

Summary of All Actions

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

Detailed Description of Actions

General Actions (apply to all areas):-

- **Flood forecasting** - The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business.
- **Self-help** - Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.
- **Awareness raising** - Public awareness, participation and community support are essential components of sustainable flood risk management. SEPA and the responsible authorities have a duty to raise public awareness of flood risk. This is undertaken both individually and collaboratively by a range of organisations. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.
- **Maintenance** - Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. The local authorities produce schedules of clearance and repair works and make these available for public inspection. Scottish Water undertake inspection and repair on the public sewer network. Asset owners and riparian landowners are responsible for the maintenance and management of their own assets including those which help to reduce flood risk.

- **Emergency plans/response** - Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is co-ordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.
- **Planning policies** – The Scottish Planning Policy sets out the Scottish Ministers' priorities for the operation of the planning system and the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, development in areas with medium to high likelihood of flooding should be avoided.

Specific Actions (apply to PVAs):-

- **Flood Protection Schemes or Works** – Schemes and works include those actions where no further study is required to understand flood risk and measures have already been identified and developed. In order to reach this stage, detailed hydraulic modelling, optioneering and feasibility studies will have been completed. Local authorities are therefore likely to seek capital funding to deliver them during the first 6 year cycle of the Flood Risk Management (FRM) process.
- **Flood Protection Study** – this applies where SEPA's appraisal has indicated that a group of actions are likely to address a flooding problem and that the initial assessment of technical, economic and environmental feasibility has indicated that it is worth progressing to a more detailed study to consider engineered flood defences such as flood storage, improved conveyance, control structures and walls and embankments.
- **Maintain Flood Protection Scheme** - Local authorities have a duty to maintain and operate any existing flood protection schemes.
- **Natural Flood Management Works** – works to implement flood management techniques that aim to work with natural processes (or nature) to manage flood risk.
- **Natural Flood Management (NFM) Study** – to consider using the natural features of the land (through techniques such as runoff control, river/floodplain restoration and sediment management) to store and slow down the flow of water.

- **Surface water plan/study** - Surface water flooding will be managed separately from the Flood Risk Management (FRM) process in some areas through:
 - Integrated Catchment Studies (ICS) – In urban areas, the causes of flooding are complex because of the interactions between rivers, surface water drainage and combined sewer systems and tidal waters. Scottish Water works with SEPA and local authorities to assess these interactions through detailed studies.
 - Surface Water Management Plans (SWMP) – A plan that takes an integrated approach to drainage accounting for all aspects of urban drainage systems and produces long term and sustainable actions. The aim is to ensure that during a flood the flows created can be managed in a way that will cause minimum harm to people, buildings, the environment and business.

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

- **Maintain flood warning** – SEPA has a duty to maintain any existing flood warning schemes. A flood warning scheme is the network of monitoring on a coastal stretch or river, which provides SEPA with the ability to issue Flood Warnings. There are already a number of flood warning schemes within Perth & Kinross on the River Tay, River Almond, River Earn, River Ericht, River Isla and the Water of Ruchill at Comrie.

- **New flood warning** - SEPA are also considering potential new flood warning schemes within Perth and Kinross.

- **Community flood action groups** - 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.

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

- **Strategic mapping and modelling** – Strategic mapping and modelling actions have been identified in locations where SEPA is planning to undertake additional modelling or analysis of catchments and coastlines, working collaboratively with local authorities where appropriate, to improve the national understanding of flood risk. Note that this is separate to those locations where a flood study is required to gain a more detailed understanding of local flooding mechanisms and inform the optioneering and detailed design of Flood Risk Management (FRM) measures.