

## Chew Magna Flood Surgery May 2014

### **Flood Risk Management Options:**

Following flooding in 2012 the Environment Agency reviewed the options for a potential flood alleviation scheme, based on feasibility works carried out in 2004. Costs were revisited and compared against current government funding criteria.

Under current government funding arrangements all potential flood risk management schemes can receive some government funding. How much is dependent on the benefits the scheme provides. The larger the benefit, the more government funding is available. In this case the total financial benefit of any of the proposed schemes in Chew Magna was estimated to be around £10 million, which would qualify for up to £830,000 of central government funding.

The least expensive option explored was for a flood wall along the river. This was estimated to cost around £4 million. For this scheme to go ahead, the remaining cost of the scheme, after the contribution from the government would have to be found locally. We have had no indication that this could be feasible. Other, more expensive options were also considered; including a bypass tunnel or bypass channel, but these would require even more local funding. A large scheme of this nature has therefore been shown to be too expensive to justify at the current time, under current government spending rules.

Although these are not the only possible schemes and the figures are based on some assumptions and estimates, it is our best indication of the likely gap in potential funding. Any other large scheme would provide the same level of benefit and would be likely to have a similar cost. This means it would be unlikely to qualify for any more government funding and would not therefore be feasible without a large contribution from the community.

### **Modelling:**

The modelling exercise currently being undertaken is enhancing our existing model with new data from the recent flood events and some of our gauges. This will inform the wider understanding, awareness and management of flood risk. It will not change the area of benefit and will not therefore inform a feasibility study into a permanent flood alleviation scheme – this has already been undertaken and has been shown not to be economically feasible. It does however assess some smaller options that could still go ahead if found to be feasible. We are testing the following scenarios:

- The influence of Chew Magna Reservoir and Chew Valley Lake by assuming they are full, half empty, empty and if they did not exist.
- What is the impact of silt build up at a few structures on the River Chew and Winford Brook?
- The impact of the road bridge at the end of Norton Lane.
- The effects of including buildings.
- Removal of the weir near the B3130 road.
- Whether the confluence of the River Chew and the Winford Brook causes a backwater effect up in to the communities upstream.
- Analysis of the sizing of a box culvert to replace the ford at Chew Stoke.

We can still continue with any of these options, if they are shown to be technically and financially viable. We are aiming to have the model completed and ready to share by the end of June. The results of the model will be available before we go ahead with the installation of PLP measures.

## **Why Property Level Protection (PLP)?**

Any large scheme to protect Chew Magna from flooding would be expensive and would not provide the economic benefits to attract enough government funding. This option has therefore shown to be unaffordable from government funding, unless the community wishes to contribute in excess of £3 million towards the cost. All the other smaller options being investigated would still require additional protection, which PLP measures can provide. Whether these options go ahead or not, PLP remains the best and only feasible option available at the current time. Residents already have some PLP measures installed and this scheme will simply bring those measures up to the latest standards.

The existing PLP measures in Chew Magna were installed in 2011 as part of a Department for Environment, Food and Rural Affairs (DEFRA) pilot scheme. Following flooding in 2012, where some properties suffered flood inundation and damage despite PLP measures, Bath & North East Somerset Council (B&NES) and the Environment Agency (EA) commissioned an independent investigation and report to capture learning from this pilot and identify possible improvements.

We have now completed an audit and resurvey of the existing measures and individual homeowner reports have been sent out to residents. Each report summarises the measures originally provided in 2011; the current condition, suitability and experiences during the 2012 flooding. They also include recommendations for enhanced PLP measures such as dewatering pumps and maintenance works to existing measures. Each property has been assessed individually and measures have been recommended to bring each property up to a consistent level of protection, based on risk, not cost.

We would like to go ahead with this package of enhanced PLP measures (once agreed with each householder), to bring the existing PLP measures installed as part of the pilot scheme up to the standard provided by other PLP schemes. Because the original scheme was a pilot, many lessons have since been learnt.

### **Benefits of PLP:**

The most important benefit of property level protection is its role in limiting the damage - both physical and psychological - caused by flooding. It may also have a role in enabling people to access insurance more easily, possibly even reducing premiums and excess payments. This role is likely to become more important as the support for households at high flood risk provided by Flood Re: the Government's proposed solution for affordable flood insurance is gradually withdrawn over a 20 to 25 year period.

A national review carried out by DEFRA in 2012, shows that where measures had to be deployed and were required, 84% had a positive impact.

If you've done flood protection work on your property, you or a surveyor can complete a Flood Risk Report to tell insurers or buyers how the work affects the flood risk.

The report is designed so it can be completed by a professional, suitably qualified, independent surveyor either:

- engaged by the property owner (where they are investing or have invested in their own flood protection measures), or Flood Risk Report Guidance v1.1 1-11-12 Page 2 of 6
- engaged by the Lead Local Flood Authority, local authority or the Environment Agency, who are providing flood protection measures to property owners.

Insurers are most interested in post-installation flood risk to the property. Any information that can help them assess the post-installation risk and the reduction in potential damages and claims from providing flood protection measures could be useful, even if this is just that the measures will help protect against flooding previously experienced. The more detailed the information that can be provided in the report, the more likely insurers are to feel that they can use the information.

More information can be found here <https://www.gov.uk/prepare-for-a-flood/get-insurance>

**Funding the proposed PLP measures:**

Bath & North East Somerset Council (B&NES) has secured funding to enable existing PLP measures to be improved. The Environment Agency (EA) is also in the process of securing additional funding through Local Levy. As a result we expect to be able to provide the recommended upgrades and enhancements to the PLP measures in Chew Magna free of charge. There will also be the opportunity for homeowners to contribute and further upgrade specific items if they wish.

**Homeowner expression of interest:**

You can choose not to go ahead with your measures individually or as a community, however if you do not accept these enhanced measures, there is currently no other feasible option to reduce flood risk at your property. If your property is at risk of flooding, PLP offers a greater standard of protection than sand bags. There will be an opportunity at the surgery to let the Environment Agency or B&NES council know if you are happy to go ahead with your enhanced PLP measures.

**Timescales:**

After the flood surgery we will update the homeowner reports and re-issue final reports as agreed with the residents. We will then start the process of procuring the measures, at which time we will request the formal approval of each homeowner. We expect installation to take place during the autumn. Once installed, the PLP products will become the property and responsibility of the householders, but we will provide any necessary advice and support to the community during the initial trial. We will continue to update the community as planning progresses.

**Sharing community experience:**

Whilst many residents with PLP measures were impacted by the 2012 flooding, others have reported how their measures performed well. A number of residents have stated how they would be happy to share their experiences in deploying their PLP measures – in particular how pumps, back-up power supplies and resilient repairs have been developed as part of their overall flood protection system. If you are interested in finding out more please contact the Chew Valley Flood Forum.

**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.

- During 2013 the Environment Agency updated the flood warning service to allow all those at risk from the River Chew to register for flood warnings. It also improved the flood warning service by using levels from a gauge at Chew Stoke to complement information from existing gauges.

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, as rivers rise so quickly, it is possible for flooding to occur before the warning can be sent. 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](http://www.environment-agency.gov.uk/flood).

**Chew Magna Emergency Plan:**

The 2013 reports also highlighted the importance of updating the Chew Magna Parish Council emergency plan. There is a need to revise the plan to account for the PLP measures provided and to reflect ownership of these measures by the individual homeowners. The emergency plan should also reflect the changes made to the Environment Agency's flood warning service. The Chew Valley Flood Forum will be working closely with the Chew Magna Parish Council in order to update this plan – if you have any queries regarding this please contact the Parish Council or the Flood Forum. This plan will be very much owned by the community and will need to be maintained.

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