

Report To: Full Council

Date of Meeting: 10th September 2013

Lead Member / Officer: Lead Member for Public Realm / Corporate Director:
Economic and Community Ambition

Report Author: Senior Engineer, Flood Risk Management

Title: Investigation into the November 2012 Floods at
Glasdir, Ruthin

1. What is the report about?

On 9th July 2013 a report was put to Full Council regarding the investigation into the flooding events across Denbighshire in November 2012. Because of the complexities surrounding the flooding of the Glasdir estate in Ruthin, the investigation of that particular event has taken longer than anticipated, but is now complete.

2. What is the reason for making this report?

To bring to Members attention the findings of the independent investigation into the flooding of the Glasdir estate, Ruthin.

3. What are the Recommendations?

That Members:

- Note the findings of the independent investigation.
- Accept the recommendations set out in the investigation report.
- Instruct officers of the Council to proceed with implementation of the recommendations set out in the investigation report

4. Report details.

4.1

Significant flooding occurred at a number of locations across Denbighshire on 26th and 27th November 2012. At the Glasdir estate, in Ruthin, more than 120 properties flooded. In February 2013 the Council appointed two experts, Dr Jean Venables and Clive Onions, to conduct a full independent investigation. The experts were provided with Terms of Reference (ToR) which set out that the Council wanted to understand:

- Why the flooding occurred.
- What the likelihood of recurrence may be.
- What can/should be done to by all relevant flood risk management authorities to minimise flood risk to properties in future events.

Importantly, the purpose of the investigation was not to allocate blame or fault but to investigate the cause(s) of the flood in order to determine what actions should be taken.

4.2

A thorough and detailed knowledge of the River Clwyd catchment hydrology was essential to the understanding of the November 2012 event and has enabled the independent experts to develop a detailed hydraulic computer model. The model has been used to develop and test a range of possible options to reduce flood risk at Glasdir.

4.3

Findings of the Independent Investigation:

Why the flooding occurred.

Heavy rain falling over a long period of time on an already saturated catchment led to high volumes of water in the River Clwyd at Ruthin. The river overtopped its banks downstream of the A494 Park Road Bridge and flowed towards the 5 way culvert beneath the Ruthin Northern Link Road. Partial blockage of the culverts by vegetation and debris carried on the flood resulted in raised water levels behind the link road embankment. Water eventually overtopped the flood defence bund and flooded the Glasdir estate.

What the likelihood of recurrence may be.

The hydraulic modelling carried out by the independent experts shows that the November 2012 event has between a 1 in 100 (1%) and 1 in 200 (0.5%) chance of happening in any one year, biased towards 1 in 100.

What can/should be done to by all relevant flood risk management authorities to minimise flood risk to properties in future events.

The independent experts have explored a range of engineering solutions to reduce flood risk at Glasdir. An important consideration has been the practicability and affordability of each option. In making their recommendations, the independent experts have concluded that the appropriate standard of protection for the Glasdir development is 1 in 100 year plus climate change allowance, with 95% culvert blockage and 600mm freeboard. The recommendations are summarised below.

Key Recommendations by the Independent Experts:

- The level of the existing flood defence bund should be increased to provide the appropriate standard of protection referred to above. This means that the height of the bund will be increased by just over 1 metre adjacent to the link road, with the height increase being reduced towards the southern end of the bund.
- An inspection and maintenance regime should be introduced for the bund.
- As an interim measure (until the bund is permanently raised), a temporary line of sandbags should be considered to be used to raise the bund height.
- The long term management of the floodplain and catchment area should be organised, with particular emphasis on the culverts and the area immediately

upstream and downstream, to reduce the risk of blockage.

- A network of flood wardens should be put in place, with a designated Council officer to respond to the wardens.
- The flood warning system should be linked to an upstream river level gauge.
- The culvert grills, which were removed following the November 2012 event, should not be put back.
- The installation of a line of posts around the entrances to the culverts should be explored, to catch larger debris and vegetation carried by flood water.

4.4

Implementing the Recommendations

While the above recommendations include some temporary interim measures to reduce risk, there is clearly a need to carry out permanent work to provide an appropriate level of protection. The work would be subject to statutory approval and would require Flood Defence Consent from Natural Resources Wales. From a Planning perspective, the work would be deemed General Permitted Development under the Town and Country Planning Order. Subject to the availability of funding and the necessary statutory approvals, the work could feasibly be carried out by the end of February 2014.

5. How does the decision contribute to the Corporate Priorities?

Flooding has the potential to cause severe and prolonged disruption to the communities it affects. Understanding and managing local flood risk supports the Council's priority to develop the local economy.

6. What will it cost and how will it affect other services?

The cost of implementing the recommendation to increase the height of the existing bund is expected to be in the region of £250,000. The Council is currently in discussions regarding funding contribution with Taylor Wimpey, who own the land on which the existing bund sits and the proposed bund would be built and the Welsh Government.

If the recommended works are carried out, the level of protection at the Glasdir estate will be to currently acceptable standards, that is to say, the estate will be defended against a 1 in 100 flood event, with additional allowances for climate change and 95% blockage of the 5 way culvert beneath the Ruthin Link Road.

7. What are the main conclusions of the Equality Impact Assessment (EqIA) undertaken on the decision?

An Equality Impact Assessment has not been carried out.

8. What consultations have been carried out?

Stakeholder Briefings have been produced to share with all interested parties. Regular liaison meetings have taken place with representatives of the residents at Glasdir.

9. Power to make the Decision

Section 19 of the Flood & Water Management Act 2010 gives the Council as Lead Local Flood Authority, the responsibility to investigate incidents of flooding.

Section 2 of the Local Government Act 2000 gives the Council the power to do anything which is likely to promote or improve the social, economic or environmental well being of the Council's area.