

**REPORT TO:** Cabinet

**MEETING DATE:** 8 September 2015

**BY:** Depute Chief Executive (Partnerships and Community Services)

**SUBJECT:** Flood Risk Management

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## **1 PURPOSE**

- 1.1 To update Cabinet on the Flood Risk Management Strategy process and seek approval of the inclusion of proposed Flood Protection Schemes (FPS) for Musselburgh and Haddington and further Flood Studies in various locations in East Lothian, in SEPA's List of Prioritised Actions. The List will be considered by the Scottish Government in determining the distribution of future funds as part of the ongoing Flood Risk Management Strategy process.

## **2 RECOMMENDATIONS**

- 2.1 That Cabinet approve the inclusion of proposed Flood Protection Schemes (FPS) for Musselburgh and Haddington and further Flood Studies, in SEPA's List of Prioritised Actions.

## **3 BACKGROUND**

- 3.1 A report to the May 2014 Cabinet meeting outlined the requirements of the Flood Risk Management (Scotland) Act 2009 and recommended approval of the Coastal Characterisation Report as part of the ongoing Flood Risk Management Strategy process.
- 3.2 A report to the October 2014 Cabinet meeting recommended approval of the Objectives and Short List of Actions as part of the ongoing Flood Risk Management Strategy process.
- 3.3 A report submitted to the Member's Library Service in February 2015 informed Members of the Public Consultation and provided details of SEPA's Short List of Potential Actions and the Delivery Plan for those Actions.

- 3.4 SEPA have now produced a List of Prioritised Actions for 41 proposed flood protection schemes / works and 168 further studies across Scotland. The List will be the basis for future Scottish Government flood funding allocation and it is envisaged the majority of the List will be funded in the 2016 – 2022 planning cycle. The Actions in East Lothian are listed in Appendix 1.
- 3.5 SEPA are seeking Local Authority approval of the List prior to including the List in their Flood Risk Management Strategy to be published in December 2015.
- 3.6 Flood Protection Schemes (FPS) for Musselburgh and Haddington have been included in the List of Prioritised Actions which have been ranked according to Benefit / Cost Ratio (BCR). The proposed Musselburgh FPS is ranked 11 out of 41 schemes and the Haddington FPS is ranked 36. The Scottish Government will contribute 80% of the cost of Flood Protection Schemes.
- 3.7 Studies to identify a range of options for flood mitigation measures in Musselburgh and Haddington are ongoing and the List of Prioritised Actions includes future Flood Studies for Cockenzie, Port Seton, Prestonpans, Tranent, Dunbar, West Barns and North Berwick. The Scottish Government will allocate 20% of the annual flood budget to undertake these studies.
- 3.8 The ongoing study for Musselburgh Flood Mitigation Measures has identified an option for direct flood defences comprising relatively low (typically 1 to 1.5m) earth embankments and flood walls that would provide a 1:200 year Standard of Protection against extensive flooding of Musselburgh as a result of the interaction of high river flows in the River Esk and high sea levels (due to tides, storm surges and waves). Further work to formalise this option is ongoing but the current estimated cost of these direct defence Flood Protection Works is £5.6 million of which the Council's contribution would be £1.12 million.
- 3.9 The study for Haddington Flood Mitigation Measures is considering a range of options including direct flood defences. Further work to formalise the options is also currently ongoing but the current estimated cost of the direct defence Flood Protection Works is £7.4 million of which the Council's contribution would be £1.48 million.
- 3.10 It is envisaged that the Flood Protection Schemes for Musselburgh and Haddington could be undertaken in the 2016 – 2022 planning cycle subject to confirmation of the Scottish Government and Council funding allocation and the necessary approvals being in place.

#### **4 POLICY IMPLICATIONS**

- 4.1 The Flood Risk Management (Scotland) Act 2009 places a statutory responsibility on the Local Authority to exercise their flood risk related functions with a view to reducing overall flood risk and complying with the EC Floods Directive. A key responsibility is the preparation of a Flood Risk Management Strategy & Local Flood Risk Management Plan in accordance with the Directive.

#### **5 EQUALITIES IMPACT ASSESSMENT**

- 5.1 This report is not applicable to the well being of equalities groups and an Equalities Impact Assessment is not required.

#### **6 RESOURCE IMPLICATIONS**

- 6.1 Financial - The financial provision for the preparation of the Flood Risk Management Strategy and Plan (to be published in June 2016) and implementation of Flood Protection Schemes and Studies will be allocated from the 2015/16 and future year Flooding and Coastal Protection budgets.

Provision for the Council's contribution towards the Musselburgh FPS (current estimate £1.12 m) has been identified in the re-profiled capital budget for Coastal Protection / Flooding.

Provision for the Haddington FPS and other Flood Protection Schemes identified in the Flood Risk Management Plan, will be required in future years and will be influenced by future settlements from the Scottish Government.

- 6.2 Personnel - None

- 6.3 Other – None

#### **7 BACKGROUND PAPERS**

- 7.1 Appendix 1 – List of East Lothian Prioritised Actions

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<b>DATE</b>	31/08/15

Rows highlighted in green have undergone a notable change since v3. These changes have resulted in some small changes to overall rankings

Location	Objective	Scheme Description	PV Scheme costs – (*indicate capital / undefined)	Economic Benefits	BCR	Non-Monetised Score	Ranking (evidence based)			Ranking (local preference) Reason	Proposed delivery Cycle	Scheme Status	LA Funding identified (if Yes, which years)	Supporting Text
							National	LPD	LA					
<b>East Lothian Council</b> <b>Musselburgh</b>	Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk and coastal flooding. Reduce risk to people in Musselburgh from flooding from the River Esk. Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk.	Scheme comprises elements of direct flood defences comprising relatively low (typically 1 to 1.5m) earth embankments and flood walls that would provide a 1:200 year standard of protection against extensive flooding of Musselburgh as a result of the interaction of high river flows in River Esk and high sea levels (due to tides, storm surges and waves).  Standard of Protection: 1 in 200yr	£5.6m	PV Damages Avoided £29.6m  1489 residential properties and 417 non-residential properties at risk	5.29	4	11 Of 41	2 Of 7	1 Of 2	-	C1 (2017/2018)	Preliminary Stages Ongoing  Flood Study Report to be completed July 2015  Forecast: Notification May 2016 Completion of Scheme March 2018	Yes  2017/2018  Funding available in current approved Capital Budget	A Flood Protection Study for Musselburgh is currently underway and due to report in summer 2015. Draft study outputs have been used to inform the prioritisation.  The scheme would be implemented prior to 2021 (proposed for 2017/18 - subject to available funding)  Economic appraisal is based only on direct damages to properties. No indirect or social damages calculated, therefore BCR may be under-represented.
<b>East Lothian Council</b> <b>Haddington</b>	Reduce economic damages to residential and non-residential properties in Haddington caused by flooding from the River Tyne.	A Flood Protection Study for Haddington is currently underway and due to report in summer 2015. The study has identified the need for flood protection actions including direct flood defences and possibly NFM works which will, subject to funding, be implemented prior to 2021 (proposed for 2018/19)	*£7.4m	PV Damages Avoided £8.8m  231 properties at risk	1.19	4	36 Of 41	7 Of 7	2 Of 2	-	C1	Preliminary Stages Ongoing  Option Appraisal Report published in July 2015  Forecast: Notification May 2016 April 2018 - Start on site Completion of Scheme March 2019	No  Scheme proposed for 2018/19. Capital Budget only approved for 3 years i.e. until 2017/18	A Flood Protection Study for Haddington is currently underway and due to report in summer 2015. Draft findings have been supplied to SEPA for use in the prioritisation. The study has identified the need for flood protection actions including direct flood defences and possibly NFM works which will, subject to funding, be implemented prior to 2021 (proposed for 2018/19)."

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The following table lists (in descending national rank order) all 169 identified Flood Protection Studies. Some of these have NFM elements. Standalone NFM studies are listed in the second table within this document.

Where a study has been identified for C2 delivery, the right hand table column is highlighted in orange.

Where a Local Authority does not agree with the technical ranking prepared by SEPA, the entire entry is in italic and highlighted in bold for ease of interpretation.

Location	Objective	Next Step	Estimated Study Cost	Economic Benefits	PVD Damages	Mon-Monetised Score	Ranking (evidence based)			Ranking (local preference)	Reason	Proposed delivery cycle
							National	LPD	LA			
<i>East Lothian Cockenzie, Port Seton, Prestonpans PVA (10/23)</i>	<i>Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10080.</i>	<i>A Flood Protection Study should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. Natural Flood Management should assess Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.</i>	<i>£30k to £120k</i>	<i>63 residential properties and 14 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £6.2M</i>	<i>£6,236,581</i>	<i>6</i>	<i>61 of 168</i>	<i>9 of 27</i>	<i>1 of 3</i>	<i>3</i>	<i>No known fluvial issues to the LA. Known coastal issues.</i>	<i>C1</i>
East Lothian Tranent PVA (10/23)	Reduce risk to people in Tranent from river flooding. Objective ID: 10081.	A Flood Protection Study should assess Modification of Conveyance, Installation / modification of fluvial control structures, Direct flood Defences and Sediment Management. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action.	£30k to £100k	29 residential properties and 46 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £4.6M	£4,600,000	4	79 of 168	14 of 27	2 of 3	2	-	C1
<i>East Lothian Dunbar, West Barnes, North Berwick PVA (10/25)</i>	<i>Reduce economic damages to residential and non-residential properties caused by river and coastal flooding. Objective ID: 10083.</i>	<i>A Flood Protection Study in Dunbar/ West Barnes should assess Modification of Conveyance, Direct flood Defences and Sediment Management. Natural Flood Management should assess Wave Attenuation. The assessment should also consider these actions in combination and the impacts on flood risk upstream and downstream of each action. The study should also assess the risk and mitigation of wave overtopping at North Berwick.</i>	<i>£30k to £120k</i>	<i>49 residential properties and 15 non-residential properties at risk in a 200 year event with a PVD (damages avoided) of £3.4M</i>	<i>£3,384,500</i>	<i>4</i>	<i>110 of 168</i>	<i>20 of 27</i>	<i>3 of 3</i>	<i>1</i>	<i>Wave overtopping risk at North Berwick has not been studied. The risk may qualify North Berwick for PVA designation.</i>	<i>C1</i>

Draft NPWG Reference

The following table lists all of the standalone NFM Studies. NFM Studies are assumed C1 delivery unless otherwise identified.

Local Authority	Location	Objective	Indicators	Next-Step	Estimated Cost of Next Step
East Lothian	Musselburgh (10/21)	Reduce economic damages to residential and non-residential properties in Musselburgh caused by flooding from the River Esk and coastal flooding. (10075)	£1,574,382 Annual Average Damages (Residential Properties)	A Natural Flood Management Study should assess Wave Attenuation. The assessment should also consider the potential benefits and disbenefits to locations both upstream and downstream. The study should be linked to the flood protection works.	£20k to £50k

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