



## REPORT TO INFRASTRUCTURE SERVICES COMMITTEE – 24 JANUARY 2019

### TAY ESTUARY AND MONTROSE BASIN FLOOD RISK MANAGEMENT PLAN 2016 - 2022 - INTERIM REPORT

#### 1 Recommendations

The Committee is recommended to:

- 1.1 **Note the drafting of the Interim Report for the Tay Estuary and Montrose Basin Local Plan District, under Section 37 of the Flood Risk Management (Scotland) Act 2009 by Angus Council.**
- 1.2 **Agree extracts of the Tay Estuary and Montrose Basin Interim Report that relate to the three Potentially Vulnerable Areas in Aberdeenshire.**

#### 2 Background / Discussion

- 2.1 On 17 March 2016 the meeting of this Committee agreed the Local Flood Risk Management Plan for the Tay Estuary and Montrose Basin Local Plan District<sup>1</sup>. The Local Flood Risk Management Plan presents a summary of the objectives and actions contained within SEPA's Flood Risk Management Strategy. The Plan also contains an element of how the measures will be implemented, as well as timescales for delivery, funding arrangements and details of partnership working to deliver these measures.
- 2.2 Under Section 37 of The Flood Risk Management (Scotland) Act 2009, the lead authority is required to undertake a review of the Plan and publish a report on the conclusions of the review. This report must include information on the progress that has been made towards implementing the measures identified in the Plan. This review must be undertaken not less than two years or more than 3 years after publishing the Plan, i.e. between June 2018 and June 2019.
- 2.3 Angus Council is the lead authority for the Tay Estuary and Montrose Basin Local Plan District and is responsible for publishing the Interim Report for this district.
- 2.4 If agreed by this Committee it is proposed that the Interim Report for the Tay Estuary and Montrose Basin Local Plan District will be published in March 2019. This publication date has been provisionally agreed with the other thirteen lead authorities, SEPA and Scottish Water, such that the Interim Reports for all fourteen Local Plan Districts in Scotland will be launched at the same time as the Scottish Government's annual report on flood management in Scotland. It is currently proposed that these documents will be launched at the Scottish Flood Management conference in February.

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<sup>1</sup> <https://www.aberdeenshire.gov.uk/environment/flooding/flood-risk-management-scotland-act-2009/>

- 2.5 The extracts relating to the three Potentially Vulnerable Areas within Aberdeenshire is shown in **Appendix 1**. The most significant action relates to the continuing inspection and maintenance of the 1982 Fettercairn Flood Protection Scheme and an informal flood storage area created on the Burn of Cauldcotts in 2011 to provide additional storage capacity.
- 2.6 The Head of Finance and the Monitoring Officer within Business Services have been consulted but neither had any comments to make on the contents of the report.

### **3 Scheme of Governance**

- 3.1 The Committee is able to consider and take a decision on this item in terms of Section F.1.1d of the List of Committee Powers in Part 2A of the Scheme of Governance as it relates to policy issues and resource matters (within agreed budgets) relating to those functions which have not been reserved to the Full Council or specifically delegated to any other Committee of the Council for Roads, Landscape and Waste Management.

### **4 Implications and Risk**

- 4.1 An equality impact assessment is not required because there are no proposals within this report that have a differential impact on any of the protected characteristics.
- 4.2 There are no proposals within this report that have staffing or financial implications.
- 4.3 A Town Centre First Impact Assessment was not required as this report does not have a differential impact on Town Centres.
- 4.4 No Risks have been identified as relevant to this matter on a Corporate Level.

**Stephen Archer**  
**Director of Infrastructure Services**

Report prepared by Gavin Penman, Projects Manager  
Date 11 January 2019

# Laurencekirk (Potentially Vulnerable Area 07/01)

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

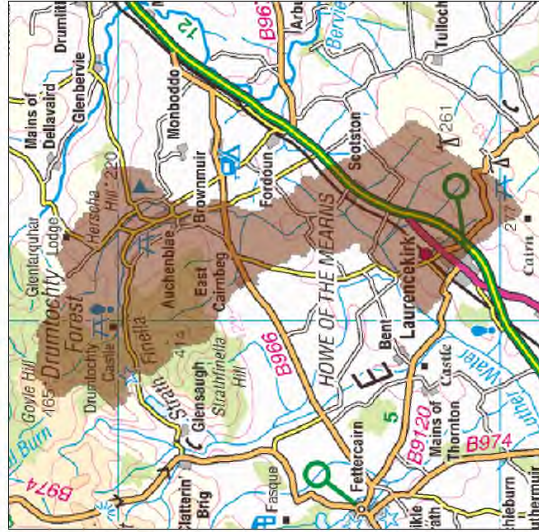
## Summary of Progress Within PVA

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.

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; works at Mains of Haukerton bridge to maintain the flow capacity.



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### 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
<b>Strategic Mapping and Modelling</b>	<b>A</b>	<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. Scottish Water will provide responsible authorities with the outputs of the</p>	Scottish Water	2016-2019	Sewer mapping progressing as scheduled.	Laurencekirk Section 16 assessment scheduled for completion by 01/06/2020.

<p><b>Flood Forecasting</b></p>	<p><b>G</b></p>	<p>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>	<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) 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</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>
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<b>Self Help</b>	<b>G</b>	For more information please visit SEPA's website.	Responsible Authorities	Ongoing	freely available to everyone and enables communities to be aware and prepared to reduce the impacts of flooding.	See progress with LPD-wide actions	See progress with LPD-wide actions		
<b>Awareness Raising</b>	<b>G</b>	See progress with LPD-wide actions	Responsible Authorities	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions	See progress with LPD-wide actions		
<b>Maintenance</b>	<b>G</b>	See progress with LPD-wide actions	Local authorities, asset / land managers	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions	See progress with LPD-wide actions		
<b>Emergency Plans / Response</b>	<b>G</b>	See progress with LPD-wide actions	Category 1 and 2 responders	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions	See progress with LPD-wide actions		
<b>Planning Policies</b>	<b>G</b>	See progress with LPD-wide actions	Planning authority	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions	See progress with LPD-wide actions		

## 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.

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 Fettercairn 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
PVA 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	<p>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.</p> <p>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</p>	Aberdeenshire Council	Ongoing	<p>Inspection and maintenance of the 1982 Fettercairn flood protection scheme and an informal flood storage area created on the Burn of Cauldcotts in 2011 to provide additional storage capacity. These actions provide protection to the village of Fettercairn.</p>	<p>Continue to inspect and maintain the 1982 Fettercairn flood protection scheme and an informal flood storage area created on the Burn of Cauldcotts in 2011 to provide additional storage capacity. These actions provide protection to the village of Fettercairn.</p>



<p><b>Flood forecasting</b></p>	<p><b>G</b></p>	<p>response inspections. This work will be carried out by Aberdeenshire Council engineers on a priority needs basis as resource allows. The general maintenance standard target is to conduct watercourse inspections annually.</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) 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>
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<p><b>Community Flood Action groups</b></p>	<p><b>G</b></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.</p> <p>Aberdeenshire Council will ensure stocks of sandbags are delivered to the Distillery 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>Aberdeenshire Council</p>	<p>Ongoing</p>	<p>Fettercairn Flood Resilience Group operates in this area. This is a community-run group set up in spring 2013 and continues to be supported and advised by Aberdeenshire Council.</p>	<p>Continue to provide support and advice to Fettercairn Flood Resilience Group when resources are available.</p>
<p><b>Self Help</b></p>	<p><b>G</b></p>	<p>See progress with LPD-wide actions</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>See progress with LPD-wide actions</p>	<p>See progress with LPD-wide actions</p>
<p><b>Awareness Raising</b></p>	<p><b>G</b></p>	<p>See progress with LPD-wide actions</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>See progress with LPD-wide actions</p>	<p>See progress with LPD-wide actions</p>
<p><b>Maintenance</b></p>	<p><b>G</b></p>	<p>See progress with LPD-wide</p>	<p>Local authorities,</p>	<p>Ongoing</p>	<p>See progress with LPD-wide</p>	<p>See progress with LPD-wide</p>

		actions	asset / land managers		actions	actions
<b>Emergency Plans / Response</b>	<b>G</b>	See progress with LPD-wide actions	Category 1 and 2 responders	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions
<b>Planning Policies</b>	<b>G</b>	See progress with LPD-wide actions	Planning authority	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions

## North of Brechin (Potentially Vulnerable Area 07/03)

Local Plan District	Local Authority	Main Catchment
Tay Estuary and Montrose Basin	Aberdeenshire Council, 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 07/03	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	G
	Maintain flood protection scheme*	
	Maintain flood warning	G
	Flood forecasting	G
	Property level protection scheme	
	Community flood action groups	G
	Self help	G
	Awareness raising	G
Maintenance	G	
Site protection plans		
Emergency plans/response	G	
Planning policies	G	

**Summary of Progress of Actions to Manage Flood Risk in North of Brechin (PVA 07/03)**

Action	Status (RAG)	Description	Delivery Lead	Planned Dates	Interim Progress	Planned Actions to complete
<b>Strategic Mapping and Modelling</b>	<b>G</b>	<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 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</p>	Scottish Water	2016-2020	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 1 <sup>st</sup> May 2019.

	<b>G</b>	<p>Management (Scotland) Act 2009</p> <p>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.</p> <p>SEPA will seek to incorporate additional surface water data into the flood maps to improve understanding of flood risk. Approximately 1,100km<sup>2</sup> of improved surface water data is currently available within this Local Plan District.</p> <p>River mapping improvements and surface water mapping improvements are SEPA-led.</p>	SEPA	2016-2018	<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 significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer considered appropriate to deliver this action as originally intended.</p> <p>Following a screening exercise to characterise the catchment and identify the data</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> <p>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> <p>It is planned to complete this action by the end of 2018.</p>
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					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.	
<b>Maintain Flood Warming</b>	<b>G</b>	Mapping improvements on the Cruick Water are expected to be carried out in 2017 to 2018. Surface water mapping improvements are expected to be carried out in 2016 to 2017.	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	Ongoing	SEPA has continued to operate the flood warning service.  SEPA will continue to operate the flood warning service.
<b>Flood Forecasting</b>	<b>G</b>	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The flood guidance statements provide an assessment of the risk of flooding for a five day period allowing responders time to	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	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

		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.			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.	
<b>Self Help</b>	<b>G</b>	See progress with LPD-wide actions	Responsible Authorities	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions
<b>Awareness Raising</b>	<b>G</b>	See progress with LPD-wide actions	Responsible Authorities	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions
<b>Maintenance</b>	<b>G</b>	See progress with LPD-wide actions	Local authorities, asset / land managers	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions
<b>Emergency Plans / Response</b>	<b>G</b>	See progress with LPD-wide actions	Category 1 and 2 responders	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions



<b>Planning Policies</b>	<b>G</b>	See progress with LPD-wide actions	Planning authority	Ongoing	See progress with LPD-wide actions	See progress with LPD-wide actions
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