

## **Item: 6**

**Development and Infrastructure Committee: 8 June 2021.**

**Orkney Flood Risk Management Plan – Update.**

**Report by Executive Director of Development and Infrastructure.**

### **1. Purpose of Report**

To consider the draft list of actions for inclusion in the Local Flood Risk Management Plan for the period 2022 to 2028.

### **2. Recommendations**

The Committee is invited to note:

#### **2.1.**

That, in terms of the Flood Risk Management (Scotland) Act 2009, the Council is required to produce a Local Flood Risk Management Plan, with the first Plan being published in 2016 and covering the period up to 2022.

#### **2.2.**

That the second Flood Risk Management Plan for Orkney, to cover the period from 2022 to 2028, is currently being developed and will detail actions to be adopted to reduce the damage, distress and costly impact of flooding.

#### **2.3.**

That, in order to satisfy statutory land and marine based planning functions, the Council has a duty to acknowledge and plan for coastal change and flooding to ensure that services and new development are appropriately located and designed.

#### **2.4.**

The local list of proposed actions based on agreed objectives for tackling floods in highest risk areas, attached as Appendix 1 to this report, for inclusion in the Local Flood Risk Management Plan.

#### **2.5.**

That, in July 2021, the draft actions proposed within the Plan will be subject to a joint public consultation exercise with the Scottish Environment Protection Agency on the Flood Risk Management Strategy and Local Flood Risk Management Plan for Orkney.

**It is recommended:**

## **2.6.**

That the local list of draft actions for inclusion in the Local Flood Risk Management Plan 2022 to 2028, attached as Appendix 1 to this report, be approved for public consultation.

## **2.7.**

That the Executive Director of Development and Infrastructure should review the local list of draft actions for inclusion in the Local Flood Risk Management Plan 2022 to 2028, following consultation feedback, and thereafter submit a report to the Committee, detailing the actions for inclusion in the Local Flood Risk Management Plan 2022 to 2028.

# **3. Background**

## **3.1.**

Under the Flood Risk Management (Scotland) Act 2009 (the Act), the lead local authority for each flooding local plan district must prepare a Local Flood Risk Management Plan to supplement the relevant Flood Risk Management Strategy (the Strategy), which is prepared by SEPA for the same district.

## **3.2.**

Orkney forms a complete local plan district on its own so the preparation of the Local Flood Risk Management Plan (the Plan) is a requirement placed on the Council by the Act. A revision of the Plan for Orkney must be prepared every six years.

## **3.3.**

The Plan supports the Strategy which coordinates the actions of all organisations that tackle flooding, be that in town or country or from surface water, watercourses or the sea. The Strategy identifies where the risk of flooding and benefits of investment are greatest, while the Plan details the prioritised actions.

## **3.4.**

The first Plan for Orkney was published in 2016 and describes the actions to reduce flood risk during the period 2016 to 2022. A progress update on the first Plan was published in 2019.

# **4. Next Stage**

## **4.1.**

The second Flood Risk Management Plan for Orkney is currently being developed to cover the period from 2022 to 2028. It will detail the actions to be adopted to reduce the damage, distress and costly impact of flooding in Orkney during this next six year period.

## **4.2.**

The actions in the Plan are based on agreed objectives for tackling floods in highest risk areas. The actions rely on the best evidence available on the causes and consequences of flooding and make clear the practical ambition of responsible authorities, including the Council, Scottish Environment Protection Agency (SEPA) and Scottish Water.

## **4.3.**

In July 2021, SEPA will publish the actions proposed for the Plan, by all responsible parties, as part of a joint public consultation exercise on both the Strategy and the Plan actions. The recommendation of this report covers only the actions for which the Council would be responsible. These are detailed in Appendix 1 to this report.

# **5. Local Projects**

## **5.1.**

Draft actions relating to flood risk identified at specific sites include the following:

- A Shoreline Management Plan (SMP). This is a strategic level assessment which sets out management policies for the short, medium and long terms, taking account of natural processes and the risks to people, property, transport and service infrastructure and how that changes with time, including climate change.
  - The proposed SMP would supersede actions within the 2016 Plan to prepare flood studies for Whitehall, Pierowall and the Ayre (Hoy and Walls). It would set the strategic policy direction for coastal management and identify the most sustainable approaches to managing the risks to the entire coast of Orkney. It would provide a detailed understanding of flood risk at sites identified as being highly vulnerable, including Stromness, Stronsay, Westray, Sanday, Burray, Dingieshowe, Graemeshall and Little Ayre (Walls), and their associated infrastructure, along with sites of historic and natural importance would be gained.
- A flood study into the coastal flooding in St Mary's.
- Completion of the St Margaret's Hope Flood Study.
- Completion of the Churchill Barrier No 2 Flood Study.
- Development of the Kirkwall Surface Water Management Plan.
- Maintenance of the Kirkwall Harbour Flood Prevention Scheme.

## **5.2.**

In addition to the location-specific actions described above, the Council, as a Responsible Authority under the Act, also has the following ongoing duties with regard to flood risk management:

- Awareness raising to allow communities and organisations to be prepared for flooding.
- Maintenance of Council assets vulnerable to flooding and erosion.

- Planning policies and their implementation.
- Emergency plans/response.

## **6. Links to Council Plan**

### **6.1.**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Council Plan strategic priority theme of Quality of Life.

### **6.2.**

The proposals in this report relate directly to Priority 5.18, Engage with the Scottish Government and Scottish Water to seek to identify viable solutions to reduce risk of flooding to communities: St Margaret's Hope; St Marys; Stronsay – Whitehall and Kirkwall, of the Council Delivery Plan.

## **7. Links to Local Outcomes Improvement Plan**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Local Outcomes Improvement Plan under the priorities of Strong Communities and Living Well.

## **8. Financial Implications**

### **8.1.**

An annual allowance of £50,000 is included in the roads revenue budget to cover the cost of current duties required under the Act.

### **8.2.**

Some of the actions contained within the Plan, including preparation of an Orkney Shoreline Management Plan, will require the input of external specialists and therefore additional budgets will need to be identified and allocated for this work. As a guide, other local authorities have prepared Shoreline Management Plans using external consultants for around £150,000.

### **8.3.**

Some of the proposed 2<sup>nd</sup> Cycle Actions are continuations of 1<sup>st</sup> Cycle actions, such as the next phase of the Kirkwall Surface Water Management Plan, for which funding has been previously approved. Other 1<sup>st</sup> Cycle Actions, like maintenance and operation of the Kirkwall Harbour Flood Defence Scheme, are already funded through the Roads revenue budget.

### **8.4.**

At present the requirement is to ensure that draft actions from the Plan are approved for public consultation and that the financial implications of the Plan should be considered once a final set of actions have been brought forward for adoption through Committee later in the year. However, there may be scope to assist or joint-

fund the Shoreline Management Plan from other funding streams, including the Crown Estate Fund.

## **9. Legal Aspects**

### **9.1.**

The Council has a duty under section 34 of the Flood Risk Management (Scotland) Act 2009 (“the Act”) to prepare a Local Flood Risk Management Plan, with the first Plan having been published in 2016 and covering the period up to 2022.

### **9.2.**

Preparing a new Local Flood Risk Management Plan in respect of the period 2022 until 2028 will ensure that the Council continues to discharge its statutory duty under the Act.

## **10. Contact Officers**

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## **11. Appendix**

Appendix 1: Summary of Proposed Actions.

## APPENDIX 1

### Summary of Proposed Actions to be taken by OIC during FRM Cycle2 - 2022 to 2028

Location	OIC Action Ref.	Proposed Action	Detail	Start (Year)
A960 Deerness	1	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). The impacts of coastal flood risk and erosion on the A960 causeway are to be assessed as part of the Shoreline Management Plan. Monitoring and data collection activities may be included.	2021/22
A960 Deerness	2	Data collection	This may include data collection and monitoring to improve the confidence in flood sources, mechanisms and risk. A review is required to assess the need for tide gauges and offshore wave buoys. Post flood or erosion event surveys may be required to collect data on flooding mechanisms, risk and damage caused. Expected flood levels should be checked against property thresholds, to verify the digital terrain model. This action to be taken forward as part of a Shoreline Management Plan for Orkney.	2022
Burray Village	3	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). The Plan should consider the significance of Barrier No 4 in the connectivity between South Ronaldsay and Mainland.	2021/22
Churchill Barrier No 2	4	Flood Study	Completion of flood study to develop understanding of the impacts of climate change and sea level rise on the safe operation of the causeways carried by the Churchill Barriers. Further consideration of options to manage the expected increase in number of closures of the barriers and the need for an adaptation plan for the Churchill Barriers is required.	Ongoing
Graemeshall	5	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). For Graemeshall, it will be important to understand the impacts of increased flooding and erosion on road connections between east mainland and the rest of Mainland.	2021/22

Location	OIC Action Ref.	Proposed Action	Detail	Start (Year)
Kirkwall	6	Surface water management plan	Orkney Islands Council to work closely with Scottish Water to implement the Surface Water Management Plan and identify opportunities for joint working. The impacts of climate change on flood risk should be considered. Opportunities to remove surface water from the sewerage system should be identified. The impacts of tide locking of the Peedie Sea need to be considered.	Ongoing
Kirkwall	7	Flood defence maintenance	The Kirkwall Harbour Flood Prevention Scheme needs to be maintained. Regular exercises should be carried out to deploy the flood gates, to ensure an efficient process is in place.	Ongoing
Little Ayre (Walls)	8	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). The impacts to the transport links between Hoy and South Walls should be considered.	2021/22
Pierowall	9	Shoreline Management Plan (Coastal Adaptive Plan)	1st Cycle action to undertake a flood study for Pierowall to be superseded by a new action to develop a shoreline management plan for Orkney in Cycle 2. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years).	2021/22
Sanday	10	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). Monitoring and data collection activities may be included. The impacts of coastal flood risk and erosion on the low-lying softer parts of the Sanday shoreline are to be assessed as part of the Shoreline Management Plan.	2021/22
St Margaret's Hope	11	Flood Study	The flood study for St Margaret's Hope should be progressed to preferred option. A range of options should be considered. The impacts of climate change on flood risk should be fully considered. Coastal erosion may also need to be considered. Given the anticipated significant impacts of sea level rise on flood risk, consideration of how flood risk management might need to develop over time and an adaptation plan is likely to be required.	2021
St Mary's	12	Flood study	Complete the Cycle 1 St Mary's Flood Study and identify actions to address A961 vulnerability near the post office. In particular, the effects of climate change on	2021/22

Location	OIC Action Ref.	Proposed Action	Detail	Start (Year)
			sea level, wave conditions, erosion and frequency of flooding or damage from wave action should be considered. The need for an adaptation plan to be assessed as part of a Shoreline Management Plan for Orkney in Cycle 2.	
St Mary's	13	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). For St Mary's, it will be important to understand the impacts of increased flooding and erosion on road and other infrastructure connections between the linked south isles and the Orkney mainland.	2021/22
Stromness	14	Shoreline Management Plan (Coastal Adaptive Plan)	A Shoreline Management Plan for Orkney is to be developed. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). For Stromness, it will be important to understand the effects of increased flooding and erosion on the settlement and surrounding infrastructure.	2021/22
The Ayre (Hoy to South Walls)	15	Shoreline Management Plan (Coastal Adaptive Plan)	1st Cycle action to undertake a flood study for the Ayre to be superseded by a new action to develop a shoreline management plan for Orkney in Cycle 2. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years). Monitoring and data collection activities may be required.	2021/22
Whitehall	16	Shoreline Management Plan (Coastal Adaptive Plan)	1st Cycle action to undertake a flood study for Whitehall is to be superseded by a new action to develop a shoreline management plan for Orkney in Cycle 2. The Shoreline Management Plan will set the strategic policy direction for coastal management and identify the most sustainable approaches for managing coastal flood and erosion risks in the short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years).	2021/22
Orkney-wide	17	Awareness Raising	Raising awareness of roles, responsibilities and sources of information relating to flooding and flood preparedness.	2022
Orkney-wide	18	Planning Policies	The Council, as Planning Authority, will ensure that appropriate policies and measures are put in place through the Local Development Plan and associated guidance is in place to take account of the objective of a reduction in flood risk.	2022

Location	OIC Action Ref.	Proposed Action	Detail	Start (Year)
Orkney-wide	19	Maintenance	In common with other Responsible Authorities and asset owners, the Council must inspect and maintain the assets for which it has responsibility. In addition, where a risk is identified, the Council will co-ordinate with other Responsible Authorities and carry out works.	2022
Orkney-wide	20	Emergency Plans / Response.	Like many other organisations, the Council has a responsibility to provide an emergency response to flooding when it happens. Effective management of an emergency response relies on emergency plans prepared under the Civil Contingencies Act 2004 by Category 1 and 2 responders. The response by these organisations in the event of flooding is co-ordinated by Orkney Local Emergency Co-ordinating Group (OLECG).	2022