The Highland Council

Caithness and Sutherland Area Committee

16th September 2015

Agenda Item	**18.**
Report No	**CS/36 /15**

Progress Report on Flood Risk Management

Report by the Director of Development and Infrastructure

Summary

SEPA has concluded the appraisal of the Flood Risk Management Strategy for the Highland & Argyll Local Plan District and agreed actions with The Highland Council for the first 6 year cycle (2016-2022).

Due to the large number of studies required to better understand flood risk within the Highlands, these actions have had to be prioritised such that some studies will take place in the first cycle, with others taking place in the second, from 2022 onwards.

Within the Caithness & Sutherland Area Golspie, Thurso, Wick, Dornoch and Lochinver were designated as Potentially Vulnerable Areas (PVA) requiring appraisal by SEPA.

Golspie and Thurso have been prioritised for the first cycle, with a Flood Protection Study (and Natural Flood Management Study) required to be commissioned for each.

Dornoch and Lochinver have been prioritised for the second cycle, with a Flood Protection Study required to be commissioned to assess specific options in more detail.

Wick (fluvial and coastal) has been identified as needing 'improved understanding' in the first cycle, meaning that the current modelling has not accurately reflected the risk and more detailed modelling will be carried out by SEPA.

Members are asked to note the progress and next steps in relation to local Flood Alleviation measures.

1 PVA Identification

1.1 Following the implementation of the Flood Risk Management (Scotland) Act, SEPA, Scottish Water, The Highland Council and neighbouring local authorities (eg Argyll & Bute) have been working in partnership to develop a Flood Risk Management Strategy and Plan for the Highland & Argyll Local Plan District.

1.2 In 2011/12, SEPA worked with The Highland Council to define Potentially Vulnerable Areas (PVA) in the Highlands where there was a history of significant flooding which should be appraised in the process to follow, and have measures defined in the Strategy and Plan. These included Golspie, Thurso, Wick, Dornoch and Lochinver.

Golspie

1.3 Golspie has suffered from significant flooding and erosion throughout the years with recent events occurring in 2012 and 2014.

1.4 Golspie is at risk from coastal flooding and due to the exposed nature of the main frontage is susceptible to storm surges and wave overtopping, which was the cause of the most recent flooding in Golspie.

Thurso

1.5 Thurso has suffered from flooding from the River Thurso throughout the years with recent events occurring in 2014 and a significant event in 2005

1.6 The cause of flooding in Thurso is from a combined fluvial/coastal event from the River Thurso, as experienced in 2005.

Wick

1.7 The cause of flooding in Wick is from a combined fluvial/coastal event from the River Wick. Additional flooding was also identified from the Burn of Newton.

Dornoch

1.8 The cause of flooding in Dornoch is from the Dornoch Burn. A number of utilities were identified crossing the main channel which restricts the capacity of the culverted sections and leads to blockages.

Lochinver

1.9 The only area to be assessed within Lochinver was the school from the Loch. Access to the school has been affected numerous times in the past with flooding of the road/ grounds.

2 Flood Risk Management Strategies and Local Flood Risk Management Plan Development

2.1 For the high level appraisal of flood risk in each PVA, strategic level modelling was carried out by SEPA. In most areas, the level of modelling was sufficient to accurately reflect the level of risk in order to progress the appraisal in the area to define appropriate measures. However, in Wick, the complexities associated with the combined fluvial/ coastal flood mechanism meant that the

modelling did not accurately reflect the risk. This PVA has therefore been recommended to be remodelled by SEPA in the first cycle (2016-2022).

2.2 The modelling carried out for Lochinver and Dornoch was sufficient to accurately reflect the risk of flooding and the recommendation in the Strategy was to progress a Flood Protection Study (FPS) to define an appropriate flood defence in more detail.

2.3 Given the number of FPS's that were required in the Highlands, the budgets available and staffing resource and consultant availability a prioritisation was required to be carried out. This placed both Dornoch and Lochinver in the second cycle for further work (commencing 2022).

2.4 Factors included in the prioritisation of schemes included the level of damages (scale of flooding affecting residential and commercial properties); the frequency of events; the current 'burden' on the Council in attending to or managing flood events and whether major infrastructure/ transport links were affected.

3 Next Steps

Golspie

3.1 Following the appraisal process carried out by SEPA, and in agreement with The Highland Council, Golspie was identified as being a high priority requiring a Flood Protection Study in the first cycle 2016-2022. It was also recommended that a Natural Flood Management Study should be carried out in the first cycle 2016-2022. Natural Flood Management, as the name suggests, investigates and promotes measures which seek to restore the 'natural' condition of the watercourse and flood plain (ie prior to historic pressures/ influence). These may include re-meandering, sediment management, runoff reduction (blocking ditches) and riparian (woodland) planting. Both studies are planned to be progressed together.

3.2 A high-level cost benefit assessment indicated that flood walls along the coastal front and/or revetments could be economically viable. The Natural Flood Management Study will focus on beach recharge and/or breakwaters as this could help reducing wave overtopping. The Flood Risk Management Team will be progressing both studies with the aim of developing a Flood Protection Scheme by the end of the cycle.

3.3 A local interest group, The Golspie Links Trust are already planning on carrying out a beach recharge for a section of coast from the caravan park along the Golspie Golf Course. The FRM Team are working with this group and communicating on the issues.

3.4 A separate local interest group, The Golspie Flood Prevention Group has also recently been set up by residents. The FRM Team have also met with members and conducted a site meeting with them. The members identified an existing breakwater which they believe if reinstated would reduce the impact

of wave overtopping. The FRM Team are working with this group to investigate this option in more detail.

Thurso

3.5 The initial conclusion from the appraisal for Thurso was that the strategy level modelling did not accurately represent the complex interaction between the coastal and fluvial sources. This was originally recommended by SEPA to require further modelling by them in the first cycle.

3.6 Due to the recent significant events in Thurso and desire from local Members to progress a solution, the FRM Team ensured this PVA was recommended to be designated as a Flood Protection Study for the first cycle. This means that further more detailed modelling will initially be progressed in the first cycle before progressing a detailed assessment of direct defences along the river.

4 Implications

4.1 Financial
Budget allocation was approved at Planning Development & Infrastructure on the 3rd June 2015.

4.2 Equality
Any implications on equality issues will be considered as part of the detailed design process.

4.3 Legal
There are no specific legal implications to highlight in this report, but any necessary flood schemes will be developed in accordance with the requirements of the Flood Risk Management (Scotland) Act.

4.4 Economic
Flooding has significant impact on the local economy and solutions will make a significant change and provide stability to local residents and businesses.

4.5 Rural
The infrastructure investment proposed largely covers the more rural elements of the Highland area aiding the local rural economy and communities.

4.6 Climate change
Climate change and increases in flows will be taken into consideration on all infrastructure projects and specifically flood alleviation schemes.

4.7 Risk
Risk is managed through construction via risk register identification and associated risk management.

4.8 Gaelic

There are no Gaelic implications over and above any signage that will be in accordance with Council policy.

Recommendation

Members are asked to note the progress and next steps in relation to local Flood Alleviation measures.

Designation: Director of Development and Infrastructure

Date: 3 September 2015

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