

Chew Magna flooding - September update

This briefing is to update you on the work we have been carrying out since the floods last year. It includes the findings and recommendations of the independent review of the Chew Magna property level protection scheme.

The Chew Valley suffered extreme rainfall last year, resulting in prolonged and repeated flooding. It is important to note that the likelihood of a similar event occurring again remains the same. The occurrence and probability of last year's events does not change the current flood risk in Chew Magna. Analysis suggests that the flooding witnessed on the Winford Brook during September 2012 had a 1% chance of happening in any given year. Current information suggests that this was somewhat lower for the River Chew.

Following last year's flooding the Environment Agency reviewed the costs of a flood alleviation scheme, designed to stop flooding in an event such as those last year, against current Government funding criteria. This has shown that at least £3 million of local funding would have to be found to contribute to Government funding. A flood alleviation scheme therefore remains unviable.

It is important that residents remain prepared for flooding.

Work carried out since the flooding

Rapid Response Catchment and flood warning improvements

- The Chew Valley is classified as a Rapid Response Catchment, which means it is at risk of flash flooding. It reacts very quickly to heavy rainfall which makes it difficult, if not impossible at times, to issue flood warning in a timely manner. The Environment Agency are focussing on ways to improve the flood warning service in Rapid Response Catchments. Our free Floodline Warnings Direct service is triggered from river level gauges, however, it is possible for flooding to occur before the river levels rise. We advise residents to monitor weather forecasts when rainfall is expected. Monitor the three-day flood risk forecast and sign up to the FREE Floodline Warnings Direct service at www.environment-agency.gov.uk/flood
- The Environment Agency updated the flood warning service in June 2013 to allow all those at risk from the River Chew to register for flood warnings.
- Flood warning thresholds at Chew Stoke gauging station have been established to allow better monitoring of river levels on the Chew Stoke Stream and River Chew. This has provided a more timely and accurate flood warning service for both Chew Magna and Chew Stoke. This complements the existing gauging sites at Chew Magna for the Winford Brook and further downstream at Compton Dando for the River Chew.

Chew Valley Flood Forum

- A flood forum for the Chew Valley has been established and is working closely with the Environment Agency, B&NES, Bristol Water and Chew Magna and Chew Stoke Parish Councils.
- The flood forum will have a key role in working with all agencies and the community to help mitigate the impact of flooding.

River maintenance

- The Environment Agency carried out de-silting at Tun Bridge in early 2013.
- A programme of blockage and vegetation management was completed in August 2013 on the Winford Brook and the River Chew. The Flood Forum have a copy of our maintenance schedules and they will also be available at the October public meeting. Maintenance still remains the responsibility of the riparian land owner (if you own land or property alongside a watercourse this is you).
- Vegetation management is also to be carried out in Dumpers Lane to remove overhanging trees from land the Environment Agency own.

Property level protection (PLP)

The Chew Magna PLP scheme was part of a Department for Environment, Food and Rural Affairs (Defra) pilot grant scheme in response to Sir Michael Pitt's review of the 2007 summer floods. The pilot aimed to demonstrate on a large scale the use of innovative flood protection measures in cases where flooding occurs frequently but where other flood management solutions are not viable. B&NES and the EA have commissioned an independent report to capture learning from this pilot and identify possible improvements for Chew Magna.

The report found that around half of the properties provided with PLP measures suffered flood inundation and damage, leading to anger and disappointment within the community. Although the PLP helped protect some properties, many residents have expressed their concerns over the scheme and over future flood risk.

The report also notes that the Chew Magna PLP scheme was a pilot, intended to improve understanding and knowledge of PLP and develop the PLP product technology market. It had tight budget and time constraints which limited what assessment could be carried out and the range of PLP products that could be provided.

Key results from the investigation are:

- Flooding was severe and resulted in 13% of the flooded properties experiencing floodwater levels above the top of the barriers. The flooding was therefore above the barriers design capability, which is limited by potential structural damage to properties.
- 31 properties flooded and suffered damage. The principle inundation route at these properties was floodwater rising up through the floors (at 45% of the flooded properties) and floodwater leaking past the lower door barrier seal (at 30% of the flooded properties). Groundwater flood risk and the potential for floodwater to rise up through the floors was not fully assessed or mitigated. Only two properties were provided with a dewatering pump to help control and manage this risk.
- The automatic airbricks and the majority of non-return valves functioned correctly, providing protection and helping to mitigate flood damage.
- There is evidence that the expectations of residents had been raised inappropriately, with many believing that the PLP measures would provide standards of flood protection beyond what could reasonably be expected.
- Ownership and maintenance responsibility/requirements were not clear.

The findings of the PLP scheme investigation have been drawn together into a series of recommendations, listed below, to help manage future flood risk and ensure learning from the pilot is incorporated into future schemes elsewhere.

An electronic version of the report, together with investigations into the flooding at Chew Magna and Chew Stoke last year, is available at:

<http://www.bathnes.gov.uk/services/environment/land-drainage>

A paper copy can be obtained by contacting Bath and North East Somerset Council.

Recommended actions following the PLP Review

Action Owner	Action	Timescale
B&NES and Environment Agency	Working in close partnership with community, assess potential for funding for PLP improvements.	Commenced May 2013. Allocation of budgets for April 2014 onwards will be confirmed after Christmas
Environment Agency and B&NES	Ensure ongoing engagement with residents (through flood surgeries, newsletters etc) to help raise and maintain flood awareness and understanding of flood warnings, channel maintenance, preparedness, emergency planning, PLP deployment etc.	On-going
B&NES	Working with the EA, ensure the ownership and maintenance of existing PLP measures is clear. The report recommends this sits with the homeowner.	To be completed by Feb 14
Parish Council	Update and maintain flood plan with input from residents, the Flood Forum, B&NES and the Environment Agency.	Ongoing
Environment Agency/B&NES/Parish Council/Flood Forum	Arrange annual flood exercises to ensure residents can deploy measures successfully, receive flood warnings as planned, and that emergency flood plans can be tested and updated.	Ongoing
Parish Council and residents	Attend engagement events and take part in flood exercises.	Ongoing
Parish Council and residents	Maintain individual PLP and remain flood aware	Ongoing

Survey work and flood modelling for the Chew Valley

The Environment Agency has carried out an updated threshold survey of all properties at risk in Chew Magna and Lewis Brown Chartered Land Surveyors have completed a river bank survey within Chew Magna and Chew Stoke on behalf of the Environment Agency. The data provided by the survey will be used in the Chew Magna/Chew Stoke flood model. We envisage the results of the model being available early next year.

The model will be used to:

- Help answer residents questions about the viability of changes to the river systems, such as altering the confluence of Winford Brook and the River Chew, effectiveness of maintenance practices and understanding the operation of upstream reservoirs.
- Understand flood risk scenarios and allow further improvements to our flood warnings.
- Provide better data to residents for insurance purposes

Next Steps

- The Parish Council to update and maintain the flood plan with input from residents, the Flood Forum, B&NES and the Environment Agency.
- Residents should ensure they are prepared for flooding, with a suitable plan in place of what to do if flooding occurs. Complete a personal plan today at: <http://www.environment-agency.gov.uk/homeandleisure/floods/38329.aspx>
If you would like further advice please come to the public event detailed below.
- Where properties have PLP residents should ensure that this is in working order and practice installation. Where residents are concerned about the effectiveness of the seals, they can contact UK Flood Barriers directly.
- B&NES and the Environment Agency are hoping to find funds this financial year to commission a household level survey to detail what improvements in the existing PLP would be beneficial. This would be used to inform provision of improvements if funds can be found next financial year. It would also provide a report for each household identifying improvement needs for each property. If residents wish to carry out improvements prior to this, it is important to understand that costs will not be able to be claimed back if public funding can be found next year.
- Next year, when the river model is complete, the Environment Agency, B&NES and Bristol Water will discuss the outcomes from the model with the Parish Council, Flood Forum and community generally

The Parish Council are holding a public meeting on flooding, which will be attended by the Environment Agency, B&NES and Bristol Water on 8 October 2013 at the Old School Rooms, Chew Magna. Please come along to find out more.

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