

Flood Risk Management (Scotland) Act 2009

INTERIM REPORT on the TAY ESTUARY AND MONTROSE BASIN Local Flood Risk Management Plan



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Foreword

This INTERIM REPORT to the 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 ourselves and our communities across the local plan district.

“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 Estuary and Montrose Basin Local Flood Risk Management Plan, June 2016)

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

The INTERIM REPORT is published by Angus Council on behalf of a partnership comprising five local authorities: Angus Council; Perth and Kinross Council, Fife Council; Aberdeenshire Council; Dundee City Council; as well as Scottish Water; SEPA; Cairngorms National Park Authority and Forestry Commission Scotland.

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

Since the publication of the 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 and 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.

SEPA, local authorities and Scottish Water and other responsible authorities will continue to work collaboratively to implement the actions in the Plan to its conclusion in June 2022.

Background

The INTERIM REPORT is a legal requirement of the Flood Risk Management (Scotland) Act 2009(Section 37). The INTERIM REPORT is required to be published between July 2018 and June 2019. The INTERIM REPORT includes the conclusions of a review of the Tay Estuary and Montrose Basin Local Flood Risk Management Plan (the ‘Plan’), published in June 2016 and includes information on the progress that has been made towards implementing the actions identified in the Plan.

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

A copy of the Tay Estuary and Montrose Basin Local Flood Risk Management Plan can be found at the follow link.

[https://www.angus.gov.uk/sites/angus-cms/files/2017-07/Tay Estuary and Montrose Basin Local Flood Risk Management Plan.pdf](https://www.angus.gov.uk/sites/angus-cms/files/2017-07/Tay%20Estuary%20and%20Montrose%20Basin%20Local%20Flood%20Risk%20Management%20Plan.pdf)

Review of the plan

This section sets out the conclusions of the review of the plan and a summary of progress of actions detailed in Tay Estuary and Montrose Basin Local Flood Risk Management Plan. It draws upon the assessment of progress of actions presented in the subsequent sections.

Key progress in reducing the impacts of flooding since publication

Partnership working within the TEAM B Local plan district has been very positive and enabled the Responsible Authorities to work together to achieve the objectives of the plan. This has ensured that progress against the actions identified in the plan has been good with the majority of actions commenced within the proposed timescale. Responsible Authorities have been able to learn from each other's working practices and experiences and this has been hugely valuable in progressing the actions identified within the plan.

1. Angus Council has developed a flood protection scheme for the Brothock Water in Arbroath. This has received confirmation of 80% funding from the Scottish Government's Capital Grant fund. Construction will commence in 2019.
2. Dundee City Council completed a flood protection scheme from City Quay to Dundee Airport coastline in August 2018. The scheme received 80% funding from the Scottish Government's Capital Grant Fund.
3. Dundee City Council has developed a flood protection scheme for the Broughty Ferry coastline. The scheme has been granted planning permission and construction will commence in the summer of 2019.
4. Strategic studies are progressing across LPD 7. These cover the following areas:
 - Hatton sewer catchment (Dundee to Arbroath) by Scottish Water
 - Mapping and Modelling of Montrose coastal area and Arbroath – Dundee coastal area by SEPA.
5. A number of LPD wide actions are being undertaken across the district by the Local Authorities and Scottish Water and these include :-
 - maintenance of existing and new assets
 - clearance and repair activities
 - awareness raising – both of flooding in general and the plan led approach to flood risk management
6. A number of flood protection studies and surface water management plans are progressing across the Team B district in partnership with Consultants – specific details of these studies are provided within the report.
7. SEPA has continued to operate the Scottish Flood Forecasting Service Partnership with the Met office. Daily, national flood guidance statements are issued to Category 1 and 2 agencies (such as emergency responders, local authorities and other organisations with flooding management duties.) Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these

organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding. SEPA has also continued to provide flood warning service to a number of locations within the Tay Estuary and Montrose Local Plan District.

How current is the 2016 Plan?

The Plan was published in June 2016 supplementing the Flood Risk Management Strategy published by SEPA in December 2015. The Plan details how the actions identified in the Strategy were to be implemented over the period 2016 to 2022. The Strategy and Plan are based on the National Flood Risk Assessment and the designated Potentially Vulnerable Areas at that time.

Since the identification of the action in the Plan, there have, and continue to be advancements in our knowledge and methodologies. These include the publication by SEPA of an updated National Flood Risk Assessment and Potentially Vulnerable Areas in December 2018. These advancements may inform the delivery of the actions in this Plan and will be used in the development of future Strategies and Plans. Changes to planned delivery of actions is outlined in the assessment of the progress of actions section.

Significant challenges

Based on a review of the assessment of the progress of actions detailed in this INTERIM REPORT, the following key challenges and issues have been identified that have or may have 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 an LPD, this is detailed in the 'Assessment of the progress of actions'.

However, the overall delivery of actions in the Plan has not been impacted by funding or resource issues.

Significant weather events

The Tay Estuary and Montrose Basin LPD was adversely affected by significant weather events in late 2015 and early 2016, which had an impact on the delivery of actions in the Plan from June 2016 onwards. For example, Angus Council and Perth & Kinross Council resources were deployed to deal with the emergency events at the time as well as the follow up activities and necessary works, which are still being delivered into financial year 2019/20. 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 was experienced in March 2018. This resulted in low temperatures and high levels of snow fall across the district although a gradual thaw meant that flooding from snow melt was limited.

Arrangements planned to deliver the remaining actions affected by significant weather events are described below and detailed in the 'Assessment of the progress of actions' section of this INTERIM REPORT. Specifically each local Authorities approach to resilience and measures for climate change adaption are relevant.

Funding

The 'actions in the Plan 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 Estuary and Montrose Basin Local Flood Risk Management Plan, June 2016).

Allocation of Resources

The delivery of flood risk management actions must be seen in the context of challenging local government finances and increased expectation and demand for public services. This applies to all of the responsible authorities and SEPA.

The impact on the level of funding from Scottish Government in general settlements for local government and in respect of funding for other responsible authorities and SEPA may also have had an effect on the availability and allocation of resources. There is a challenge for priority of flood risk with and against many other worthy demands on public spending.

The availability and retention of skilled staff to deliver flood risk actions has been a limiting factor in some areas. The increased workload created by the weather events noted above has put more pressure on existing staff resources. This has caused consequential delays in the planned delivery of actions.

Prioritisation of actions for next plan cycle

Many actions contained in the plan are to undertake studies that will assess the need for further actions to be implemented in future plans. 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. This introduces a deadline date by when such actions need to be detailed and submitted by responsible authorities for consideration as actions in the next plans from 2022-28. The deadline date for submission of these actions to SEPA has been set as December 2019. The actions submitted will then be assessed and prioritised against the flood risk objectives, and consulted upon ahead of the publication of the next cycle of Flood Risk Management Strategies in December 2021 and Local Flood Risk Management Plans in June 2022. Any actions that miss this deadline may therefore be delayed for consideration in the next cycle from 2028-34.

Arrangements planned to deliver the remaining actions

The actions in the Plan will continue to be delivered over the remainder of the 2016 to 2022 period. This will be as per the published Plan, subject to revisions in delivery dates as detailed in the 'Assessment of the progress of actions' section of this INTERIM REPORT.

In general, all of the actions in the Plan will be delivered by June 2022. 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 there is a risk that remaining actions will not be delivered by the end of the Plan, planned contingencies have been considered, which are described against the relevant action.

Next steps

A Final Report on the plan will be published in between July 2021 and June 2022. This will include an updated assessment of the progress made towards implementing the current actions, a summary of the current measures which were not implemented, with reasons for their non-implementation; and a description of any other measures implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the flood risk objectives.

In the meantime, to find out more about how flood risk is being managed please refer to your Local Authority website :-

https://www.angus.gov.uk/the_environment/flooding/flood_management

<http://www.pkc.gov.uk/article/14716/Flooding>

<https://www.dundee.gov.uk/service-area/city-development/flooding>

<https://www.fifedirect.org.uk/topics/index.cfm?fuseaction=subject.display&subjectid=6128ECEA-FA04-4CEE-11F4FBCDEB3BD6E2>

<https://www.aberdeenshire.gov.uk/environment/flooding/>

Conclusions

Since the publication of the Tay Estuary and Montrose Basin Local FRM Plan in June 2016, good progress has been made over the initial three years of the first cycle. This has clearly highlighted the benefits that can be achieved by partnership working in flood risk management.

Flood protection studies have generally progressed as programmed, and surface water management studies have commenced in some areas utilising the detailed hydraulic modelling outputs from Scottish Water to increase certainty in the predictions of surface water flooding. Detailed consideration of flood sources and pathways has allowed an improved understanding of the impacts of flooding, allowing for improved prioritization of measures.

The requirement for sustainable flood measures to be prioritised will drive environmental improvements in conjunction with flood protection, achieving enhancements to communities across the Tay Estuary and Montrose Basin district.

The responsible authorities involved in delivering the actions for the Tay Estuary and Montrose Basin LPD are also involved in delivering actions in other local plan districts with the exception of Dundee City Council whose boundary extents are wholly within the Tay Estuary and Montrose Basin district.

Assessment of progress – Local Plan District

This section sets out an assessment of the progress towards implementing the actions set out in the Team B LFRMP.

There are actions that apply across the whole of the TEAMB LPD and actions that are specific to each of the 19 Potentially Vulnerable Areas (as defined under Section 13 of the Act) in the TEAMB LPD, which are shown below in Figure 1.

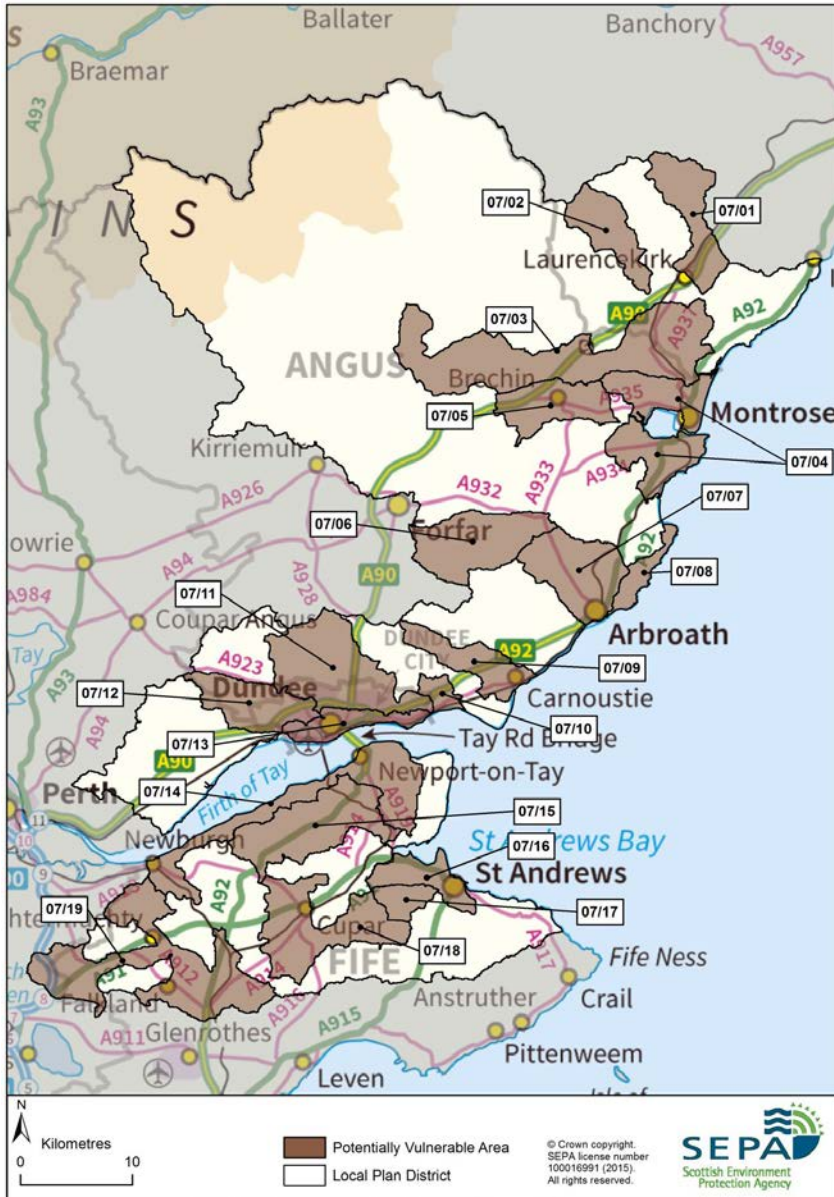


Figure 1: The Tay Estuary and Montrose Basin Local Plan District with Potentially Vulnerable Areas identified

Reproduced from Tay Estuary and Montrose Basin Local Plan District Flood Risk Management Strategy, SEPA (December 2015)

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

- **GREEN** – Action has been/is being delivered and is on programme and within budget;
- **AMBER** – Action is behind programme and/or over budget, but the action is still anticipated to be achieved in Cycle 1.
- **RED** – Action is behind programme and/or over budget, with key dates unlikely to be met in Cycle 1 and/or the outputs unlikely to achieve what was anticipated by the LFRMP.

PVA	Flood protections scheme/works	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection scheme*	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
07/01							A			G			G	G	G		G	G
07/02								G		G		G	G	G	G		G	G
07/03							SW G	SEPA R	G	G			G	G	G		G	G
07/04			G	G		G	SW G	SEPA G	G	G		G	G	G	G		G	G
07/05		G			G	G	SW G	SW G	G	G			G	G	G		G	G
07/06							SW A	SEPA R		G			G	G	G		G	G
07/07	G					G	G	A	G	G			G	G	G		G	G
07/08						G	G	A		G			G	G	G		G	G
07/09				G		G	G		G	G			G	G	G		G	G
07/10			G	G			SW G	SEPA A	G	G			G	G	G		G	G
07/11				G		AC G	SW A	SW G	SEPA A			G	G	G	G		G	G
07/12					A	G	G			G			G	G	G		G	G
07/13	G					LA G	SW A	SW G	SEPA A		G		G	G	G		G	G
07/14				A			SW G	SEPA A		G			G	G	G		G	G
07/15							SW G	SEPA A		G			G	G	G		G	G
07/16	A			A		A	SW G	SEPA A		G			G	G	G		G	G
07/17	A		G	A		A	G			G			G	G	G		G	G
07/18			G	G		A	SW G	SEPA R	G	G			G	G	G		G	G
07/19			G	R	A		SW G	SEPA R	G	G			G	G	G		G	G

Figure 2: Summary of progress of actions to manage flood risk in the Potentially Vulnerable Areas of the Tay Estuary and Montrose Ba

Progress with LPD-wide Actions

The details of progress with LPD wide actions is contained within the individual sheets for each Potentially Vulnerable Area.

Progress with PVA-specific Actions

This section sets out an assessment of the progress towards implementing actions that are specific to each of the 19 PVA as shown in Figure 2. Assessments of the progress of actions within each PVA are presented.

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.

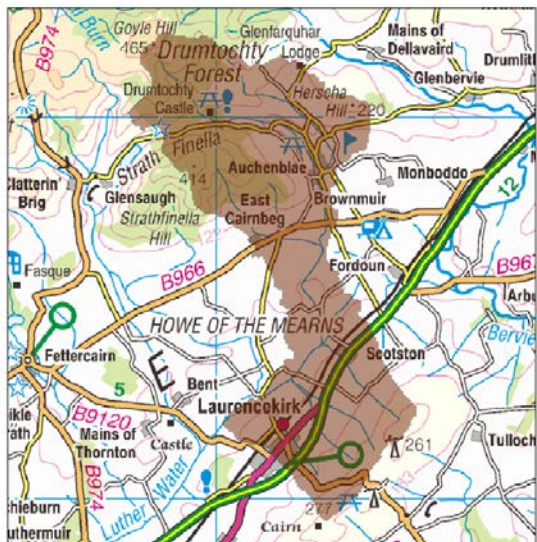
List of Acronyms and Abbreviations

FRM	Flood Risk Management
ICS	Integrated Catchment Study
LFRMP	Local Flood Risk Management Plan
LPD	Local Plan District
NFM	Natural Flood Management
PVA	Potentially Vulnerable Area
Q&S	Quality & Standards (Scottish Water)
SEPA	Scottish Environment Protection Agency
SR10/15	Spending Review periods for 2010-2015 and 2016-2021 for Scottish Water capital maintenance expenditure
SWMP	Surface Water Management Planning
TEAMB	Tay Estuary and Montrose Basin

Laurencekirk (Potentially Vulnerable Area 07/01)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Aberdeenshire Council	River North Esk (Tayside)

Summary of Progress Within PVA



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There are approximately 20 residential properties at risk of flooding. The Annual Average Damages are approximately £110,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/01.

Progress has been made by Scottish Water on sewer modelling and mapping. This work will provide an improved understanding of flooding from the public sewer system. The 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 Estuary and Montrose Basin catchments.

Overview of actions to manage flooding in the Laurencekirk 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
07/01							A			G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Laurencekirk (PVA 07/01)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Strategic Mapping and Modelling	A	<p>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.</p> <p>Scottish Water will work with responsible authorities to incorporate relevant information into these studies and by regularly keeping the responsible authorities informed of their progress.</p> <p>Scottish Water will provide responsible authorities with the outputs of the Section 16 assessment which, where relevant, may be used to inform surface water management plans and SEPA flood hazard and risk maps.</p> <p>Scottish Water will undertake further investigation and modelling in the Laurencekirk DOA (2016-2019) 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.</p>	Scottish Water	01/06/2016 – 31/12/2019	Sewer modelling and mapping progressing.	Laurencekirk Section 16 assessment scheduled for completion by 01/06/2020.
Flood	G	The Scottish Flood Forecasting Service is	SEPA	01/06/2016	SEPA has continued to operate	SEPA will continue and

Forecasting		<p>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.</p>		<p>– 31/12/2021</p>	<p>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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.</p>	<p>improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
Awareness Raising	G	<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 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</p>	Responsible Authorities	ongoing	<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 publish and publicise an electronic Newsletter (Flooding Gateway) four times a year which is distributed to a wide audience. We are working with</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Aberdeenshire Council's website provides guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p> <p>In an effort to assist local</p>	<p>engagement with partners, customers and the public.</p> <p>Aberdeenshire 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</p>
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					<p>communities, Aberdeenshire Council has progressed several projects involving placing shipping containers of sandbags within the communities most likely to be affected by flooding. This encourages community resilience whilst reducing demands on the Council's front-line resources during a flood event.</p> <p>There is engagement with community councils and flood groups. As flood studies are developed there will be greater engagement with local communities which will assist in raising awareness.</p> <p>In partnership with Education Scotland, plans were in place to deliver a seminar to school teachers in Aberdeen City, Aberdeenshire and Moray. Unfortunately, this had to be cancelled due to the low numbers of interested delegates.</p>	<p>resilience and understanding of how we manage flood risk in Aberdeenshire and the North East Local Plan District.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Aberdeenshire Council also will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
Self Help	G	<p>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</p>	Responsible Authorities	ongoing	<p>SEPA assist members of the public to sign up to Floodline. Aberdeenshire Council make PLP products available at cost price. New sandbag containers have been installed across Aberdeenshire at flood prone locations for public to help</p>	<p>Continue to provide discounted cost Property Level Protection products. Continue discussions with Community Groups to provide community run sandbag containers at various locations.</p>

		level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.			themselves to in times of flooding.	
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	Publicly accessible page available on Council website, updated nightly, showing schedules of clearance and repair as assessments take place.	Continue to do routine watercourse inspections and update schedules on Council website.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water 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	Category 1 and 2 responders	ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 Aberdeenshire aims to raise awareness of flooding through ongoing

		supported by the work of voluntary organisations.				<p>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 in Aberdeenshire and the North East Local Plan District.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Aberdeenshire Council also will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
Planning Policies	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land	Planning authority	ongoing	<p>Aberdeenshire Council and SEPA continues to advise on planning applications.</p> <p>Aberdeenshire Council has recently provided input to the Strategic Flood Risk Assessment for the Aberdeen City and Shire Strategic Development Planning Authority Proposed Strategic Development Plan 2020.</p>	<p>Aberdeenshire Council will continue to advise on planning applications.</p> <p>The proposed Strategic Development Plan's accompanying Strategic Environmental Assessment will incorporate the Strategic Flood Risk Assessment details into its</p>

		<p>management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the 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. 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.</p>			<p>The Strategic Flood Risk Assessment is a strategic overview of flood risk in the Strategic Development Plan Area. It combines the collection, analysis and presentation of all existing and derivable information on flood risk. The Strategic Flood Risk Assessment process is designed to inform the development planning process and to reduce flood risk by avoiding areas at risk of significant flooding.</p> <p>Aberdeenshire Council are currently carrying out a review of the Local Development Plan 2021 Bid Sites submitted to ensure these are assessed for both drainage issues and potential flood risk.</p>	<p>baseline data. The Main Issues Reports should be published for consultation in the first quarter of 2019.</p>
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Fettercairn (Potentially Vulnerable Area 07/02)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Aberdeenshire Council	River North Esk (Tayside)

Summary of Progress Within PVA



There are approximately 50 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £140,000. All damages are derived from river flooding. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/02.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Fettercairn 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
07/02									G		G		G	G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Fettercairn (PVA 07/02)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Maintain Flood Protection Scheme	G	The existing Fettercairn Flood Protection scheme provides relief from watercourse flooding. This includes an informal flood storage area on the Burn of Cauldcotts constructed in 2011. Aberdeenshire Council will maintain the existing Flood Protection Scheme ensuring works are co-ordinated 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 Aberdeenshire Council engineers on a priority needs basis as resource allows. The general maintenance standard target is to conduct watercourse inspections annually and	Aberdeenshire Council	01/06/2016 - 31/12/2021	Information on the 2011 flood protection works and the Formal 1987 flood protection works (SFDAD data) added to LA's routine inspection and maintenance programme.	Continue to undertake inspections of the scheme and schedule any necessary repairs.

<p>Flood forecasting</p>	<p>G</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, giving people a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA's website.</p>	<p>SEPA, Met Office</p>	<p>01/06/2016 – 31/12/2021</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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables 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 and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
<p>Community Flood Action groups</p>	<p>G</p>	<p>Aberdeenshire Council will work with the Fettercairn Flood Resilience Group to reduce flood risk, improve preparedness and increase resilience against flooding. Aberdeenshire Council will provide regular updates. Aberdeenshire Council will ensure stocks of sandbags are delivered to the Distillery for distribution by the community. A water level</p>	<p>Aberdeenshire Council</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Aberdeenshire Council will work with the Fettercairn Flood Resilience Group to reduce flood risk, improve preparedness and increase resilience against flooding. Aberdeenshire Council will provide regular updates. Aberdeenshire Council will ensure stocks of sandbags are delivered to the Distillery</p>	<p>Aberdeenshire Council will continue to provide support and advice to Fettercairn Flood Resilience Group when resources are available. This will include checking the stocks of sandbags that are held at the Distillery for the public.</p>

		<p>indicator board has been erected on the Cauldcots Burn near the Royal Arch as an aid to residents in deciding when sandbags should be deployed.</p> <p>Aberdeenshire Council will also maintain the existing watercourse gauges at the Distillery and Town Centre which provide the Fettercairn Flood Resilience Group with early warning.</p>			<p>for distribution by the community. A water level indicator board has been erected on the Cauldcots Burn near the Royal Arch as an aid to residents in deciding when sandbags should be deployed.</p> <p>Aberdeenshire Council will also maintain the existing watercourse gauges at the Distillery and Town Centre which provide the Fettercairn Flood Resilience Group with early warning.</p>	
<p>Awareness Raising</p>	<p>G</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 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/</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 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</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Aberdeenshire aims to raise awareness of flooding through ongoing community engagement and working in partnership with</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Aberdeenshire Council's website provides guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>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 in Aberdeenshire and the North East Local Plan District. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Aberdeenshire Council also will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
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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.	Continue to provide discounted cost Property Level Protection products. Continue discussions with Community Groups to provide community run sandbag containers at various locations.
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	Publicly accessible page available on Council website, updated nightly, showing schedules of clearance and repair as assessments take place.	Continue to do routine watercourse inspections and update schedules on Council website.
Emergency	G	Providing an emergency response	Category 1	ongoing	SEPA continues to support LAs	SEPA to provide a list of receptors

Plans / 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.	and 2 responders		in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 Aberdeenshire 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 in Aberdeenshire and the North East Local Plan District. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Aberdeenshire Council also will give consideration to a public communications campaign to assist with raising awareness of flooding.
Planning Policies	G	Scottish Planning Policy and accompanying Planning Advice	Planning authority	Ongoing	Aberdeenshire Council and SEPA continues to advise on	Aberdeenshire Council will continue to advise on planning

		<p>Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the 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. The advice provided by SEPA will be with respect to the</p>			<p>planning applications. Aberdeenshire Council has recently provided input to the Strategic Flood Risk Assessment for the Aberdeen City and Shire Strategic Development Planning Authority Proposed Strategic Development Plan 2020.</p> <p>The Strategic Flood Risk Assessment is a strategic overview of flood risk in the Strategic Development Plan Area. It combines the collection, analysis and presentation of all existing and derivable information on flood risk. The Strategic Flood Risk Assessment process is designed to inform the development planning process and to reduce flood risk by avoiding areas at risk of significant flooding.</p> <p>Aberdeenshire Council are currently carrying out a review of the Local Development Plan 2021 Bid Sites submitted to ensure these are assessed for both drainage issues and potential flood risk.</p>	<p>applications. The proposed Strategic Development Plan's accompanying Strategic Environmental Assessment will incorporate the Strategic Flood Risk Assessment details into its baseline data. The Main Issues Reports should be published for consultation in the first quarter of 2019.</p>
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		<p>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.</p>				
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North of Brechin (Potentially Vulnerable Area 07/03)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Aberdeenshire Council and Angus Council	River North Esk (Tayside)

Summary of Progress Within PVA



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There are approximately 20 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £110,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/03.

Key progress has been made with the strategic mapping and modelling work carried out by both SEPA and Scottish Water. This will significantly improve the understanding of flood risk within the catchment.

The 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 Estuary and Montrose Basin catchments.

Overview of actions to manage flooding in the North of Brechin 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
							SW	SEPA											
07/03							G	R		G	G			G	G	G		G	G

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Strategic Mapping and Modelling Scottish Water	G	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 Brechin (2018-2020), Laurencekirk (2016-2019) and Montrose (2016-2019) 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	01/06/2016-01/05/2019	Section 16 Sewer mapping in the Brechin, Laurencekirk and Montrose catchments has been progressed by Scottish Water as scheduled.	Sewer mapping on programme for completion by 01/05/19.
Strategic	R	River mapping improvements and surface water mapping	SEPA	01/06/2016 -	SEPA's current Surface water hazard maps use design rainfall	This action will not be taken forwards as described. SEPA will

Mapping and Modelling SEPA		improvements are SEPA-led. SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 1,100km ² of improved surface water data is currently available within this Local Plan District.		31/12/2018	estimates based on FEH99 methodology. This has now been superseded by FEH13 methodology. The FEH13 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.	develop new Surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in Cycle 2. Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in Surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.
	G	SEPA will seek to develop flood mapping in the Cruick Water and Lower North Esk areas to improve understanding of flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.		01/06/2016 – 31/12/2021	Following a screening exercise to characterise the catchment and identify the data necessary to support mapping improvements, a modelling project is currently underway which will enable a revision of the river flood hazard mapping within this catchment.	Mapping exercise has been completed.
Maintain Flood Warning	G	SEPA will continue to maintain the Inchbare, Marykirk and the Logie Mill and Craigo flood warning areas which are part of the North Esk 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	01/06/2016 – 31/12/2021	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
Flood Forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that	SEPA, Met Office	01/06/2016 – 31/12/2021	SEPA has continued to operate the Scottish Flood Forecasting Service (SFFS) Partnership with the	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met

		<p>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.</p>			<p>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 flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.</p>	<p>Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.</p>
<p>Awareness Raising</p>	<p>G</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 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</p>	<p>Responsible Authorities</p>	<p>01/06/2016 – 31/12/2021</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 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</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p>

		<p>(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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Both Aberdeenshire Council's and Angus Council's websites provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>Aberdeenshire and Angus Council aim 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Both Councils will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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,</p>	<p>Responsible Authorities</p>	<p>ongoing</p>	<p>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</p>	<p>Aberdeenshire Council will continue to provide discounted cost Property Level Protection products and to provide community run sandbag containers at various locations. Angus and Aberdeenshire Councils will continue discussions</p>

		installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.			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.	with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
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	Aberdeenshire Council has a publicly accessible page available on Council website, updated nightly, showing schedules of clearance and repair as assessments take place. Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Both Council's will continue to do routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water 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	Category 1 and 2 responders	ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 Aberdeenshire and Angus Council aim 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

		<p>partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>promote community resilience and understanding of how we manage flood risk within the Local Authority area and the local plan districts.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>ongoing</p>	<p>Aberdeenshire Council, Angus Council and SEPA continue to advise on planning applications. Aberdeenshire Council has recently provided input to the Strategic Flood Risk Assessment for the Aberdeen City and Shire Strategic Development Planning Authority Proposed Strategic Development Plan 2020.</p> <p>The Strategic Flood Risk Assessment is a strategic overview of flood risk in the Strategic Development Plan Area. It combines the collection, analysis and presentation of all existing and derivable information on flood risk. The Strategic Flood Risk Assessment process is designed to inform the development planning process and to reduce flood risk by avoiding areas at risk of significant flooding.</p>	<p>Aberdeenshire Council, Angus Council and SEPA will continue to advise on planning applications. Aberdeenshire's proposed Strategic Development Plan's accompanying Strategic Environmental Assessment will incorporate the Strategic Flood Risk Assessment details into its baseline data. The Main Issues Reports should be published for consultation in the first quarter of 2019.</p>

		<p>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. 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.</p>			<p>Aberdeenshire Council are currently carrying out a review of the Local Development Plan 2021 Bid Sites submitted to ensure these are assessed for both drainage issues and potential flood risk.</p>	
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Montrose Basin (Potentially Vulnerable Area 07/04)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	River North Esk (Tayside)

Summary of Progress Within PVA



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 Reproduced from Tay Estuary and Montrose Basin Flood Risk Management Strategy, SEPA (December 2015).

There are approximately 130 residential properties and 90 non-residential properties at risk of flooding. The Annual Average Damages are approximately £700,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/04.

Key progress has been made with the flood protection study for this PVA.

SEPA have made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

Other actions undertaken have included the inclusion of the Montrose coastal area in the National Coastal Change Assessment being taken forward by a consortium of bodies on behalf of the Scottish Government.

Overview of actions to manage flooding in the Montrose Basin 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	
							SW	SEPA												
07/04			G	G		G	G	G	G	G	G		G	G	G	G		G	G	

Summary of Progress of Actions to Manage Flood Risk in Montrose Basin (PVA 07/04)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	G	Angus Council will undertake a flood protection study for Montrose will assess whether flood defences and natural flood management can be used to reduce flood risk. Natural flood management options will consider wave and surge attenuation. The study will also consider the viability of property level protection. The study will take a sustainable approach and consider the interactions between actions and effects on coastal processes along the shoreline, in line with Angus Shoreline Management Plan.	Angus Council	01/06/2016 – 31/12/2019	The flood protection study for Montrose commenced in June 2018 and is progressing. AeCOM were appointed to carry out this study and to date there has been considerable focus on the coastal flooding element.	Angus Council will continue to work with the consultants to finalise the flood study report. Once complete a programme of engagement and consultation will take place to disseminate the findings and discuss and prioritise options.
Maintain Flood Protection Scheme*	G	Undertake routine, reactive, programmed, regulatory and emergency response inspections. The general maintenance standard target is to conduct watercourse inspections annually and structural	Angus Council	01/06/2016 – 31/12/2019	Angus Council have maintained the existing flood protection scheme which extends from the northern end of the splash seawall frontage to the eastern end of Montrose	Angus Council will continue to undertake routine, reactive, regulatory and responsive inspections and programme and co-ordinate required maintenance works where

		inspections biennially.			port.	resources allow. Recommendations from the flood protection study will be incorporated within this programme of maintenance.
Strategic Mapping and Modelling Scottish Water	G	Review the assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk by 2019/20.	Scottish Water	01/06/2016 – 31/12/2019	Scottish Water have provided the outputs from the S16 assessment which can be used in the preparation of surface water management plans for this PVA.	Scottish Water will continue to work with Angus Council and AECOM on the preparation of surface water management plans for this PVA. Once the plans are finalised the SWMP partners will support the prioritisation of solutions and jointly seek funding.
Strategic Mapping and Modelling SEPA	G	SEPA will seek to develop flood mapping in the Montrose area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping and data availability.	SEPA	01/06/2016 – 31/12/2019	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Coastal modelling and mapping project for north-east Scotland. <p>These projects will collectively enable the revision of flood mapping for the coastline from Scrabster to Arbroath.</p> <p>A detailed local authority study is being undertaken for Montrose to inform coastal flood hazard at that location.</p>	<p>It is planned to complete this action in 2019.</p> <p>SEPA will await the conclusion of this local study and review its suitability to inform updates to existing flood mapping alongside the wider coastal hazard mapping improvements in this area.</p>
New Flood	G	Flood Warning is required for communities at risk of coastal	SEPA	01/06/2016 –	SEPA has completed development of a flood	SEPA will continue to operate the flood warning service.

Warning		flooding along the north east coast including the coast at Montrose. This will be co-ordinated with the flood protection study outputs for Montrose		31/12/2021	forecasting model for Aberdeenshire and Angus coastline and has worked with Aberdeenshire Council to develop procedures for the new flood warning service.	
Maintain Flood Warning	G	Continue to maintain the Kinnaird/Bridge of Dun flood warning area (South Esk river flood warning scheme).	SEPA	Ongoing	SEPA has continued to maintain and operate this flood warning service for Kinnaird/Bridge of Dun.	SEPA will continue to maintain and operate this flood warning service for Kinnaird/Bridge of Dun.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	Ongoing	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.
Community Flood Action	G	Angus Council is engaging with Ferryden and Craig Community Council and Aulton Way Flood	Angus Council	01/06/2016 – 31/12/2021	Angus Council has attended a series of meetings with Scottish Water and Borrowfield area	Angus Council will continue to work with Scottish Water to develop solutions to flooding in

Groups		Group.			Flood Group to provide advice and assistance in relation to the issues that have been raised.	the Borrowfield area of Montrose.
Awareness Raising	G	<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 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</p>	Responsible Authorities	01/06/2016 - 31/12/2021	<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 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 (eg. Neighbourhood Watch Scotland, Citizens Advice Scotland and others) to share</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus Council will continue 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public</p>

		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.			our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information. Angus Council's website provides guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	communications campaign to assist with raising awareness of flooding.
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	01/06/2016 - 31/12/2021	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.	Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
Surface Water Plan/ Study	G	Angus Council will prepare surface water management plans to cover Ferryden and Montrose. This will identify the most sustainable	Angus Council	01/06/2016 – 30/06/2019	The surface water management plans for this PVA are being undertaken as part of the flood study by	Angus Council will continue to work with Scottish Water to prepare the surface water management plans for this PVA.

		measures to manage urban drainage and the risk of surface water flooding as well as flooding from the sewer network. This will inform a long term action plan to manage surface water and influence capital investment.			AeCOM. Work will commence on these when the coastal focus has completed. The outputs from the Scottish Water modelling and mapping exercise will identify flooding areas within the urban area with a high degree of confidence.	These plans will identify joint and/or separate solutions to surface water flooding within the area. Once the plans are finalised the SWMP partners will support the prioritisation of solutions and jointly seek funding.
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	01/06/2016 - 31/12/2021	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water are a Category 2	Category 1 and 2 responders	01/06/2016 - 31/12/2021	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

		<p>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>				<p>Aberdeenshire and Angus Council aim 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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 the long-term vulnerability of parts of our coasts</p>	<p>Planning authority</p>	<p>01/06/2016 - 31/12/2021</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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Brechin (Potentially Vulnerable Area 07/05)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	River North Esk (Tayside)

Summary of Progress Within PVA



There are approximately 100 residential properties and 70 non-residential properties at risk of flooding. The Annual Average Damages are approximately £670,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/05.

Key progress has been made on natural flood management works in the upper South Esk catchment. Strategic mapping and modelling has been undertaken by Scottish Water to improve the understanding of surface water flooding in this PVA.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Brechin PVA

PVA	Flood protection 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
							SW	SEPA											
07/05		G			G	G	G	G	G	G	G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Brechin (PVA 07/05)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Maintain Flood Protection Scheme*	G	Angus Council will maintain the Brechin Flood Protection Scheme ensuring works are co-ordinated and all infrastructure is fully assessed. Reactive maintenance will be carried out when necessary.	Angus Council	01/06/2016 – 31/12/2021	Angus Council have maintained the Brechin flood protection scheme since construction was completed in 2017.	Angus Council will continue to undertake routine, reactive, regulatory and responsive inspections and programme and co-ordinate required maintenance works where resources allow.
Natural Flood Management Works	G	Natural flood management works are continuing in the catchment following completion of the Brechin Flood Protection Scheme	Angus Council with SEPA, SNH, Forestry Commission, Fisheries and Landowners	01/06/2016 – 30/06/2020	South Esk catchment restoration works at Rottal Burn and Pow Burn have not been completed. Other projects including contour planting in Glen Clova, diffuse pollution reduction initiative and pilot catchment work are ongoing.	Continue contour planting in upper catchment.
Strategic Mapping and Modelling	G	Review the assessment of flood risk within the highest risk sewer prepare Surface Water Management Plans (SWMPs) to cover Brechin. This will identify the most sustainable measures to manage urban drainage and the	Scottish Water	01/10/2018 – 31/12/2021	Sewer mapping progressing as scheduled.	On track to deliver within agreed timescale

		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. in this area as required under Section 16				
Maintain Flood Warning	G	Continue to maintain the South Esk river flood warning scheme.	SEPA	01/06/2016 – 31/12/2021	SEPA has continued to operate this flood warning service for Brechin	SEPA will continue to operate this flood warning service for the River South Esk and Brechin.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	01/06/2016 – 31/12/2021	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.
Awareness	G	SEPA and the responsible	Responsible	ongoing	SEPA has delivered a range of	SEPA will continue to raise

<p>Raising</p>		<p>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 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</p>	<p>Authorities</p>	<p>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 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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding</p>	<p>awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
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		services (Floodline). Where they exist, SEPA will engage with community resilience groups and community safety partnerships.			information. Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	
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.	Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
Surface Water Plan/ Study	G	Scottish Water will provide modelling and mapping information demonstrating the flood risk from the public sewer system with a high degree of confidence.	Scottish Water	01/06/2016 – 31/12/2019	Section 16 Sewer mapping in the Brechin catchments has been completed by Scottish Water as scheduled.	On programme to complete.
	G	Prepare Surface Water Management Plans (SWMPs) to cover Brechin. 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	Angus Council	01/06/2016 – 30/06/2020	Surface Water management plan partnership established.	Angus Council will coordinate the surface water management plan for Brechin through the partnership using the outcomes of the S16 study by Scottish Water.

		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.				
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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water 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	Category 1 and 2 responders	ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 Aberdeenshire and Angus Council aim to raise awareness of flooding through ongoing community engagement and working in partnership with the

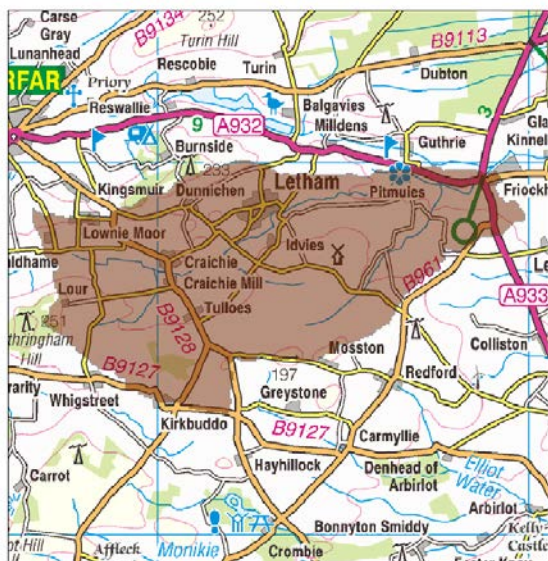
		<p>organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>Scottish Flood Forum, SEPA and Scottish Water to share our resources and help to promote community resilience and understanding of how we manage flood risk within the Local Authority area and the local plan districts.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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Lunan (Potentially Vulnerable Area 07/06)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	Lunan Water

Summary of Progress Within PVA



There are approximately 20 residential properties at risk of flooding. The Annual Average Damages are approximately £60,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/06.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Lunan 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
							SW	SEPA											
07/06							A	R			G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Lunan (PVA 07/06)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Strategic Mapping and Modelling Scottish Water SEPA	A	Scottish Water will undertake further investigation and modelling in the Letham sewer catchment to improve knowledge and understanding of flood risk in this area	Scottish Water	01/06/2016 – 31/03/2019	S16 Sewer mapping continuing.	Mapping to continue and complete on 01/09/2019
	R	SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk.	SEPA	01/06/2016 – 31/12/2017	SEPA's current surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH13 methodology. The FEH13 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 forward as described. SEPA will develop new surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in cycle 2. Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.

<p>Flood Forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is an existing and ongoing 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.</p>	<p>SEPA</p>	<p>Ongoing</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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables 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 and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
<p>Awareness Raising</p>	<p>G</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 required and provide targeted flooding communications</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 publish and publicise an electronic Newsletter (Flooding Gateway) four times a year</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
Self Help	G	Everyone is responsible for	Responsible	ongoing	Everyone is responsible for	Angus Council will continue

		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.	Authorities		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.	discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on	Category 1 and 2 responders	ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

		<p>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>				<p>Community group about preparing an Emergency Plan with assistance provided by Grampian Emergency Planning Unit and the Scottish Flood Forum Aberdeenshire and Angus Council aim 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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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,</p>	<p>Planning authority</p>	<p>ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the 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. 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.</p>				
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Arbroath (Potentially Vulnerable Area 07/07)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	Brothock Water

Summary of Progress Within PVA



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There are approximately 250 residential properties and 140 non-residential properties at risk of flooding. The Annual Average Damages from flooding are approximately £1.6 million. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/07.

Key progress has been made with the development of the Brothock Water Flood Protection Scheme which has an anticipated 2019 start date.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

Other actions undertaken have include strategic mapping and modelling by Scottish Water to improve understanding of surface water flood risk in this PVA.

Overview of actions to manage flooding in the Arbroath 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
							SW	SEPA											
07/07	G					G	G	A	G	G	G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Arbroath (PVA 07/07)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Scheme/ Works	G	The Arbroath Flood Protection Scheme will reduce river flood risk. The scheme is being advanced as a formal flood protection scheme under the Flood Risk Management (Scotland) Act 2009. The proposed scheme will provide a 1 in 200 year standard of protection and is to be delivered by 2018/19 addressing fluvial flood risk from the Brothock Water. It is anticipated that the scheme will be at a cost of £11.4m. The proposed scheme has estimated damages avoided of £16 million and an estimated benefit cost ratio of 1.40. The scheme includes improvements to existing flood defences and the construction of two upstream flood storage areas; this will attenuate flood waters in areas to the north	Angus Council	01/06/2016 – 31/12/2019	Hydraulic modelling and outline design complete. Consultation exercises have been held with stakeholders and public. The scheme has been confirmed without modifications.	Detailed design progressing. Construction start date 01/06/2019.

		and north-west of Arbroath reducing peak flows downstream. It is expected that the scheme will remove 530 people at risk of flooding saving an estimated £840,000 in annual average damages.				
Maintain Flood Protection Scheme (existing and new)	G	The existing Brothock Water Flood Prevention Scheme 1987 provides protection from river flooding. The existing scheme is situated between Arbroath Harbour and St.Vigeans. The scheme comprises a number of features to reduce flood risk in Arbroath. This included the construction of floodwalls, heightening of existing walls, altering the soffit level of two bridges, re-grading and realignment of existing embankments, removing various buildings and structures that span the Brothock Water, installation of concrete screens and waterproofing buildings that span the Brothock Water. The new Arbroath Flood Protection Scheme, due for completion in 2018/19 will provide a higher level of protection from river flooding. Details of the scheme are shown above in section 'Flood Protection Scheme/Works'.	Angus Council	01/06/2016 – 31/12/2021	Angus Council will maintain the existing Flood Protection Schemes ensuring works are co-ordinated 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.	Actions to continue
Strategic Mapping and	G	Scottish Water will review the assessment of flood risk within the	Scottish Water	01/06/2016 –	An integrated catchment study covering the Hatton	Optioneering phase commenced.

<p>Modelling Scottish Water</p>		<p>highest risk sewer catchments to improve knowledge and understanding of surface water flood risk by 2019/20. Scottish Water will 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.</p>		<p>30/03/2019</p>	<p>DOA catchment was carried out in SR10 (2010-2015) to support the surface water management planning process in Arbroath, Arbirlot, Auchmithie and Colliston. The study has improved knowledge and understanding of surface water flood risk and The study has improved knowledge and understanding of surface water flood risk and interactions between the above ground and below ground drainage network, e.g. with the sewer network, watercourses and (where applicable) the sea. The Optioneering phase of this study, to establish the preferred solution(s) to the significant flooding issues, will be carried out in SR15. Integrated catchment study complete and outputs provided to Angus Council.</p>	
<p>Strategic Mapping and Modelling SEPA</p>	<p>A</p>	<p>SEPA will seek to develop flood mapping in the Arbroath to Dundee area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping study and data availability.</p>	<p>SEPA</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability 	<p>A technical specification for coastal modelling and mapping for the coastline from Arbroath to Berwick upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is planned that this action will be</p>

					<p>dataset;</p> <ul style="list-style-type: none"> • Update to the UK design extreme sea level dataset; • Coastal modelling and mapping project for north-east Scotland. <p>These projects/datasets will inform a future coastal modelling and mapping project for the coastline from Arbroath to Berwick upon Tweed.</p> <p>A detailed local authority study is being undertaken for Montrose to inform coastal flood hazard at that location.</p>	completed by the end of Cycle 1.
Maintain flood warning	G	SEPA will continue to maintain the Arbroath Coastal flood warning area which is part of the Firth of Forth and Tay coastal flood warning scheme.	SEPA	ongoing	Continued maintenance of system.	Continued maintenance of system.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	SEPA	ongoing	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.

		<p>a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA's website.</p>			<p>assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.</p>	
<p>Awareness Raising</p>	<p>G</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 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</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 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</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts.</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>information on current flooding issues (Report-a-Flood). We have worked in partnership with Local Authorities, emergency services and community organisations (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Angus Council's website provides guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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</p>	<p>Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

		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.			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.	
Surface Water plan/study Angus Council	G	Angus Council will prepare surface water management plans to cover Arbroath , Arbirlot, Auchmithie and Colliston. This will identify the most sustainable measures to manage urban drainage and the risk of surface water flooding.	Angus Council	01/06/2016 – 30/03/2020	The surface water management plans for this PVA are being undertaken as part of the flood study by AeCOM. The outputs from the Scottish Water modelling and mapping exercise will identify flooding areas within the urban area with a high degree of confidence.	Angus Council will continue to work with Scottish Water to prepare the surface water management plans for this PVA. These plans will identify joint and/or separate solutions to surface water flooding within the area. Once the plans are finalised the SWMP partners will support the prioritisation of solutions and jointly seek funding.
Scottish Water	G	Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data and where available outputs of S16 or integrated catchment studies to assist with the surface water management planning process.	Scottish Water	01/06/2016 – 30/03/2019		The outputs from Scottish Water’s Integrated catchment modelling will be incorporated in the surface water management plan to provide an accurate representation of surface water flooding in this PVA.
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	Local authorities, asset / land managers	ongoing	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.

		<p>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.</p>				
<p>Emergency Plans / Response</p>	<p>G</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. 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</p>	<p>Category 1 and 2 responders</p>	<p>ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans</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 the Scottish Flood Forum Angus Council aim 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.</p>

		<p>these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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Coast North of Arbroath (Potentially Vulnerable Area 07/08)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	Kincardine and Angus Coastal

Summary of Progress Within PVA



Approximately 30 residential properties and 10 non-residential properties have a risk of flooding. The Annual Average Damages are approximately £56,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/08.

Key progress has been made through the establishment of the surface water management partnership.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Coast North of Arbroath 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
							SW	SEPA											
07/08						G	G	A			G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Coast North of Arbroath (PVA 07/08)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Strategic Mapping and Modelling (Scottish Water)	G	<p>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 by 2019/20.</p> <p>Scottish Water will 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.</p>	Scottish Water	01/06/2016 – 30/03/2019	An integrated catchment study covering the Hatton DOA catchment was carried out in SR10 (2010-2015) to support the surface water management planning process in Arbroath, Arbirlot, Auchmithie and Colliston. The study has improved knowledge and understanding of surface water flood risk and The study has improved knowledge and understanding of surface water flood risk and interactions between the above ground and below ground drainage network, e.g. with the sewer network, watercourses and (where applicable) the sea. The Optioneering phase of this	Optioneering phase commenced.

Strategic Mapping and Modelling SEPA					study, to establish the preferred solution(s) to the significant flooding issues, will be carried out in SR15. Integrated catchment study complete and outputs provided to Angus Council.	
	A	SEPA will seek to develop flood mapping in the Arbroath to Dundee area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping study and data availability.	SEPA	01/06/2016 – 31/12/2021	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Collection of topographic survey data of beach profiles and defences. <p>These projects/datasets will inform future a future coastal modelling and mapping project for the coastline from Arbroath to Berwick Upon Tweed.</p>	<p>A technical specification for coastal modelling and mapping for the coastline from Arbroath to Berwick Upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is planned that this action will be completed by the end of Cycle 1.</p>
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	SEPA	ongoing	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	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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.

		<p>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.</p>			<p>authorities and other organisations with flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.</p>	<p>SEPA is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
<p>Awareness Raising</p>	<p>G</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 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</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 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</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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</p>

		<p>(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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Angus Council's website provides guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>resources and help to promote community resilience and understanding of how we manage flood risk in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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</p>	<p>Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

		<p>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.</p>			<p>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.</p>	
<p>Surface Water Plan/ Study Angus Council</p>	<p>G</p>	<p>Angus Council will prepare Surface Water Management Plans (SWMPs) to cover Arbroath, Arbirlot, Auchmithie and Colliston. 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.</p>	<p>Angus Council</p>	<p>2020/21</p>	<p>The surface water management partnership has been established. The surface water management plan for Arbroath has commenced. AeCOM have been appointed to carry out this work on behalf of Angus Council.</p>	
<p>Scottish Water</p>	<p>G</p>	<p>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. Scottish Water will work with and support surface water management planning</p>	<p>Scottish Water</p>	<p>01/06/2016 – 30/03/2019</p>		<p>The outputs from Scottish Water’s Integrated catchment modelling will be incorporated in the surface water management plan to provide an accurate representation of surface water flooding in this PVA.</p>

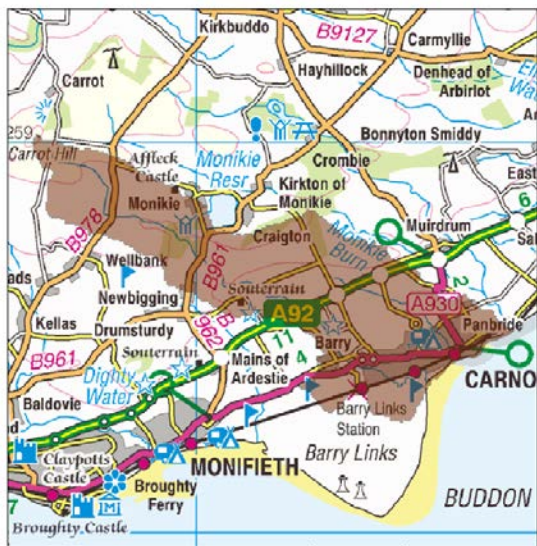
		through ensuring that best available knowledge and data is used to input into the surface water management plans.				
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. They produce schedules 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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water 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	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 the Scottish Flood Forum Angus Council aim 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

		<p>resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>understanding of how we manage flood risk within the Local Authority area and the local plan districts.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
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Carnoustie and Barry (Potentially Vulnerable Area 07/09)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council	Dundee Coastal

Summary of Progress Within PVA



There are approximately 180 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £470,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/09.

Key progress has been made through the flood protection study which has considered all sources of flooding in this PVA.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Carnoustie and Barry 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
07/09				G		G	G	G		G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Carnoustie and Barry (PVA 07/09)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study Angus Council	G	Angus Council will undertake a flood protection study for Carnoustie and Barry to be delivered by the financial year 2019/20. This will assess a number of options to manage flood risk including flood storage, modification of conveyance, fluvial control structures, sediment management and the viability of property level protection.	Angus Council	01/06/2016 – 31/12/2019	Angus Council has procured a flood study for Carnoustie and Barry and hydraulic modelling is complete and being reviewed by Angus Council.	Angus Council will consider the outputs of the study and identify and prioritise flood protection measures to reduce the flood risk to Carnoustie and Barry. Study on track to complete July 2019.
Maintain flood protection scheme	G	Angus Council will maintain this existing flood protection scheme ensuring works are co-ordinated and infrastructure is fully assessed. This will be done by undertaking programmed and reactive maintenance. Where required Angus Council will co-ordinate required maintenance works with other agencies and landowners	Angus Council	01/06/2016 – 31/12/2022	Angus Council has undertaken inspections and maintenance as required.	Angus Council will continue to inspect and maintain the scheme infrastructure as described and as resources allow.
Strategic	G	Review the assessment of flood risk	Scottish	01/06/201	S16 Sewer mapping within	Optioneering phase of study on

Mapping and Modelling (Scottish Water)		<p>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 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 by 2019/20.</p>	Water	9 – 31/03/2019	<p>highest risk sewer catchments in the area was completed by Scottish Water in February 2017.</p> <p>This information will be used within the surface water management planning process with the SWMP partnership.</p>	track to be completed.
Flood Forecasting	G	<p>The Scottish Flood Forecasting Service is an existing and ongoing 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.</p>	SEPA	ongoing	<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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables 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 and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
Awareness	G	SEPA and the responsible	Responsible	Ongoing	SEPA has delivered a range of	SEPA will continue to raise

<p>Raising</p>		<p>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 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</p>	<p>Authorities</p>	<p>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 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 (eg. 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</p>	<p>awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
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		services (Floodline). Where they exist, SEPA will engage with community resilience groups and community safety partnerships.			the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information. Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	
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.	Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
Surface Water Plan/ Study		Angus Council will prepare surface water management plans to cover Carnoustie, Barry, Panbride and	Angus Council	01/06/2016 – 31/12/2019	Surface water management plans for the areas of Carnoustie and Barry are being undertaken	Further identification of areas subject to surface water flooding within this PVA and design of

Angus Council		Westhaven. This will identify the most sustainable measures to manage urban drainage and the risk of surface water flooding.			as part of the flood study and in partnership with Scottish Water and SEPA. The partnership has been established and data from Scottish Water reviewed.	actions to reduce risk where possible to be developed.
Surface Water Plan/ Study Scottish Water	G	Scottish Water will provide local knowledge and understanding of the sewer network. This includes Scottish Water corporate data and where available outputs of S16 or integrated catchment studies to assist with the surface water management planning process.	Scottish Water	01/06/2016 – 30/03/2019		The outputs from Scottish Water's Integrated catchment modelling will be incorporated in the surface water management plan to provide an accurate representation of surface water flooding in this PVA.
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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

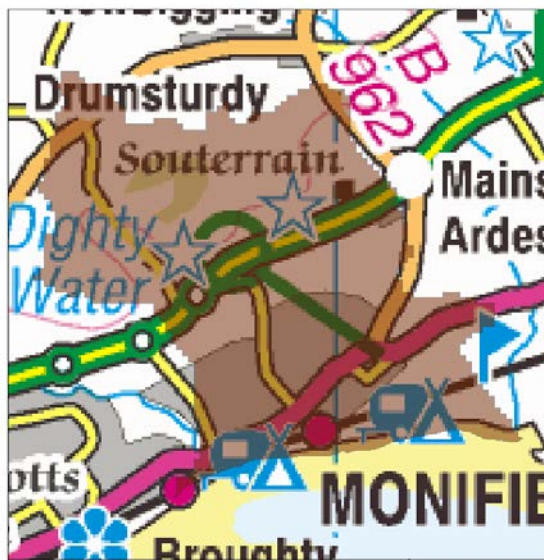
		<p>Responders. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>Forum Aberdeenshire and Angus Council aim 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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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Monifieth (Potentially Vulnerable Area 07/10)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council, Dundee City Council	Dundee Coastal

Summary of Progress Within PVA



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There are approximately 250 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £670,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/10.

Key progress has been made through the procurement of the flood protection study which considers all sources of flooding in this PVA.

The 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 Estuary and Montrose Basin catchments.

Overview of actions to manage flooding in the Monifieth 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
							SW	SEPA											
07/10			G	G		G	G	A	G		G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Monifieth (PVA 07/10)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	G	Angus Council will undertake a flood protection study to be delivered by financial year 2019/20. This will assess whether flood storage, flood defences and sediment management could reduce flood risk.	Angus Council	01/06/2016 – 31/12/2019	Angus Council has procured a flood study for Monifieth in conjunction with the study for Carnoustie and Barry and hydraulic modelling is complete and being reviewed by Angus Council.	Angus Council will consider the outputs of the study and identify and prioritise flood protection measures to reduce the flood risk to Monifieth. Study on track to complete August 2019.
Maintain flood protection scheme	G	The existing flood protection scheme provides protection from coastal processes and extends from the mouth of the Dighty Water to Tayview Caravan Park. Angus Council will maintain this existing flood protection scheme ensuring works are co-ordinated and infrastructure is fully assessed. This will be done by undertaking programmed and reactive maintenance. Where required Angus Council will co-ordinate required maintenance works with other agencies and landowners.	Angus Council	ongoing	Angus Council has undertaken inspections and maintenance as required.	Angus Council will continue to inspect and maintain the scheme infrastructure as described and as resources allow.

Strategic Mapping and Modelling SEPA	A	SEPA will seek to develop flood mapping in the Arbroath to Dundee area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping study and data availability.	SEPA	01/06/2016 – 31/12/2021	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Coastal modelling and mapping project for north-east Scotland. <p>These projects/datasets will inform a future coastal modelling and mapping project for the coastline from Arbroath to Berwick upon Tweed.</p>	<p>A technical specification for coastal modelling and mapping for the coastline from Arbroath to Berwick upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is planned that this action will be completed by the end of Cycle 1.</p>
New Flood Warning	G	The area under consideration includes properties in Monifieth affected by flooding from the Monifieth Burn. Further feasibility assessment is required to assess the delivery of a potential new flood warning scheme in this area.	Angus Council	01/06/2016 – 31/12/2021	Angus Council has procured a flood study for Monifieth in conjunction with the study for Carnoustie and Barry and hydraulic modelling is complete and being reviewed by Angus Council.	Angus Council will consider the outputs of the study and identify and prioritise flood warning measures to reduce the flood risk to Monifieth. Study on track to complete August 2019.
Strategic Mapping and Modelling (Scottish Water)	G	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 Hatton sewer catchment to	Scottish Water	01/06/2019 – 31/03/2019	<p>S16 Sewer mapping within highest risk sewer catchments in the area was completed by Scottish Water in February 2017.</p> <p>This information will be used within the surface water</p>	Optioneering phase of study on track.

		improve knowledge and understanding of flood risk in this area as required under Section 16 of the Flood Risk Management (Scotland) Act 2009 by 2019/20.			management planning process with the SWMP partnership.	
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	ongoing	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.
Awareness Raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall	Responsible Authorities	Ongoing	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	SEPA will continue 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

impact. Scottish Water will support SEPA and responsible authorities with their awareness raising activities as required and provide targeted flooding communications for Scottish Water specific activities. Scottish Water will raise awareness by producing and supplying targeted information to the public on large capital projects and detailed local studies. More general information and flooding guidance 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 exist, SEPA will engage with community resilience groups and community safety partnerships.

campaigns to raise awareness of flood risk and SEPA's flood warning service, Flood line. We 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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.

our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.

Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.

					Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	
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.	Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
Surface Water Plan/ Study Angus Council	G	Angus Council will prepare surface water management plans to cover Carnoustie, Barry, Panbride and Westhaven. This will identify the most sustainable measures to manage urban drainage and the risk of surface water flooding.	Angus Council	01/06/2016 – 31/12/2019	Surface water management plans for the areas of Carnoustie and Barry are being undertaken as part of the flood study and in partnership with Scottish Water and SEPA. The partnership has been established and data from Scottish Water reviewed.	Further identification of areas subject to surface water flooding within this PVA and design of actions to reduce risk where possible to be developed.
Surface Water Plan/ Study	G	Scottish Water will provide local knowledge and understanding of the sewer network. This includes	Scottish Water	01/06/2016 – 30/03/2019		The outputs from Scottish Water's Integrated catchment modelling will be incorporated in the surface

Scottish Water		Scottish Water corporate data and where available outputs of S16 or integrated catchment studies to assist with the surface water management planning process.		9		water management plan to provide an accurate representation of surface water flooding in this PVA.
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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required.	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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 Aberdeenshire and Angus Council aim to raise awareness of flooding through ongoing community engagement and

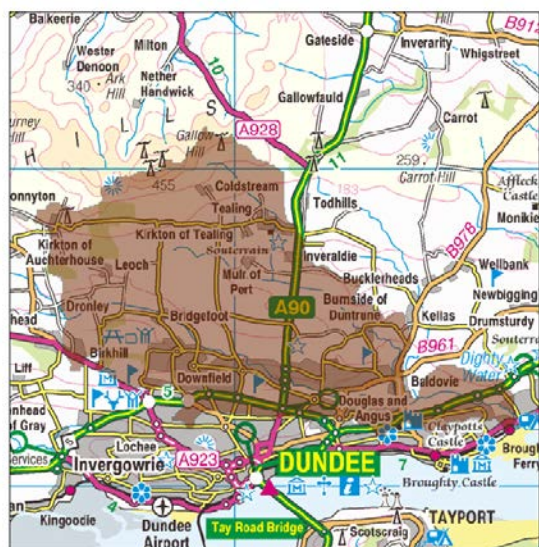
		<p>The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>working in partnership with the Scottish Flood Forum, SEPA and Scottish Water to share our resources and help to promote community resilience and understanding of how we manage flood risk within the Local Authority area and the local plan districts.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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Downfield and Dundee/Monifieth and Sidlaws (Potentially Vulnerable Area 07/11)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Angus Council, Dundee City Council	Dighty Water

Summary of Progress Within PVA



There are approximately 190 residential properties and 80 non-residential properties at risk of flooding. The Annual Average Damages are approximately £580,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/11.

Key progress has been made with the procurement of the flood protection study for the area and creating the surface water management planning partnership. Scottish Water have completed detailed integrated catchment modelling which provides a detailed picture of flooding within the catchment.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Downfield and Dundee/Monifieth and Sidlaws 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
						AC	SW	SW	SEP A											
07/11				G		G	A	G	A			G		G	G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Downfield and Dundee/Monifieth and Sidlaws (PVA 07/11)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	G	Undertake a flood protection study of the Downfield and Dundee to be delivered by financial year 2019/20. This will assess whether flood defences, sediment management and natural flood management could reduce flood risk. Natural flood management options that will be considered include river / floodplain restoration and sediment management. The study will also investigate the viability of property level protection. The study will take a sustainable approach and consider the interaction between actions upstream and downstream and potential effects on coastal processes along the shoreline.	Angus Council, Dundee City Council	June 2016 – June 2020	The flood protection study for the Downfield and Dundee, Monifieth and Sidlaws area commenced in June 2018 and is progressing well. RPS were appointed to carry out this study. The flood study is likely to meet the completion date of June 2019.	Angus Council will continue to work together with Dundee Council, Perth and Kinross Council and RPS to finalise the flood study report. Once complete a programme of engagement and consultation will take place to disseminate the findings and discuss prioritised options.
Strategic	G	Review the assessment of flood risk within the highest risk sewer	Scottish Water	01/06/2019 –	S16 Sewer mapping within highest risk sewer catchments	Optioneering phase of study on track to be completed.

<p>Mapping and Modelling (Scottish Water)</p>		<p>catchments to improve knowledge and understanding of surface water flood risk. Scottish Water will 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 by 2019/20.</p>		<p>31/03/2019</p>	<p>in the area was completed by Scottish Water in February 2017. This information will be used within the surface water management planning process with the SWMP partnership.</p>	
<p>Strategic Mapping and Modelling (SEPA)</p>	<p>A</p>	<p>Develop flood mapping in the Arbroath to Dundee area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping and data availability. Wider coastal mapping and modelling improvements may take place in this area and these will be further refined in 2016 with the intention of updating the strategic coastal maps in 2016 to 2019.</p>	<p>SEPA</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Collection of topographic survey data of beach profiles and defences. <p>The outputs from these projects will inform a future coastal modelling and mapping project for the coastline from Arbroath to Berwick Upon Tweed.</p>	<p>A technical specification for coastal modelling and mapping for the coastline from Arbroath to Berwick Upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area. It is planned that this action will be completed by the end of Cycle 1.</p>
<p>Flood Forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is an existing and ongoing</p>	<p>SEPA, Met Office</p>	<p>ongoing</p>	<p>SEPA has continued to operate the Scottish Flood Forecasting</p>	<p>SEPA will continue and improve the Scottish Flood Forecasting</p>

(SEPA)		<p>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.</p>			<p>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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.</p>	<p>Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>
Community Flood Action Groups	G	<p>Dundee City Council and Angus Council will work with existing flood action groups to set out arrangements to reduce flood risk, improve preparedness and increase resilience against flooding. Dundee City Council and Angus Council are engaging with Dighty Flood Action Group and Strathmartine Community Council Flood Group respectively. Angus Council and Dundee City Council will co-ordinate these works with each other, Scottish Water and</p>	<p>Angus Council, Dundee City Council</p>	<p>Ongoing</p>	<p>Dundee City Council and Angus Council have continued to engage with the community groups regarding concerns about flooding.</p>	<p>Contact has recently been made with the community group "Dighty Connect" to understand their priorities for the Dighty Water. The community groups will continue to be consulted once the outputs from the flood study are available to gauge views on any proposed measures for the Dighty Water. These measures will seek to improve water and habitat quality wherever possible.</p>

		<p>emergency services when required. Completion of the Integrated Catchment Study may identify further collaboration opportunities.</p>				
<p>Awareness Raising</p>	<p>G</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 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</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 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 (eg. Neighbourhood Watch Scotland, Citizens Advice Scotland and others) to share</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Angus Council will give consideration to a public</p>

		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.			our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information. Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	communications campaign to assist with raising awareness of flooding.
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.	Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.
Surface Water Plan/ Study	G	A surface water management plan or plans to cover Dundee, Broughty Ferry, Invergowrie, Lochee and	Angus Council, Dundee City	01/06/2016 – 31/12/2021	The surface water management plans for this PVA are being undertaken as	Angus Council will continue to work together with Dundee Council, Perth and Kinross

		Monifieth, which sets objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives will be prepared. This will include agreeing the most sustainable actions to manage surface water determined from the Integrated Catchment Study and co-ordinating the implementation of the actions. The Surface Water Management Plan will be developed in 2017 and the actions identified considered for implementation following this as part of the flood risk management planning process.	Council	9	part of the Flood Study by RPS. An event for the Local Authorities and Scottish Water was held in late November 2018 to discuss priorities, agree information requirements and verify known flood risk locations.	Council, Scottish Water and RPS to prepare the surface water management plans for this PVA. This plan will identify joint and/or separate solutions to surface water flooding within the area. 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.
Surface Water Plan/Study – Scottish Water	A	An integrated catchment study covering the Hatton DOA catchment was carried out in SR10 (2010-2015) to support the surface water management planning process in (SWMP Priority Areas). The study has improved knowledge and understanding of surface water flood risk and interactions between the above ground and below ground drainage network, e.g. with the sewer network, watercourses and (where applicable) the sea. The Optioneering phase of this study, to establish the preferred solution(s) to the significant flooding issues, will be carried out in SR15 (2015-2021).	Scottish Water	June 2016 – June 2019	This study by Scottish Water has entered the optioneering phase and all partners have been involved in identifying and agreeing priorities. The modelling outputs from the study are being used in the preparation of the surface water management plans for this PVA.	Scottish Water will continue to work with Angus Council, Dundee Council to prepare the surface water management plans for this area. These plans will identify joint and/or separate solutions to surface water flooding within the area. Once the plans are finalised the SWMP partners will support the prioritisation of solutions and jointly seek funding.
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where	Local authorities, asset / land	Ongoing	Angus Council have a routine programme of watercourse inspections which informs the	Angus Council will continue to undertake routine watercourse inspections and update

		<p>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.</p>	<p>managers</p>		<p>schedule of clearance and repair.</p>	<p>schedules and make available for inspection.</p>
<p>Emergency Plans / Response</p>	<p>G</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. 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>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans</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 Aberdeenshire and Angus Council aim 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</p>

						<p>districts.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

		<p>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. 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.</p>				
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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



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 will not be taken forward in the wider surface water management plan.

The 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 Estuary and Montrose Basin catchments.

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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					A	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	Interim Progress	Planned Actions to complete
Natural Flood Management Study	A	Undertake a natural flood management study to assess whether river / floodplain 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 is programmed to commence in the 2019/20 financial year.	This study is programmed for completion in 2019/20.
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 the most sustainable actions to achieve the objectives will be prepared.	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 available information reviewed.	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 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.	
Flood Forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The flood guidance statements provide an assessment of the risk of flooding for a five day period allowing responders time to put preparations in place to reduce the impact of flooding. The service also provides information which allows SEPA to issue flood warnings.	SEPA		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 flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.

Awareness Raising	G	<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 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</p>	Responsible Authorities	Ongoing	<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 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 (eg. 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.</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Perth and Kinross Council will continue with awareness raising activities when developing proposals for the remaining actions in it's local flood risk management plans.</p>
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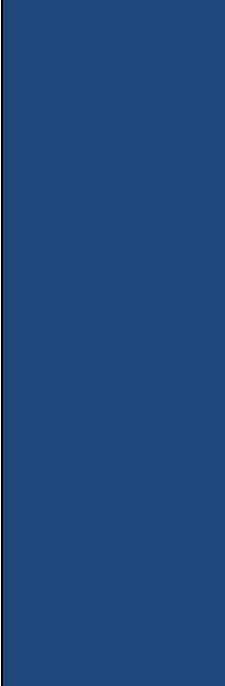

		<p>flood forecasting and warning services (Floodline). Where they exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information. Perth and Kinross Council has developed its website to provide more advice and information on flood risk management.</p>	
<p>Self Help</p>	<p>G</p>	<p>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.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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 supports communities to become more resilient to emergency situations, including flood events. Communities have been engaged through the multi-agency local Resilience Partnership Community and Business Resilience Group led by the Council.</p>	<p>Perth and Kinross Council will continue to support communities to become more resilient to flooding and to develop community resilience groups and emergency plans.</p>

Maintenance	G	<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 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.</p>	<p>Local authorities, asset / land managers</p>	<p>Ongoing</p>	<p>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 substantially reduce that flood risk, then those works are included on the Council's clearance and repair schedule and carried out.</p> <p>Perth and Kinross Council 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.</p> <p>Through this monitoring, the</p>	<p>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 gully monitoring programme. Scottish Water will continue to undertake risk based inspections and maintenance.</p>

					<p>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>Scottish Water continue to undertake risk based inspections maintenance and repair on the public sewer network.</p>	
<p>Emergency Plans / Response</p>	<p>G</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. 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>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans.</p> <p>Perth and Kinross Council further developed its Flooding Emergency Response Plan in October 2017. 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</p> <p>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.</p>

						<p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p> <p>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 table top 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>Planning Policies</p>	<p>G</p>	<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 the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with</p>	<p>Planning authority</p>	<p>Ongoing</p>	<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 and Kinross Local Development Plan (LDP1) contains planning policy and development allocations which ensure that new development at medium to high risk of flooding is avoided (unless flood</p>	<p>This action will continue. Perth and Kinross Council will publish LDP2 and revised Supplementary Guidance on Flooding and Drainage. Following consultation on the Perth and Kinross proposed LDP2, the Council considered the representations made to the Proposed Plan and approved responses to these representations at a special Council meeting August 2018. The Proposed Plan was then submitted to Scottish Ministers for examination on 14 September 2018. The Reporter will examine the unresolved issues.</p>

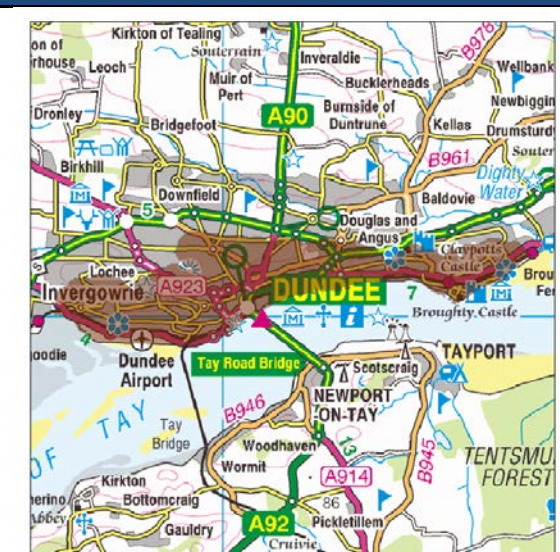
		<p>medium to high likelihood of flooding should be avoided. For further information on the national planning policies see http://www.sepa.org.uk/environment/land/planning/. SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 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. 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.</p>			<p>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 and 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 872 planning applications since the start of the 2016/17 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 outwith these formal consultations. The Council is reviewing LDP1, which was adopted in February 2014 to produce LDP2. LDP1 includes the policies and development allocations against which the planning applications for development are considered. Key milestones in its review have included publication and consultation on the Main Issues</p>	<p>Following amendment of the LDP2 in line with the Reporter's recommendations (unless there are reasonable and justifiable grounds for not accepting some of the recommendations), the Council will adopt LDP2. This is anticipated to be July 2019. The existing Supplementary Guidance (SG) on Flood Risk and Flood Risk Assessments (Developers Guidance note on Flooding and Drainage) is also currently being reviewed and will be revised and consulted on in January 2019 with a view to adoption alongside LDP2. The main aspects that are being updated are the guidance on climate change; 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>
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					<p>Report (consulting on key issues and changes from the adopted LDP1) in December 2015 and the publication and consultation on the LDP2 Proposed Plan (the settled view of the Council) in December 2017. To inform this process, the Council has undertaken a Strategic Environmental Assessment (SEA) and prepared 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 involved engagement with SEPA and the Council's flooding team.</p>	

Dundee and Broughty Ferry (Potentially Vulnerable Area 07/13)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Dundee City Council	Dundee Coastal

Summary of Progress Within PVA



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There are approximately 1,300 residential properties and 460 non-residential properties at risk of flooding. The Annual Average Damages are approximately £4.3 million. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/13.

Key progress has been made with completion of the Dundee Flood Protection Scheme (City Quay to Dundee Airport) in August 2018.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

Other actions undertaken have included mapping and modelling to progress development of surface water management plans for this PVA.

Overview of actions to manage flooding in the Dundee and Broughty Ferry PVA

PVA	Flood protection 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	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
						LA	SW	SW	SEPA											
07/11	G					G	A	G	A		G	G		G	G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Dundee and Broughty Ferry (PVA 07/13)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Scheme/ Works	G	Dundee City Council will prepare a flood protection scheme for Dundee City to protect properties at risk of coastal flooding. The scheme for the Dundee coastline consists of set-back walls and flood defences. The Central Waterfront sea wall raising to commence in 2015/16. Standard of protection: 1 in 200 years + CC.	Dundee City Council	2017	Dundee Flood Protection Scheme (City Quay to Dundee Airport) completed in August 2018.	N/A
	G	Dundee City Council will prepare a flood protection scheme for Broughty Ferry to protect properties at risk of coastal flooding. The scheme for the Broughty Ferry coastline consists of new sea walls, set-back embankments, sand dune replenishment, rock armour and will provide a 1 in 200 years + CC standard of protection.	Dundee City Council	2019	Broughty Ferry Flood Protection Scheme design at advanced stage. Formal notification is complete and deemed planning permission was granted in December 2018. The design of natural flood protection measures to replenish Broughty Ferry beach and an associated Maintenance Plan have been prepared.	Commencement of construction currently programmed for June 2019 with an 18 month construction period. Dune replenishment works to commence early 2019.

<p>Maintain flood protection schemes</p>	<p>G</p>	<p>Dundee City Council will maintain this existing flood protection scheme ensuring works are co-ordinated and infrastructure is fully assessed. This will be done by undertaking programmed and reactive maintenance. Where required Angus Council will co-ordinate required maintenance works with other agencies and landowners</p>	<p>Dundee City Council</p>	<p>01/06/2016 – 31/12/2022</p>	<p>Dundee City Council has undertaken inspections and maintenance as required.</p>	<p>Dundee City Council will continue to inspect and maintain the scheme infrastructure as described and as resources allow.</p>
<p>Strategic Mapping and Modelling (Scottish Water)</p>	<p>G</p>	<p>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 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 by 2019/20.</p>	<p>Scottish Water</p>	<p>01/06/2019 – 31/03/2019</p>	<p>S16 Sewer mapping within highest risk sewer catchments in the area was completed by Scottish Water in February 2017.</p> <p>This information will be used within the surface water management planning process with the SWMP partnership.</p>	<p>Optioneering phase of study on track to be completed.</p>
<p>Strategic Mapping and Modelling SEPA</p>	<p>A</p>	<p>SEPA will seek to develop flood mapping in the Arbroath to Dundee area to improve understanding of coastal flood risk. The extent and timing of improvements will depend on detailed scoping study and data availability.</p>	<p>SEPA</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Coastal modelling and 	<p>A technical specification for coastal modelling and mapping for the coastline from Arbroath to Berwick upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is planned that this action will be completed by the end of Cycle 1.</p>

					<p>mapping project for north-east Scotland.</p> <p>These projects/datasets will inform a future coastal modelling and mapping project for the coastline from Arbroath to Berwick upon Tweed.</p>	
Maintain Flood Warning	G	SEPA will continue to maintain the Broughty Ferry, Dundee Central and Riverside West flood warning areas which are part of the Firth of Forth and Tay coastal flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service and will work with Dundee City Council to ensure that changes to hydrology and flood risk as a result of the proposed flood protection schemes are fully considered in the existing flood warning system.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	SEPA	ongoing	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to enable these organisations to put preparations in place to	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.

		<p>please visit SEPA's website.</p>			<p>reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and enables communities to be aware and prepared to reduce the impacts of flooding.</p>	
<p>Awareness Raising</p>	<p>G</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 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</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 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 (eg.</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Angus 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Angus Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>Education. Angus Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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</p>	<p>Angus Council will continue discussions with Community Groups. Angus Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

		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.			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.	
Surface Water Plan/ Study	G	A surface water management plan or plans to cover Dundee, Broughty Ferry, Invergowrie, Lochee and Monifieth, which sets objectives for the management of surface water flood risk and identify the most sustainable actions to achieve the objectives will be prepared. This will include agreeing the most sustainable actions to manage surface water determined from the Integrated Catchment Study and co-ordinating the implementation of the actions. The Surface Water Management Plan will be developed in 2017 and the actions identified considered for implementation following this as part of the flood risk management planning process.	Angus Council, Dundee City Council	01/06/2016 – 31/12/2019	The surface water management plans for this PVA are being undertaken as part of the Flood Study by RPS. An event for the Local Authorities and Scottish Water was held in late November 2018 to discuss priorities, agree information requirements and verify known flood risk locations.	Angus Council will continue to work together with Dundee Council, Perth and Kinross Council, Scottish Water and RPS to prepare the surface water management plans for this PVA. This plan will identify joint and/or separate solutions to surface water flooding within the area. 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.
Surface Water Plan/Study – Scottish Water	A	An integrated catchment study covering the Hatton DOA catchment was carried out in SR10 (2010-2015) to support the surface water management planning process in (SWMP Priority Areas). The study has improved knowledge and understanding of surface water flood risk and interactions	Scottish Water	June 2016 – June 2019	This study by Scottish Water has entered the optioneering phase and all partners have been involved in identifying and agreeing priorities. The modelling outputs from the study are being used in the preparation of the surface water management plans for	Scottish Water will continue to work with Angus Council, Dundee Council to prepare the surface water management plans for this area. These plans will identify joint and/or separate solutions to surface water flooding within the area. Once the plans are finalised the SWMP partners will

		between the above ground and below ground drainage network, e.g. with the sewer network, watercourses and (where applicable) the sea. The Optioneering phase of this study, to establish the preferred solution(s) to the significant flooding issues, will be carried out in SR15 (2015-2021).			this PVA.	support the prioritisation of solutions and jointly seek funding.
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	Angus Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Angus Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water are a Category 2	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

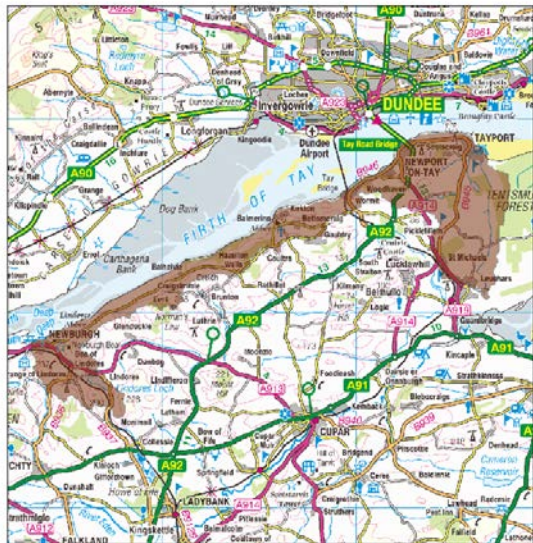
		<p>responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>Aberdeenshire and Angus Council aim 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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 the long-term vulnerability of parts of our coasts</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Angus Council and SEPA have continued to advise on planning applications.</p>	<p>Angus Council and SEPA will continue to advise on planning applications.</p> <p>Angus Council Flood risk staff will continue to work in partnership with and advise the Planning Authority on flood risk for strategic planning matters.</p>

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. 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.

Tayport and Newburgh (Potentially Vulnerable Area 07/14)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council	North Fife Coastal

Summary of Progress Within PVA



There are approximately 140 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages from flooding are approximately £540,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/14.

SEPA have made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Tayport and Newburgh 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
							SW	SEPA											
07/14				A			G	A R		G	G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Tayport and Newburgh (PVA 07/14)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	A	Coastal flood protection / NFM study for Newburgh. Study to consider: flood defences, wave attenuation and PLP. Coordination with Fife Shoreline Management Plan.	Fife Council	01/06/2016 – 31/12/2021	The recommendation of the study is to put further development of flood protection measures for Newburgh on hold until all the flood studies in Fife in the current cycle are complete, and at that stage the priority of Newburgh will be reviewed against other potential flood protection measures.	Continue to undertake the liaison and inspection recommendations contained within the report, prior to reconsideration of the priority of flood protection measures against other sites in Fife once all Cycle 1 studies have been completed
Strategic Mapping and Modelling Scottish Water	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	01/06/2016 – 31/12/2021	Sewer mapping progressing as programmed	On track to deliver within agreed LFRMP timescales

SEPA	A	<p>SEPA will seek to incorporate additional data in the flood maps to improve understanding of flood risk.</p> <p>Coastal mapping developments: St Andrews area.</p>	SEPA	01/06/2016 – 31/12/2021	<p>Coastal: Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Collection of topographic survey data of beach profiles and defences. <p>These projects/datasets will inform future a future coastal modelling and mapping project for the coastline from Arbroath to Berwick Upon Tweed.</p>	<p>Coastal: A specification for coastal modelling and mapping for the coastline from Arbroath to Berwick Upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is anticipated that this action will be completed by the end of Cycle 1.</p>
	R	Surface water mapping developments	SEPA	01/06/2016 – 31/12/2019	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH13 methodology. The FEH13 dataset contains the latest science and understanding of	This action will not be taken forwards as described. SEPA will develop new Surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in Cycle 2.

					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.	Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in Surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.
Maintain Flood Warning	G	SEPA will continue to maintain the Newburgh, Newport on Tay and Tayport flood warning areas which are part of the Firth of Forth and Tay Coastal flood warning scheme	SEPA	ongoing	SEPA has continued to maintain and operate this system of flood warning.	SEPA has continued to maintain and operate this system of flood warning.
Flood Forecasting (SEPA)	G	The Scottish Flood Forecasting Service is an existing and ongoing 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, Met Office	ongoing	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 flooding management duties) and regional Flood Alerts issued to the public. Each daily statement gives an assessment of the risk of flooding for the next five days to 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 enables communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.

Awareness Raising	G	<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 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</p>	Responsible Authorities	Ongoing	<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 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 (eg. 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.</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
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		flood forecasting and warning services (Floodline). Where they exist, SEPA will engage with community resilience groups and community safety partnerships.			<p>We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	
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.	Fife Council will continue discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow.
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially	Local authorities, asset / land managers	Ongoing	Fife Council have a routine programme of watercourse inspections which informs the schedule of clearance and	Fife Council will continue to undertake routine watercourse inspections and update schedules and make available for

		<p>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.</p>			<p>repair.</p>	<p>inspection.</p>
<p>Emergency Plans / Response</p>	<p>G</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. 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>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans</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.</p> <p>Where staffing resources allow, consideration will be given to</p>

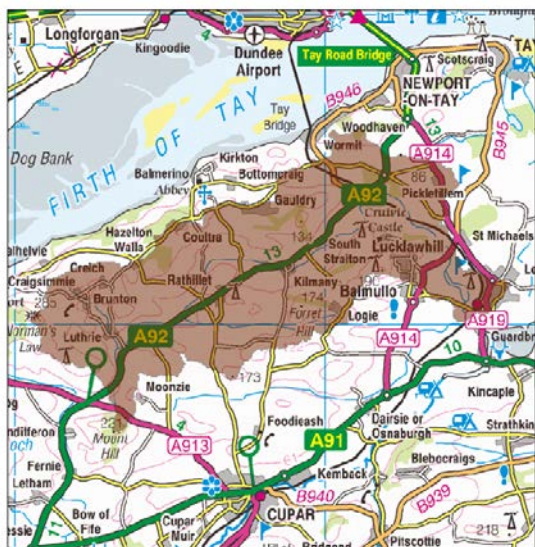
						working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.
Planning Policies	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' 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 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</p>	Planning authority	Ongoing	Fife Council and SEPA have continued to advise on planning applications.	Fife Council and SEPA will continue to advise on planning applications.

		<p>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. 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.</p>				
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Lucklawhill (Potentially Vulnerable Area 07/15)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council	North Fife Coastal

Summary of Progress Within PVA



There are approximately 20 residential properties and 10 non-residential properties at risk of flooding. The Annual Average Damages from flooding are approximately £130,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/15.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Tayport and Newburgh 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
							SW	SEPA											
07/15							G	A			G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Tayport and Newburgh (PVA 07/15)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Strategic Mapping and Modelling Scottish Water	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	01/06/2016 – 31/12/2021	Sewer mapping progressing as programmed	On track to deliver within agreed LFRMP timescales
SEPA	A	SEPA will seek to incorporate additional data in the flood maps to improve understanding of flood risk. Coastal mapping developments: St Andrews area.	SEPA	01/06/2016 – 31/12/2021	Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:	A specification for coastal modelling and mapping for the coastline from Arbroath to Berwick Upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning

					<ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Collection of topographic survey data of beach profiles and defences. <p>These projects/datasets will inform future a future coastal modelling and mapping project for the coastline from Arbroath to Berwick Upon Tweed.</p>	<p>schemes in the area.</p> <p>It is anticipated that this action will be completed by the end of Cycle 1.</p>
<p>Flood Forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is an existing and ongoing 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</p>	<p>SEPA, Met Office</p>	<p>ongoing</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 flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put</p>	<p>SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) 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 is currently exploring options to develop a public version of the daily Flood Guidance Statement to provide better and earlier information to the public.</p>

		<p>impact of flooding on their home or business.</p>			<p>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>Awareness Raising</p>	<p>G</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 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</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 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</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to</p>

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>services and community organisations (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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</p>	<p>Fife Council will continue discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

		Communities initiatives, and ensuring that properties and businesses are insured against flood damage.			level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.	
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	Fife Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Fife Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

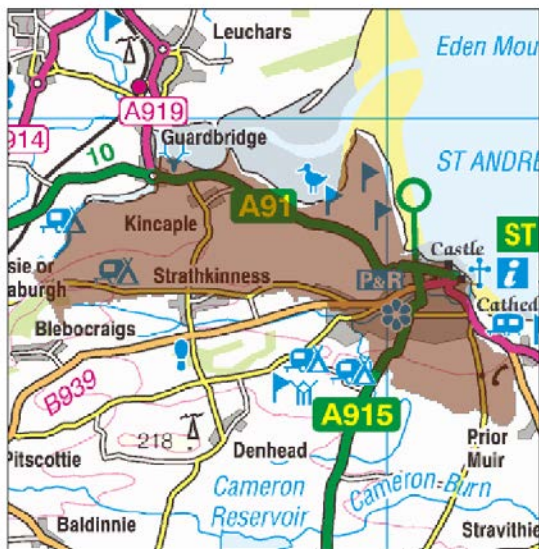
		<p>resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>and working in partnership with the Scottish Flood Forum, SEPA and 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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Fife Council and SEPA have continued to advise on planning applications.</p>	<p>Fife Council and SEPA will continue to advise on planning applications.</p>

		<p>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. 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.</p>				
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St Andrews to Guardbridge (Potentially Vulnerable Area 07/16)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council	North Fife Coastal

Summary of Progress Within PVA



There are approximately 80 residential properties and 40 non-residential properties at risk of flooding. The Annual Average Damages are approximately £670,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/16.

SEPA have also made progress on strategic mapping and modelling in order to improve the existing flood maps for the area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the St Andrews to Guardbridge PVA

PVA	Flood protection 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
							SW	SEPA											
07/16	A			A		A	G	A		G	G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in St Andrews to Guardbridge (PVA 07/16)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Scheme/ Works	A	Deliver a flood protection scheme for the Kinness Burn in St Andrews. The scheme requires detailed study and design. Part of this proposed flood protection scheme is located in Potentially Vulnerable Area 07/17. The benefits and impacts have been assessed for the whole scheme.	Fife Council	01/06/2016 – 31/12/2021	A final study report is expected early summer 2019. Depending on the results of the study a scheme may progress to detailed design.	Depending on the results of the study a scheme may progress to detailed design.
Flood Protection Study	A	Fife Council will prepare a further study, which is required to be completed to update the original. Once completed, this will inform the final scheme.			Study to consider: installation / modification of fluvial control structures, flood defences, PLP, runoff control, river / floodplain restoration and sediment management. RBMP opportunities: Kinness Burn. The Kinness Burn flood study is currently in progress. A final report is expected early summer 2019.	A final report is expected early summer 2019.

<p>Strategic Mapping and Modelling Scottish Water</p>	<p>G</p>	<p>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.</p>	<p>Scottish Water</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Sewer mapping progressing as programmed</p>	<p>On track to deliver within agreed LFRMP timescales</p>
<p>SEPA</p>	<p>A</p>	<p>SEPA will seek to incorporate additional data in the flood maps to improve understanding of flood risk.</p> <p>Coastal mapping developments: St Andrews area.</p>	<p>SEPA</p>	<p>01/06/2016 – 31/12/2021</p>	<p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Collection of topographic survey data of beach profiles and defences. <p>These projects/datasets will inform future a future coastal modelling and mapping project for the coastline from Arbroath to Berwick Upon Tweed.</p>	<p>A specification for coastal modelling and mapping for the coastline from Arbroath to Berwick Upon Tweed is under development. Opportunities will be sought to align the delivery of this project with any required developments to Flood Warning schemes in the area.</p> <p>It is anticipated that this action will be completed by the end of Cycle 1.</p>

New Flood Warning	G	The area under consideration includes properties affected by flooding in Fife and Perth and Kinross and is likely to include St Andrews which is affected by flooding from the Kinness Burn. Further feasibility assessment will be required to assess delivery potential and the final detail of communities for which warnings can be provided will be determined during the scoping process. Hydrometry developments are to begin in spring 2019. The new flood warning service is to be launched in May 2021.	SEPA	01/06/2016-31/12/2021	Initial investigation into flood risk and potential new flood warning areas undertaken across Fife.	Feasibility assessment to determine scope of new hydrometric infrastructure and flood warning service requirements due to be completed in 2019-20.
Maintain Flood Warning	G	SEPA will continue to maintain the Newburgh, Newport on Tay and Tayport flood warning areas which are part of the Firth of Forth and Tay Coastal flood warning scheme	SEPA	ongoing	SEPA has continued to maintain and operate this system of flood warning.	SEPA has continued to maintain and operate this system of flood warning.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	SEPA, Met Office	ongoing	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 flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.

		business.			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.	
Awareness Raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Scottish Water will support SEPA and responsible authorities with their awareness raising activities as required and provide targeted flooding communications for Scottish Water specific activities. Scottish Water will raise awareness by producing and supplying targeted information to the public on large capital projects and detailed local studies. More general information and flooding guidance 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	Responsible Authorities	Ongoing	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 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	SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public. 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>organisations (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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.</p>	<p>Fife Council will continue discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

Surface Water Plan/ Study	A	Prepare Surface Water Management Plans (SWMPs) to cover St Andrews and Guardbridge. 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. Fife Council will co-ordinate this work with Scottish Water and SEPA through the local plan district (LPD) partnership with delivery of the SWMP by 2019/2020.	Fife Council		Not progressed.	Will commence on completion of Kinness Burn FPS (prog April 2019) to allow findings from this study to be incorporated into SWMP
		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. Scottish Water will work with and support surface water management planning through ensuring that best available knowledge and data is used to input into the surface water management plans.	Scottish Water		The Scottish Water assessment of flood risk within these sewer catchments has been delayed. The assessment will improve knowledge and understanding of surface water flood risk.	Assessment will not deliver within LFRMP timescales but is still on track to deliver within FRM Cycle 1
Maintenance	G	Local authorities have a duty to	Local	Ongoing	Fife Council have a routine	Fife Council will continue to

		<p>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.</p>	<p>authorities, asset / land managers</p>		<p>programme of watercourse inspections which informs the schedule of clearance and repair.</p>	<p>undertake routine watercourse inspections and update schedules and make available for inspection.</p>
<p>Emergency Plans / Response</p>	<p>G</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. 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>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans</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.</p>

						<p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 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</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Fife Council and SEPA have continued to advise on planning applications.</p>	<p>Fife Council and SEPA will continue to advise on planning applications.</p>

		<p>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. 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.</p>				
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St Andrews (Denhead and Strathkinness) (Potentially Vulnerable Area 07/17)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council	North Fife Coastal

Summary of Progress Within PVA



There are approximately 40 residential properties at risk of flooding. The Annual Average Damages from flooding are approximately £94,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/17.

Key progress has been made through Scottish Water’s mapping and modelling of the public sewer system in this area.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the St Andrews (Denhead and Strathkinness) 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
07/17	A		G	A		A	G			G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in St Andrews (Denhead and Strathkinness) (PVA 07/17)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Scheme/ Works	A	Deliver a flood protection scheme for the Kinness Burn in St Andrews. The scheme requires detailed study and design. Part of this proposed flood protection scheme is located in Potentially Vulnerable Area 07/17. The benefits and impacts have been assessed for the whole scheme.	Fife Council	01/06/2016 – 31/12/2021	A final study report is expected early summer 2019. Depending on the results of the study a scheme may progress to detailed design.	Depending on the results of the study a scheme may progress to detailed design.
Flood Protection Study		Fife Council will prepare a further study, which is required to be completed to update the original. Once completed, this will inform the final scheme.			Study to consider: installation / modification of fluvial control structures, flood defences, PLP, runoff control, river / floodplain restoration and sediment management. RBMP opportunities: Kinness Burn. The Kinness Burn Flood Study is currently in progress. A final report is expected early summer 2019.	A final report is expected early summer 2019.

Strategic Mapping and Modelling Scottish Water	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	01/06/2016 – 31/12/2021	Sewer mapping progressing as programmed	On track to deliver within agreed LFRMP timescales
New Flood Warning	G	The area under consideration includes properties affected by flooding in Fife and Perth and Kinross and is likely to include St Andrews which is affected by flooding from the Kinness Burn. Further feasibility assessment will be required to assess delivery potential and the final detail of communities for which warnings can be provided will be determined during the scoping process. Hydrometry developments are to begin in spring 2019. The new flood warning service is to be launched in May 2021.	SEPA	01/06/2016- 31/12/2021	Initial investigation into flood risk and potential new flood warning areas undertaken across Fife.	Feasibility assessment to determine scope of new hydrometric infrastructure and flood warning service requirements due to be completed in 2019 - 20.
Flood Forecasting	G	The Scottish Flood Forecasting Service is an existing and ongoing 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	SEPA, Met Office	ongoing	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	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.

		<p>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.</p>			<p>organisations with flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.</p>	
<p>Awareness Raising</p>	<p>G</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 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/y</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 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.</p>	<p>SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>Fife Council aims to raise awareness of flooding through ongoing community engagement</p>

		<p>ou-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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>			<p>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 (eg. 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 Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.</p>	<p>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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
Self Help	G	Everyone is responsible for	Responsible	Ongoing	Everyone is responsible for	Fife Council will continue

		<p>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.</p>	<p>Authorities</p>		<p>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.</p>	<p>discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>
<p>Surface Water Plan/ Study Fife Council</p>	<p>A</p>	<p>Prepare Surface Water Management Plans (SWMPs) to cover St Andrews and Guardbridge. 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. Fife Council will co-ordinate this work with Scottish Water and SEPA through the local plan district (LPD) partnership with delivery of the SWMP by 2019/2020.</p>	<p>Fife Council</p>		<p>Not progressed.</p>	<p>The surface water management plan for this area will commence in April 2019.</p>
<p>Scottish Water</p>	<p>A</p>	<p>Provide local knowledge and understanding of the sewer</p>	<p>Scottish Water</p>		<p>The Scottish Water assessment of flood risk within these sewer</p>	<p>Assessment will not deliver within LFRMP timescales but is still on</p>

		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. Scottish Water will work with and support surface water management planning through ensuring that best available knowledge and data is used to input into the surface water management plans.			catchments has been delayed. The assessment will improve knowledge and understanding of surface water flood risk.	track to deliver within FRM Cycle.
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	Fife Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Fife Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Emergency Plans / Response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by	Category 1 and 2 responders	Ongoing	SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans	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

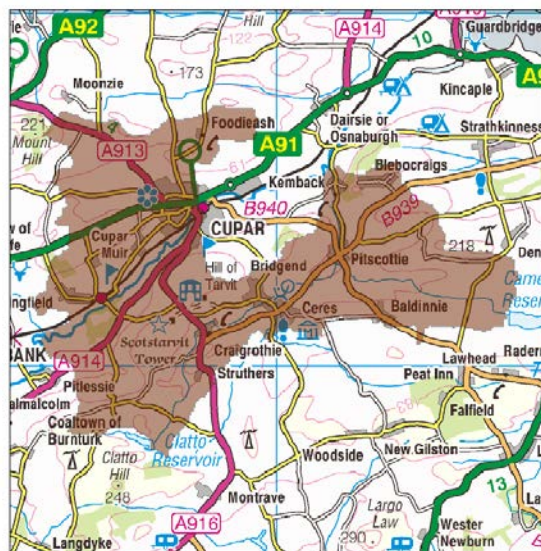
		<p>Category 1 and 2 Responders. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will support regional and local resilience partnerships as required. The emergency response by these organisations is coordinated through regional and local resilience partnerships. This response may be supported by the work of voluntary organisations.</p>				<p>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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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 the long-term</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Fife Council and SEPA have continued to advise on planning applications.</p>	<p>Fife Council and SEPA will continue to advise on planning applications.</p>

		<p>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. 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.</p>				
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Cupar (Potentially Vulnerable Area 07/18)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council	River Eden

Summary of Progress Within PVA



There are approximately 260 residential properties and 80 non-residential properties at risk of flooding. The Annual Average Damages are approximately £1.3 million. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/18.

Key progress has been made with the procurement of the flood protection study for this PVA.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Cupar 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
							SW	SEPA											
07/18			G	G		A	G	R	G		G			G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Cupar (PVA 07/18)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	G	Prepare a flood protection study for Cupar and Cults Mill from 2016-2018 to assess whether flood storage, flood defences and natural flood management could reduce flood risk from the River Eden and Lady Burnfrom. Natural flood management options will be considered include river / floodplain restoration and sediment management. The study will also investigate the viability of property level protection and property relocation. The study will take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream.	Fife Council	01/06/2016 - 31/12/2018	Study commenced	Study programmed to complete February 2019.
Maintain	G	Fife Council will continue to maintain the existing flood	Fife Council	ongoing	Fife Council has undertaken inspections and maintenance	Fife Council will continue to inspect and maintain the scheme

flood protection scheme		defences along the Blebo Burn, Ceres Burn, Craigrothie Burn, Latch Burn and an unnamed watercourse (old lade). These defences provide protection against flooding in Pitscottie and Ceres			as required.	infrastructure as described and as resources allow.
Strategic Mapping and Modelling Scottish Water	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	01/06/2016 – 31/12/2021	Sewer mapping progressing as programmed	On track to deliver within agreed LFRMP timescales
Strategic Mapping and Modelling SEPA	R	Surface water mapping developments: improved data areas across LPD + use of Cupar and Springfield SWMP results if appropriate.	SEPA	01/06/2016 – 31/12/2017	SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH13 methodology. The FEH13 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. SEPA will develop new Surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in Cycle 2. Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in Surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.
New Flood Warning	G	The area under consideration includes properties affected by	SEPA	01/06/2016-31/12/2021	Initial investigation into flood risk and potential new flood	Feasibility assessment to determine scope of new

		<p>flooding in Fife and Perth and Kinross and is likely to include Cupar. Further feasibility assessment will be required to assess delivery potential and the final detail of communities for which warnings can be provided will be determined during the scoping process.</p> <p>Hydrometry developments are to begin in spring 2019. The new flood warning service is to be launched in May 2021.</p>			warning areas undertaken across Fife.	hydrometric infrastructure and flood warning service requirements due to be completed in 2019 - 20.
Flood Forecasting	G	<p>The Scottish Flood Forecasting Service is an existing and ongoing 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.</p>	SEPA, Met Office	ongoing	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 flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.
Awareness Raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk.	Responsible Authorities	Ongoing	SEPA has delivered a range of awareness raising activities through campaigning,	SEPA will continue to raise awareness of flood risk through campaigning, developing

		<p>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 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 exist, SEPA will engage with</p>			<p>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 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 (eg. 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 Flood Forum and worked closely with UK</p>	<p>education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p> <p>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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding.</p>
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		community resilience groups and community safety partnerships.			agencies to develop joint flooding information. Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans.	
Surface Water Plan/ Study Fife Council	A	Fife Council will prepare Surface Water Management Plans (SWMPs) to cover Cupar. 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. Fife Council will co-ordinate this work with Scottish Water and SEPA through the local plan district (LPD) partnership with delivery of the SWMP by 2019/2020.	Fife Council			The preparation of the surface water management plan for Cupar will commence on completion of Cupar Flood Study (prog April 2019) to allow findings from this study to be incorporated into SWMP.
Scottish Water	A	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.			The Scottish Water assessment of flood risk within these sewer catchments has been delayed. The assessment will improve knowledge and understanding of surface water flood risk.	Assessment will not deliver within LFRMP timescales but is still on track to deliver within FRM Cycle.

		Scottish Water will work with and support surface water management planning through ensuring that best available knowledge and data is used to input into the surface water management plans.				
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	Fife Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair.	Fife Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection.
Planning Policies	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should	Planning authority	Ongoing	Fife Council and SEPA have continued to advise on planning applications.	Fife Council and SEPA will continue to advise on planning applications.

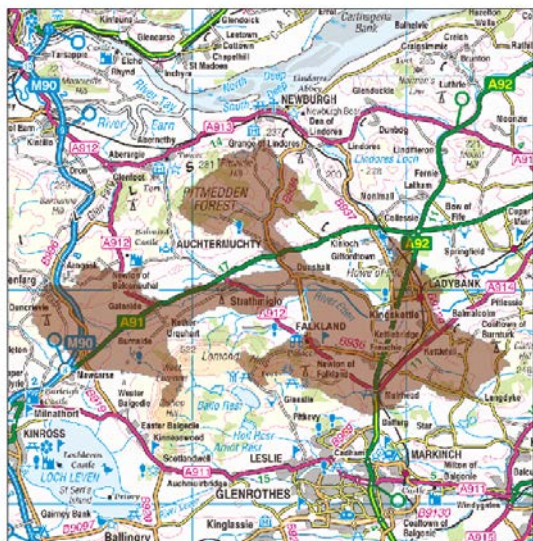
		<p>be avoided. For further information on the national planning policies see http://www.sepa.org.uk/environment/land/planning/. SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 72 of the FRM Act, 2009. SEPA also has 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. 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.</p>				
<p>Emergency Plans / Response</p>	<p>G</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. Scottish Water are a Category 2 responder under the Civil Contingencies Act 2004 and will</p>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans</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</p>

		<p>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>				<p>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.</p> <p>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Self Help</p>	<p>G</p>	<p>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.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>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.</p>	<p>Fife Council will continue discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow.</p>

Auchtermuchty and Pleasance (Potentially Vulnerable Area 07/19)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Fife Council, Perth and Kinross Council	River Eden

Summary of Progress Within PVA



There are approximately 170 residential properties and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £610,000. Further information can be found in the [Tay Estuary and Montrose Basin \(TEAMB\) Local Flood Risk Management Plan](#) under PVA 07/19.

The 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 Estuary and Montrose Basin catchments.

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Overview of actions to manage flooding in the Auchtermuchty and Pleasance 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
							SW	SEPA											
07/19			G	R	A		G	R	G		G		G	G	G	G		G	G

Summary of Progress of Actions to Manage Flood Risk in Auchtermuchty and Pleasance (PVA 07/19)

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
Flood Protection Study	R	Flood protection study for Auchtermuchty from 2017-2019 to assess whether flood storage and natural flood management could further reduce flood risk from the Auchtermuchty Burn. The study will supplement previous studies carried out by Fife Council and consider the existing flood protection works. Natural flood management options that will be considered include river / floodplain restoration and sediment management. The study will also investigate property relocation and the viability of property level protection. The study will take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream.	Fife Council	31/12/19	Study delayed	Planned commencement date April 2019
Maintain	R	Maintain the existing Auchtermuchty	Fife Council		Fife Council have continued to	Fife Council will continue to

<p>Flood Protection Scheme</p>		<p>Flood Protection Scheme and the Dunshalt Village Flood Protection Scheme. Maintain the existing Flood Protection Schemes ensuring works are co-ordinated 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 Fife 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.</p>			<p>maintain the Auchtermuchty and Dunshalt Village Flood Protection Scheme to maximise the standard of protection offered by the scheme.</p>	<p>maintain the Auchtermuchty and Dunshalt Village Flood Protection Scheme to maximise the standard of protection offered by the scheme.</p>
<p>Natural Flood Management Study</p>	<p>A</p>	<p>Undertake a natural flood management Study. The study will take a catchment approach and consider the potential benefits and disbenefits and interaction between actions upstream and downstream. Fife Council will coordinate the natural flood management study through the Local Planning District (LPD) partnership and or separate agreements. The economic, social and environmental impacts of the natural flood management actions will be considered in the study.</p>	<p>Fife Council</p>	<p>31/12/19</p>	<p>Study to be incorporated within Auchtermuchty flood protection study - currently delayed</p>	<p>Planned commencement date April 2019 – 9 month contract</p>
<p>Strategic Mapping and Modelling (SEPA)</p>	<p>R</p>	<p>Additional surface water data into the flood maps to improve understanding of flood risk. Approximately 1,100km² of improved surface water data is currently available within this Local Plan District. The inclusion of additional surface water hazard data resulting from the completion of local</p>	<p>SEPA</p>	<p>ongoing</p>	<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH13 methodology. The FEH13 dataset contains the latest science and understanding of rainfall across Scotland and represents a</p>	<p>This action will not be taken forwards as described. SEPA will develop new Surface water flood hazard maps over the remainder of Cycle 1. It is anticipated that updated flood mapping from this revised action will be available early in Cycle 2.</p>

Scottish Water		authority surface water management plans and Scottish Water integrated catchment studies will be considered as these projects are completed.			significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended.	Alongside this SEPA will investigate the feasibility of developing an interim approach to assess the change in Surface water hazard (and risk) associated with FEH13, such that we could consider it in the development of the 2021 FRM Strategies.
	G	Carry out an assessment of flood risk within the highest risk sewer catchments to improve knowledge and understanding of surface water flood risk. Undertake further investigation and modelling in the Bowhouse (2016-2019), Springfield (2018-2020) and Strathmiglo (2018-2020) 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	2016-2021	The Scottish Water assessment of flood risk within the sewer catchment has been completed. The assessment has helped to improve knowledge and understanding of surface water flood risk.	N/A
New Flood Warning	G	The area under consideration includes properties affected by flooding in Fife and Perth and Kinross and is likely to include Auchtermuchty. Further feasibility assessment will be required to assess delivery potential and the final detail of communities for which warnings can be provided will be determined during the scoping process.	SEPA	2016 - 2021	Initial investigation into flood risk and potential new flood warning areas undertaken across Fife.	Feasibility assessment to determine scope of new hydrometric infrastructure and flood warning service requirements due to be completed in 2019 - 20.
Flood Forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The flood guidance	SEPA	Ongoing	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	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts

		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.			emergency responders, local authorities and other organisations with flooding management duties). Each daily statement gives an assessment of the risk of flooding for the next five days to help enable these organisations to put preparations in place to reduce the impact of flooding. SEPA's Flood Alert service is freely available to everyone and helps enable communities to be aware and prepared to reduce the impacts of flooding.	of flooding.
Community Flood Action Groups	G	Reduce flood risk, improve preparedness and increase resilience against flooding. Fife Council is engaging with Falkland Flood Action Group, Freuchie Flood Action Group and the Kettle and District Flood Resilience Group operate in this area and aim to increase community resilience to flooding. Glenfarg Community Council also operates in this area and have prepared a community resilience plan to help prepare for and respond to emergencies.	Fife Council		Fife Council Officers hold regular meetings with groups and yearly Council meeting with Group Chairs	Ongoing
Awareness Raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Scottish Water will support SEPA and responsible authorities with their awareness raising activities as required and	Responsible Authorities	Ongoing	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, Floodline. We	SEPA will continue 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 our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning

		<p>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 exist, SEPA will engage with community resilience groups and community safety partnerships.</p>		<p>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 online 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 Flood Forum and worked closely with UK agencies to develop joint flooding information. Fife Council's website provide guidance and advice on flood risk matters, states duties under current flooding legislation, promotes SEPA's Floodline service and provides links to the current Local Flood Risk Management Plans. Perth and Kinross Council has</p>	<p>and forecasting service, innovation, education and engagement with partners, customers and the public. 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 in the Local Authority area and the appropriate Local Plan Districts. Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Fife Council will give consideration to a public communications campaign to assist with raising awareness of flooding. Perth and Kinross Council will continue with awareness raising activities when developing proposals for the remaining actions in it's local flood risk management plans.</p>
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					developed its website to provide more advice and information on flood risk management	
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 supports communities to become more resilient to emergency situations, including flood events. Communities have been engaged through the multi-agency local Resilience Partnership Community and Business Resilience Group led by the Council	Fife Council will continue discussions with Community Groups. Fife Council will continue to supply Community Groups with sandbags when requested and resources allow. Perth and Kinross Council will support communities to become more resilient to flooding and to develop community resilience groups and emergency plans.
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	Local authorities, asset / land managers	Ongoing	Fife Council have a routine programme of watercourse inspections which informs the schedule of clearance and repair. 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	Fife Council will continue to undertake routine watercourse inspections and update schedules and make available for inspection. 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 gully monitoring programme.

		<p>management of their own assets including those which help to reduce flood risk.</p>			<p>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. Perth and Kinross Council 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.</p>	
<p>Emergency Plans / Response</p>	<p>G</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</p>	<p>Category 1 and 2 responders</p>	<p>Ongoing</p>	<p>SEPA continues to support LAs in emergency planning and the process is on-going in identifying areas requiring Emergency Plans Perth and Kinross Council further developed its Flooding Emergency Response Plan in October 2017. The Plan is</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</p>

		<p>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>			<p>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>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. 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 table top 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>Where staffing resources allow, consideration will be given to working with schools through collaboration with colleagues in Education. Consideration will also be given to a public communications campaign to assist with raising awareness of flooding.</p>
<p>Planning Policies</p>	<p>G</p>	<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,</p>	<p>Planning authority</p>	<p>Ongoing</p>	<p>Fife Council and SEPA have continued to advise on planning applications. The current Perth and Kinross Local Development Plan (LDP1) contains planning policy and development</p>	<p>Fife Council and SEPA will continue to advise on planning applications. Perth and Kinross Council will publish LDP2 and revised Supplementary Guidance on Flooding and Drainage.</p>

	<p>the policy supports a catchment-scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided. For further information on the 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. 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</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 and 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 872 planning applications since the start of the 2016/17 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 outwith these formal consultations. The Council is reviewing LDP1, which was adopted in February 2014 to produce LDP2. LDP1 includes the policies and development allocations against which the planning applications for</p>	<p>Following consultation on the Perth and Kinross proposed LDP2, the Council considered the representations made to the Proposed Plan and approved responses to these representations at a special Council meeting August 2018. The Proposed Plan was then submitted to Scottish Ministers for examination on 14 September 2018. The Reporter will examine the unresolved issues. Following amendment of the LDP2 in line with the Reporter's recommendations (unless there are reasonable and justifiable grounds for not accepting some of the recommendations), the Council will adopt LDP2. This is anticipated to be July 2019. The existing Supplementary Guidance (SG) on Flood Risk and Flood Risk Assessments (Developers Guidance note on Flooding and Drainage) is also currently being reviewed and will be revised and consulted on in January 2019 with a view to adoption alongside LDP2. The main aspects that are being updated are the guidance on climate change; 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</p>
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		<p>engage in the planning system, including guidance on flood risk and planning is available on SEPA website.</p>		<p>development are considered. Key milestones in its review have included publication and consultation on the Main Issues Report (consulting on key issues and changes from the adopted LDP1) in December 2015 and the publication and consultation on the LDP2 Proposed Plan (the settled view of the Council) in December 2017. To inform this process, the Council has undertaken a Strategic Environmental Assessment (SEA) and prepared 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 involved engagement with SEPA and the Council's flooding team.</p>	<p>the Sewerage (Scotland) Act.</p>
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Appendix 1: Flood risk management responsibilities in Scotland and the legal requirement for the publication of this INTERIM 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 (reference 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 Flood Risk Management Strategy, and the publication of Local Flood Risk Management Plan's 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 Tay Estuary and Montrose Basin](#)

[Local Flood Risk Management Plan for Tay Estuary and Montrose Basin](#)

Legal requirement

This document sets out the conclusions of the review of the Local Flood Risk Management Plan (LFRMP) for the Tay Estuary and Montrose Basin (TEAMB) Local Plan District (LPD) as required by Section 37 of the Flood Risk Management (Scotland) Act 2009 (the "Act").

37 Local flood risk management plans: interim report

- (1) Not earlier than 2 years and not later than 3 years after a local flood risk management plan is finalized, the lead authority must —
 - (a) review the plan, and
 - (b) publish a report on the conclusions of the review including information on the progress that has been made towards implementing the measures identified in the implementation part of the plan.
- (2) The lead authority must make copies of the report available for public inspection.

The TEAMB LFRMP, which includes the 'implementation part of the plan', was published in June 2016. The Interim Report is therefore to be published between July 2018 and June 2019. The Interim Report will provide a summary of the LFRMP actions ('measures') and the proposed delivery timescales.

The information on progress will include:

- an assessment of the progress towards implementing each of the actions;
- reasons for any actions where delivery is not as planned; and
- a description of arrangements planned to deliver the remaining actions and to address delayed actions.

The Interim 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, will be in the LPD. The approval of the Interim Report will be in accordance with the agreed governance arrangements in the LPD. The responsible authorities for the TEAMB LPD are:

- Angus Council (lead authority)
- Aberdeenshire Council
- Cairngorms National Park
- Dundee City Council
- Fife Council
- Forestry Commission Scotland
- Perth & Kinross Council
- Scottish Water.

The lead authority must also publish a Final Report on the LFRMP under Section 38 of the Act between July 2021 and June 2022 (not earlier than 5 years and not later than 6 years from the publication of the plan). The Final Report will provide an assessment of current actions and a summary of current actions not implemented, with reasons for their non-implementation. The Final Report will also include a description of any other measures implemented, which the lead authority considers have contributed to the achievement of the objectives summarised in the LFRMP.

Publication

The published Interim Report for the TEAMB LFRMP will be made available for public inspection, as per Section 37(2) of the Act, via the website of the lead authority, Angus Council:

www.angus.gov.uk; search for “Interim Report LFRMP”.

Links to the published Interim Report for the TEAMB LFRMP will also be provided from Scottish Government, SEPA and other responsible authority websites.

A hard (paper) copy of the published Interim Report for the TEAMB LFRMP is also available for public inspection on weekdays between 9am and 5pm at the following location(s):

Angus Council, Angus House, Orchardbank, Forfar DD1 1AN

Copies of the published Interim Report for the TEAMB LFRMP may also be available at offices of other responsible authorities. It is advised that the responsible authority be contacted to make such arrangements.

Detailed arrangements for publication of the Interim Report for TEAMB LFRMP are in Appendix 2.