

## **1. St Asaph**

The investigation carried out by Natural Resources Wales (NRW) following the floods found that the current defences in St Asaph provide protection against a 1 in 30 chance event north of the A55 (adjacent to Roe Parc) and 1 in 75 chance event south of the A55. This is below the standard of protection considered appropriate. Natural Resources Wales is currently considering long term options to reduce the risk of flooding to a more acceptable level and is in the process of implementing short term measures to reduce the risk in the interim. These can be summarised as follows:

- Short Term
  - Raising of the embankment on Roe Parc to provide a minimum standard of protection of 1 in 75 until a long term solution can be delivered (work completed)
  - Modifications to Spring Gardens Bridge, involving the installation demountable barriers and alterations to mesh fence above the bridge deck (work to commence in October 2013).
  - Tree clearance work between the New Inn public house and the confluence of the Clwyd and Elwy (ongoing as part of an eight month project)
  - Improvements to telemetry systems to more accurately measure river levels and flows.
  
- Long Term
  - NRW has commenced work to plan and design long term options as part of a process that could take at least three years. NRW expects to complete a project appraisal study by Spring 2014 for submission to the Welsh Government (WG) for approval. Subject to WG funding, construction could start in 2015/16. The Council, along with NRW, has engaged in discussions with WG regarding the allocation of funds for the project.
  - Project options under assessment are the permanent raising of flood defence bunds throughout St Asaph, removal / raising of Spring Gardens bridge, setting back flood defence bunds downstream of St Asaph and upstream storage. The assessment process will identify which option is the most cost effective. The preferred solution may be a combination of different options.

## **2. Rhuddlan, including Sarn Lane**

The proposed long term measures to reduce flood risk at St Asaph should also reduce the risk to properties in and around Rhuddlan.

### **3. Lower Denbigh Road**

NRW has extended its flood warning service to include isolated properties in Lower Denbigh Road. The service will go live on 23<sup>rd</sup> October 2013 and NRW officers will be visiting the area to promote the service and encourage residents to sign up.

### **4. Brookhouse, Denbigh**

The Council has installed non-return valves to 4 surface water drains in the vicinity of the A525 underpass to prevent water from the River Ystrad entering the drains and flooding properties. NRW is currently carrying out hydraulic modelling work as part of a feasibility study into possible engineering solutions to reduce flood risk. NRW hopes to complete this work by November 2013.

### **5. Llanynys**

NRW will be carrying out ditch clearance work in January 2014. This will reduce the risk of flooding during moderate flood events, but would have little impact in reducing risk should there be an event on the scale of the November 2012 floods.

### **6. Gellifor**

The Council has commissioned a hydrological study of the river catchment which will provide an improved understanding of the level of flood risk. This, in turn, will enable the Council to consider options to reduce the risk.

### **7. Glasdir, Ruthin**

- The Council has installed sandbags on the existing flood defence bund as a temporary measure to reduce flood risk while plans are put in place to extend the bund in accordance with the recommendations of the independent investigation.
- The Council has commenced discussions with NRW regarding the requirements for Flood Defence Consent and has commissioned consultants to produce the necessary Flood Consequence Assessment. Regarding funding, the Council is in discussions with WG regarding the availability of grant funding. The housing developer, Taylor Wimpey (who owns the bund) has offered to fund one third of the cost.
- NRW is working with the Council to develop a community flood plan for the Glasdir estate, which includes the appointment of community flood wardens.
- NRW has carried out an inspection of the River Clwyd through Ruthin and a river walk took place involving Ruthin elected Members on 23<sup>rd</sup> October 2013.

### **8. Park Place, Mwrog St., Maes Ffynnon, Ruthin**

- NRW has carried out work to repair a flood bund in the vicinity of Cae Ddol (the bund had been eroded prior to the flood as a consequence of human activity).
- Non-return valves will be installed to gulley connections on the A494 at Mwrog Street to prevent flood water from the River Clwyd entering the highway.

- Maintenance work has been carried out by NRW to the masonry wall Adjacent to the River Clwyd at Maes Ffynnon.

## **9. Llanbedr DC**

The Welsh Government has agreed to the Council's proposal to carry out work to replace a critical culvert in advance of the Llanbedr Flood Risk Management Scheme. The work will be commissioned in October 2013.

## **10. Loggerheads**

No action carried out.

## **11. Corwen**

No action carried out.

## **12. Glyndyfrdwy**

Meetings have taken place between Council officers and the owners of the affected properties and advice has been offered regarding individual property protection. There doesn't appear to be a straightforward solution to the problem.