

## Invergowrie (Potentially Vulnerable Area 07/12)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council, Dundee City Council, Perth and Kinross Council	Invergowrie Burn

### Summary of Progress Within PVA



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There are approximately 240 residential properties and 60 non-residential properties at risk of flooding. The Annual Average Damages are approximately £740,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/12.

Key progress has been made with the Dundee Dighty, Monifieth and Sidlaws Flood Study and the establishment of the surface water management partnership. However, the majority of the flood risk in the Invergowrie area originates from fluvial sources of flooding and so this area was not taken forward in the wider surface water management plan. The Invergowrie Natural Flood Management Study was completed in 2022.

The PVA has been exposed to recent significant weather events including Storms Dennis in February 2021.

### Overview of actions to manage flooding in the Invergowrie PVA

PVA	Flood protections scheme /works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/ study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/ response	Planning policies
07/12					G	G	G			G			G	G	G		G	G

### Summary of Progress of Actions to Manage Flood Risk in Invergowrie (PVA 07/12)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Final Progress	Planned Actions to complete
Natural Flood Management Study	G	Undertake a natural flood management study to assess whether river / flood plain restoration and sediment management could help reduce flood risk in Invergowrie. The study will take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream economically, socially and environmentally.	Angus Council, Dundee City Council, Perth & Kinross Council	2016 - 2020	The Invergowrie natural flood management study commenced in March 2020. The contract was administered by Perth & Kinross Council and was awarded to consulting engineers, Sweco UK Ltd. The study was completed in September 2022.	Perth and Kinross Council disseminated the study findings to the local community in September 2022.
Surface Water Plan/ Study	G	A surface water management plan or plans to cover Dundee, Broughty Ferry, Invergowrie, Lochee and Monifieth, which set objectives for the management of surface water flood risk and identify	Angus Council, Dundee City Council, Perth & Kinross Council	2016 - 2019	The SWMP for Invergowrie is being undertaken as part of the Dundee Downfield, Monifieth and Sidlaws Flood Protection study which commenced in June 2018. The SWMP partnership has been established and	Angus Council will continue to work with Dundee City Council, Scottish Water and RPS to prepare the surface water management plans for this PVA. These plans will identify joint and / or separate solutions to surface water

		the most sustainable actions to achieve the objectives will be prepared.			available information reviewed.	flooding within this PVA. Once the plans are finalised the SWMP partners will support the prioritisation of solutions and jointly seek funding. This study is on track to complete in July 2019. The Tayside Integrated Catchment Study (ICS) demonstrated that there was very little interaction between the Invergowrie Burn and other sources of flooding. Perth and Kinross Council have therefore not progressed with the ICS which was originally intended to support the surface water management plan process.
Strategic Mapping and Modelling	G	Undertake further investigation and modelling in the Hatton 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		Scottish Water have delivered Section 16 assessment data as programmed in the Tay Estuary and Montrose Basin Local Flood Risk Management Plan.	

<p><b>Flood forecasting (90320009)</b></p>	<p><b>G</b></p>	<p>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.</p>	<p>SEPA</p>		<p>SEPA has continued to operate the Scottish Flood Forecasting Service (SFFS) Partnership with the Met Office with daily, national flood guidance statements issued to Category 1 and 2 agencies (such as emergency responders' local authorities and other organisations with flood management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.</p>	<p>SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements, with flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.</p>
<p><b>Awareness Raising</b></p>	<p><b>G</b></p>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Scottish Water will support SEPA and responsible authorities with their awareness raising activities as</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>SEPA has delivered a range of awareness raising activities through campaigning education activities and partnership delivery. We have run national and local digital and direct engagement campaigns to raise awareness of flood risk and SEPA's flood warning service, Flood line. We</p>	<p>SEPA will continue to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships, improving the flood warning, and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood</p>

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 Scottish Water website (<https://www.scottishwater.co.uk/you-and-your-home/your-home/flooding-information>). SEPA will undertake flood risk education and awareness raising activities. In addition, SEPA will engage with the Council and community resilience groups and participate in property level protection events delivered by the Scottish Flood Forum where possible. 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

publish and publicise an electronic Newsletter (Flooding Gateway) four times a year which is distributed to a wide audience. We are working with Education Scotland and Scottish Government Resilience team to embed flooding awareness within the Curriculum for Excellence, and resilience partners in Safer Communities programmes. We have also developed an inline tool that helps everyone share information on current flooding issues (Report-a-Flood). We have worked in partnership with Local Authorities, emergency services and community organisations (e.g., Neighbourhood Watch Scotland, Citizens Advice Scotland, and others) to share our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish

warning and forecasting service, innovation, education and engagement with partners, customers, and the public. Perth and Kinross Council will continue with awareness raising activities when developing proposals for any on-going actions in it's local flood risk management plans.

		exist, SEPA will engage with community resilience groups and community safety partnerships.			Flood Forum and worked closely with UK agencies to develop joint flooding information. Perth and Kinross Council engaged with the local community in Invergowrie in September 2022 to disseminate the findings of the Invergowrie Natural Flood Management Study. Advice and information on flood risk management are also available on the Council's website.	
Self Help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and Business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood action plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.	Responsible Authorities	Ongoing	Everyone is responsible for protecting themselves and their property from flooding. Property and Business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood action plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.	Perth and Kinross Council will continue to support communities to become more resilient to flooding and to develop community resilience groups and emergency plans.



					Perth and Kinross Council supports communities to become more resilient to emergency situations, including flood events. Communities have been engaged through the multi-agency local Resilience Partnership and Community and Business Resilience Group led by the Council.	
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules of clearance and repair works and make these available for public inspection. Scottish Water undertake risk-based inspection, maintenance, and repair on the public sewer network. Asset owners and riparian landowners are responsible for the maintenance and management of their own assets including those which help to reduce flood risk.	Local authorities, asset / land managers	Ongoing	Perth and Kinross Council has continued to inspect and assess watercourses. Routine 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 reduce that flood risk, then those works are included on the Council's clearance and repair schedule and carried out. Perth and Kinross Council	Perth and Kinross Council will continue to inspect and assess watercourses and carry out clearance and repair works where this would substantially reduce flood risk. Road gullies will continue to be monitored and cleared as per the gulley monitoring programme. Scottish Water will continue to undertake risk-based inspections and maintenance.

				<p>also operates a monitoring programme for the inspection and maintenance of road gullies. Each gully 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. Scottish Water continue to undertake risk-based inspections maintenance and repair on the public sewer network.</p>	
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Emergency Plans / Response	G	<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. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>	Category 1 and 2 responders	Ongoing	<p>SEPA continues to support LAs in emergency planning and the process is ongoing in identifying areas requiring Emergency Plans. Perth and Kinross Council has implemented its Flooding Emergency Response Plan. 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, and infrastructure.</p>	<p>SEPA to provide a list of receptors at risk but not currently considered as a PVA action (as discussed during PVA consultation exercise). LA to discuss with private owner and / or Community group about preparing an Emergency Plan with assistance provided by Grampian Emergency Planning Unit and the Scottish Flood Forum Fife Council aims to raise awareness of flooding through ongoing community engagement and working in partnership with the Scottish Flood Forum, SEPA and Scottish Water to share our resources and help to promote community resilience and understanding of how we manage flood risk within the Local Authority area and the local plan districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education.</p>
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						Consideration will also be given to a public communications campaign to assist with raising awareness of flooding. Perth and Kinross Council will continue to implement the Flooding Emergency Response Plan when required. Where no incidents have occurred 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.
Planning Policies	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment- scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address</p>	Planning authority	Ongoing	<p>SEPA and Local Authority Officers have continued to provide flood risk information to the local plan and the development control process. The promotion of sustainable surface water drainage is in place for all new developments. The current Perth &amp; Kinross Local Development Plan (LDP2) contains planning policy and development</p>	<p>This action will continue key milestones in Perth &amp; Kinross Council's LDP3 review will be the policy and place discussions which will take place during 2022/23, culminating in the preparation of an Evidence Report in 2023, whilst preparation of the Proposed Plan is programmed for 2024. To inform this process, the</p>

the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the national planning policies see <http://www.sepa.org.uk/environment/land/planning/>. SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 72 of the FRM Act, 2009. SEPA also has a duty to cooperate with planning authorities in the preparation of development plans. When consulted in relation to planning applications for development or for site allocations in development plans, or where the planning authority considers there may be a risk of flooding, SEPA will provide advice. Advice provided by SEPA will be with respect to the risk of flooding and based on the relevant information it holds which is suitable for planning purposes. It will also

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 & 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.

Council is undertaking a Strategic Environmental Assessment (SEA) and will prepare an Environmental Report to identify, describe and evaluate the 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 Perth & Kinross Council's flooding team.

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.

Perth & 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 conducted since the adoption of LDP2 has 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.	
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