

STONEHAVEN FLOOD PROTECTION SCHEME- PUBLIC HEARING STATEMENT ON BEHALF OF ABERDEENSHIRE COUNCIL

Introduction

This statement seeks to support the proposal to introduce a flood protection scheme which addresses fluvial flood risk from the lower reach of the River Carron & Glaslaw Burn area of Stonehaven. It should be noted that the scheme does not address the risk from coastal flooding, overland flow or flooding from the River Cowie.

This statement provides background information on the history of the proposed scheme and the development to date.

Aberdeenshire Council proposes to build a flood protection scheme which will reduce the risk of flooding to residential, non-residential and commercial properties and land in Stonehaven. The scheme will involve the construction of flood walls and embankments along the River Carron and Glaslaw Burn, river bed lowering and the raising and replacing of pedestrian foot bridges over the River Carron along with ancillary works to services. The scheme is intended to provide a 0.5% chance of occurrence (1:200 yr event) standard of protection with an appropriate allowance for climate change (33% increase to 2080) and freeboard.

The proposed flood protection scheme has a number of economic, social and environmental benefits. The proposed scheme will reduce flood risk to 372 residential properties at risk of flooding in this location, with estimated damages avoided of twenty million pounds over the 100 year lifetime of the scheme. The benefit-cost ratio of the proposed works is 1.23.

A reduction in flood risk would have a positive benefit to the health and wellbeing of the community and socially vulnerable people. Two utility sites (energy production/electricity), a school, an emergency service site and the A957 would benefit from flood protection works.

Flooding from the River Carron has been experienced over the centuries. A search of newspapers and local records have shown that flooding has occurred regularly from November 1873 to recent times, most notably 1979, 1985, 2009, 2012. (Appendix A: Stonehaven December 2012 Flood Event Review)

The recent flood events which occurred on 1st November 2009 and the 23 December 2012 were particularly damaging and led to strong demands from residents for urgent action at a multi-agency public meeting held on 29 January 2013.

In March 2013 a dedicated lead officer post was created with the remit to deliver the scheme and engage with the community. To date there have been regular meetings with both the Stonehaven Flood Action Group, Stonehaven Community Council and open public meetings regarding the proposal.

Scheme history

In 2009 JBA consulting were commissioned to develop a range of options which could be considered for fluvial flood mitigation. The first stage was to undertake a Channel Capacity Study using a 1D model to determine where there was risk of an out of bank event occurring along with a geomorphological audit of the River Carron.

Following the recommendations in the report, Aberdeenshire Council carried out a number of short term measures to improve channel capacity at the Green Bridge.

Flood Alleviation feasibility assessment

In 2010 this was followed by a study to develop outline options for flood alleviation in Stonehaven. The aim of this study was to;

- To develop the existing 1D InfoWorks-RS of the River Carron into a linked 1D-2D model to allow improved assessment of the extent of flooding and the effectiveness of proposed flood alleviation measures;
- To assess the existing flood risk to Stonehaven from fluvial flooding from the River Carron and Glaslaw Burn, including consideration of overland flow routes on the floodplain;
- To assess the existing flood risk to Stonehaven from surface water resulting from intense rainfall events using a 2D surface water model;
- To propose a range of flood alleviation measures for Stonehaven;
- To test the proposed measures for the feasibility in terms of hydraulics and the mitigation of flood risk, structural engineering, environmental impacts and benefit-cost analysis;
- To undertake multi-criteria analysis and recommend option(s) to be taken forward.

During this study a range of options were presented to the public and information gathered indicated strongest support for direct defences (walls and flood embankments) through the town or storage upstream of the town. As a result the options for upstream storage and/or direct defences were investigated in more detail.

Review of 2012 Event (Appendix A: Stonehaven December 2012 Flood Event Review)

The Flood Alleviation feasibility assessment was completed in July 2012, however following the December 2012 flood event, the study was reviewed. This enabled the Council to verify the modelling results against known and observed conditions.

Preferred Scheme (Appendix B: Option Development and Economic Appraisal)

In October 2013 a public consultation was held to present the preferred option and members of the public were given the opportunity to comment both at the

consultation and on the Councils website, where all the material was also available for inspection. On display were technical drawings, artist impressions, and an animation of the scheme. Overall the scheme was positively received by members of the community in attendance and by statutory stakeholders.

In November 2013, a preferred scheme report detailed the options that were considered and recommended a preferred option based on the results of the hydraulic modelling and cost analysis. The options considered were;

- Direct flood defences (Walls & Embankments)
- Direct flood defences (Walls & Embankments) with channel modifications
- Direct flood defences (Walls & Embankments) with channel modifications and bridge raising
- Upstream attenuation of flows and provision of storage
- Combination of upstream attenuation and direct defences (Walls & Embankments)

Upstream storage was further investigated as part of this report. It highlighted that only the area upstream of Fetteresso Bridge has an adequate area and volume to provide a significant reduction in flood flows in Stonehaven. However, it would not provide enough attenuation to prevent flooding from occurring through the lower section of the River Carron and direct defences would still be needed from White Bridge to Bridgefield Bridge. There was no one site large enough on the Glaslaw Burn to provide upstream storage and the costs would make the FPS uneconomic. In addition the large raised dams required would add a low risk of catastrophic dam failure in a confined valley immediately upstream of residential areas. The costs of providing both direct defences and upstream storage structures meant that this would not be an economically viable scheme and was therefore not investigated further. This report also details the scheme economics.

Political support

Throughout the schemes development, there has been strong support from the Council. From the creation of a dedicated officers post to the commitment to fund a scheme if Scottish Government funding was not available. There have been a number of key decisions made as listed below;

On 5 December 2013, Aberdeenshire Councils Infrastructure Services Committee approved in principle that the scheme be taken forward as the preferred scheme.

On 11 September 2014, the Councils Policy & Resources Committee confirmed Capital funding for the scheme should Scottish Government funding not be forthcoming.

On 14 May 2015, the Infrastructure Services Committee approved the promotion of a Flood Protection Scheme for Stonehaven under the terms of the Flood Risk Management (Scotland) Act 2009 (FRMA).

In July 2015, the scheme was formally advertised in accordance with section 60(1) and Schedule 2 of the Flood Risk Management (Scotland) Act 2009 & the Flood Risk Management (Flood Protection Schemes, Potentially Vulnerable Area and Local Plan Districts) (Scotland) Regulations 2010. Due to the holiday period the objection period was extended from 28 days to 56 days, double the normal minimum statutory period, to ensure all interested parties were given opportunity to consider the information and to formally object to the proposals.

The application attracted eleven letters of representation. Officers invited all those who had made objections to meet and discuss the issues raised. Subsequently seven objectors met with officers to discuss their concerns and where it may be possible to mitigate their objections.

These objections and possible mitigations were presented to Infrastructure Services Committee on 28 January 2016. There were a number of representations from objectors and also from the Stonehaven Flood Action Group who are in support of the scheme. The Committee subsequently made a preliminary decision to confirm the scheme with modifications.

The modifications were;

- The relocation of the Green Bridge around 18m upstream from the original proposals,
- To replace a 70m section of masonry wall on Carron Terrace with a combined masonry and glass type wall to allow views/light

Subsequently 4 objectors removed their objections.

This decision was then referred to Scottish Ministers to consider.

In June 2016, the Scottish Ministers confirmed that they did not wish to "call in" the scheme and referred the matter back to Aberdeenshire Council to convene a Hearing as detailed in Schedule 2 of the FRMA.

This Hearing is intended to be a concluding part of the scheme consideration process. If the Scheme is confirmed, powers of entry will be available to the Council under section 79(2) of the FRMA to carry out "scheme operations"- or, in other words, build the scheme. This is regardless of whether or not agreement on any compensation is achieved.

However, under section 65 of the FRMA, deemed planning permission for the scheme will be required from Scottish Ministers before works can commence.

River Carron Rock Armour Study (Appendix G)

In parallel with the preferred flood scheme development and following extensive discussion with the community, Aberdeenshire Council

commissioned a study to investigate the effectiveness of the alignment of the existing rock armour at the mouth of the River Carron.

In March 2014, following a competitive tender process, JBA consulting were appointed to undertake the above study. The study aims were to;

- Quantify the degree to which wave propagation will increase water levels upstream based on the current armourstone alignment,
- Assess the efficiency of the current orientation of the armourstone training structures in decreasing the ability of tidal waves to propagate upstream and in allowing river flood waters to discharge to sea and make recommendation for improvement.
- Provide an optimum design for the alignment of the rock armour to minimise the opportunity for propagation whilst ensuring maximum discharge from the River Carron.

The study found that the existing training wall reduced incoming wave energy by 30%.The best option being a nearshore breakwater which could reduce wave energy by 70%, however the breakwater would need to be investigated as part of a wider coastal study. Other options were tested and it was recommended that the options of a curved northern training wall, a southern extension or a straightened channel should not be considered further as they would offer no improvement (reduction of) to upstream wave conditions.

Compensation and land acquisition

The Council does not intend to acquire land to construct the scheme, preferring to use the parameters of the FRMA.

According to section 82(2) of the FRMA, compensation is only due to any person who “sustains damage” as the result of the construction and maintenance of a scheme. This is defined in section 83(1)(a) and (b) as loss of value or loss of enjoyment of land. Any question of disputed compensation may, under section 83(4), be referred to and determined by the Lands Tribunal for Scotland. There are time limits on when claims can be made, with the latest being 10 years after completion of the operations.

Interim measures

Following the 2009 flood event and following extensive discussion with the Stonehaven Flood Action Group, a number of interim measures have been introduced including,

- Temporary flood barriers were procured to be placed at strategic locations to reduce the risk of flooding from lower return period events. The Council’s Flood Duty Officer monitors the risk of flooding in consultation with SEPA’s Duty Flood Advisor and the barriers are deployed when there is a risk of flooding. These are erected on Low Wood Road, Carron Terrace, Arbuthnott Place and at the White Bridge.
- The High Street is the low point of the town and is bounded by the historic sea wall, thus trapping any flood water. In various locations, at the instigation of local residents, non-return valves have been installed through the sea wall to allow any flood waters to disperse.

- In the same area, a large culvert and associated holding tank has been installed with the outfall extending directly to the sea.
- The existing river bank upstream of the White Bridge was realigned to remove around 1.5m which had encroached on the River Carron. This has increased capacity slightly in periods of lower flow.
- Coarse debris screens have been installed upstream on both the Glaslaw Burn and the River Carron. These have been very effective in trapping debris in a more suitable location rather than under the Green Bridge or in the culverts on the Glaslaw Burn.
- A flood warden scheme has been in operation. This is a community led scheme supported by Aberdeenshire Council, which aims to provide residents with an early warning which is disseminated door to door by volunteers.

These measures reduce the risk and prepare the community but do not reduce the risk as significantly as the proposed FPS.

Conclusions

The residents of Stonehaven that have previously been flooded remain on tenterhooks some five years after the last major flood and are desperate that a flood scheme be implemented sooner rather than later. There have been a number of near misses since 2012 which have only served to increase their anxiety. Without further intervention, the frequency of flood risk from the River Carron will only increase as the effects of climate change are realised.

There is strong but less vocal support for the scheme from the community and the Stonehaven Flood Action Group have actively campaigned for a scheme to be delivered as soon as practically possible.

Aberdeenshire Council has developed a scheme which it is confident will address flooding in the residential areas. It is considered to be the optimum design possible in terms of, achieving a substantial reduction in the level of flood risk whilst providing value for money.

All public works projects are intended to produce considerable community benefit and this project is no different. However, it recognises that it will have a negative impact to some individuals and that is an unavoidable fact. These can only be mitigated through appropriate design and every effort has been made to limit the resulting impact.

Through its efforts the Council has demonstrated that it is committed to delivering a scheme. It is very mindful of the effects on others, but believes that the benefits to the many outweigh the disadvantages to the relatively few. Aberdeenshire Council therefore urges the Reporter to dismiss the objections, find in favour of the Scheme, and allow it to progress with the minimum of further delay.

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