out on the River Almond at Inveralmond, Perth. The works were completed in December 2017 and have helped to manage the risk of surface water flooding in the Inveralmond Industrial Estate as well as protecting the integrity of the existing flood defences in the area. Scottish Water also completed repairs to an adjacent drainage outfall earlier in 2017.
- Works to address surface water flooding have been carried out at Perth Harbour. The works have helped to manage the risk of flooding to properties in the harbour area and were completed in March 2018.
- The completion of flood study work in October 2018 for the small burns to the southeast of Pitlochry in the vicinity of Middlehaugh of Dalshian, Easthaugh of Ballyoukan and the Altrory Burn.
- Investigation works were completed on the North Muirton flood embankment. The Council has installed a sheet piled cut off wall to reduce the risk of ground water seepage during future flood events. This measure was completed in 2020 to manage the risk of flooding to adjacent properties while protecting the integrity of the flood defences in this area.
- In response to the severe flooding of 11 & 12 August 2020:
  - A coordinated response from various Council services and partner organisations involving investigations, advice and support.
  - Continued work with public agencies and local resilience groups to investigate and respond to the impact of the flooding, focusing on the homes and businesses most affected.
  - Responses to over 650 enquiries received via the Council's dedicated web page and generic e-mail address.
  - Nine online community meetings were held.

- On the ground works in the most affected areas to respond to, and support, emergency works.
- Emergency clearance works on the Craigie Burn, the Alyth Burn and the Dunning Burn.
- CCTV camera surveys of drainage systems and culverts
- Works to make safe a collapsed retaining wall on the Deich Burn in Bridge of Earn.
- A report to the Council's Environment and Infrastructure Committee on 18 August 2021, including a summary of identified short, medium, and long-term actions. These actions were consistent with the Tay Local Flood Risk Management Plan.
- A review of the Council's Out of Hours Emergency Service and flood gate closure procedure.
- In November 2020, Scottish Water and the Council carried out the replacement of all 8 pumps (4 foul & 4 surface water) in the South Inch Pumping Station, as part of planned maintenance work. The remaining pumps on the Perth Flood scheme between Inveralmond and South Inch, have been replaced over the last year.



## List of Acronyms and Abbreviations

FEH	Flood Estimation Handbook
FEP	Flood Emergency Plan
FLS	Forestry and Land Scotland
FRM	Flood Risk Management
ICS	Integrated Catchment Study
LFRMP	Local Flood Risk Management Plan
LPD	Local Plan District
PLP	Property Level Protection
NFM	Natural Flood Management
PVA	Potentially Vulnerable Area
Q&S	Quality & Standards (Scottish Water)
RAG	Red, Amber, Green
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SFFS	Scottish Flood Forecasting Service
SF	Scottish Forestry
SPP	Scottish Planning Policy
SR10/15	Spending Review periods for 2010-2015 and 2016-2021 for Scottish Water capital maintenance expenditure
SUDS	Sustainable Urban Drainage System
SWMP	Surface Water Management Plan
TEAMB	Tay Estuary and Montrose Basin

## Annex 1: FRM Responsibilities & Legal Requirement for this Final Report

### Flood Risk Management in Scotland

The Scottish Ministers, SEPA and responsible authorities must exercise their flood risk related functions with a view to reducing overall flood risk (refer to Section 1(1) of the Flood Risk Management (Scotland) Act 2009).

Through the preparation of a national flood risk assessment and setting of objectives to reduce the level of flood risk by SEPA, which is published in the Flood Risk Management Strategy, and the publication of Local Flood Risk Management Plans by lead local authorities, which detail how and when the actions agreed to meet these objectives are to be done, SEPA and all responsible authorities must act to manage flood risk in a sustainable way.

[Flood Risk Management Strategy for the Tay Local Plan District](#)

[Local Flood Risk Management Plan for the Tay Local Plan District](#)

### Legal Requirement

This document sets out an assessment of the progress made on implementing the Local Flood Risk Management Plan (LFRMP) for the Tay Local Plan District (LPD) as required by Section 38 of the Flood Risk Management (Scotland) Act 2009 (the “Act”).

#### **38 Local flood risk management plans: final report**

- (1) Not earlier than 5 years, and not later than 6 years, after a local flood risk management plan is finalised, or by such other date as the Scottish Ministers may direct, the lead authority must publish a report on the plan containing —
- (a) an assessment of the progress made towards implementing the current measures,
  - (b) a summary of the current measures which were not implemented, with reasons for their non-implementation, and
  - (c) a description of any other measures implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the objectives summarised in the supplementary part of the plan.
- (2) The lead authority must make copies of the report available for public inspection.

The Tay Local Flood Risk Management Plan, which includes the ‘implementation part of the Plan’, was published in June 2016. An Interim Report on the progress made on this Plan was published in March 2019. This Final Report was therefore to be published

between December 2021 and June 2022. However, the Scottish Minister's subsequently directed that the Final Report be published by 31 December 2022.

The Final Report provides a summary of the Tay Local Flood Risk Management Plan actions ('measures') and assessment of the progress made towards implementing them. The information on progress includes:

- an assessment of the progress made towards implementing each of the actions.
- reasons for any actions where delivery is not as planned; and
- a summary of the actions which have not been implemented, with reasons why they were not implemented; and
- a description of arrangements planned to deliver the remaining actions and to address delayed actions; 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 summarised in the Plan.

The Final Report is published by the lead authority as defined by Section 34(9) of the Act in partnership with SEPA and the responsible authorities, as defined by Section 5 of the Act. The approval of the Final Report will be in accordance with the agreed governance arrangements for the Local Plan District Partnership. The responsible authorities for the Tay LPD Partnership are:

- Perth & Kinross Council (lead authority)
- Angus Council
- Fife Council
- Stirling Council
- SEPA
- Scottish Water
- Loch Lomond and the Trossachs National Park
- Cairngorms National Park
- Scottish Forestry

## Publication

The published Final Report for the Tay LFRMP will be made available for public inspection, as per Section 37(2) of the Act, via the website of the lead authority, Perth & Kinross Council:

<http://www.pkc.gov.uk/frmplans>

Links to the published Final Report for the Tay Local Flood Risk Management Plan will also be provided from Scottish Government, SEPA and other responsible authority websites.

A hard (paper) copy of the published Interim Report for the Tay LFRMP is also available for public inspection at the following location(s):

- (1) Pullar House, 35 Kinnoull Street, Perth PH1 5GD
- (2) Auchterarder Library, Chapel Wynd, Auchterarder PH3 1BL
- (3) Blairgowrie Area Office, 46 Leslie Street, Blairgowrie PH10 6AQ
- (4) Crieff Area Office, 32 James Square, Crieff PH7 3EY
- (5) Pitlochry Area Offices/Library, 26/28 Atholl Road, Pitlochry PH16 5BX
- (6) Breadalbane Community Campus, Crieff Road, Aberfeldy PH15 2DU
- (7) Loch Leven Community Campus & Library, The Muirs KY13 8FQ

during the hours of 8.45 a.m. to 5.00 p.m., Mondays to Fridays inclusive, except 8.45am to 11am on the first Thursday of every month.

Copies of the published Final Report for the Tay Local Flood Risk Management Plan may also be available at offices of other responsible authorities. Those persons living in the Angus, Stirling and Fife Council areas of the Tay District should contact their own local authority in the first instance:

Angus Council ACCESS line	03452 777 778
Fife Council General Enquiries	03451 550 000
Stirling Council General Enquiries	01786 404 040

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