

# Chew Stoke Q & A

## Responses to questions raised by Chew Valley Flood Forum

Following the flooding in Chew Stoke in 2012 Bath and North East Somerset Council (B&NES) and the Environment Agency (EA) commissioned an investigation into the floods. The results of the investigation were published during September 2013. This joint document with B&NES and the EA forms a response to questions raised by members of the public and the Chew Valley Flood Forum regarding the contents of the reports and other related issues.

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## 1. Flood Warnings

### 1.1 Will the Environment Agency explain how the flood warning system works for Chew Magna and Chew Stoke? What is the national standard procedure?

The Environment Agency provides a free of charge service to warn members of the public of flood risk from Main Rivers. There are three different levels of warning provided.

A Flood Alert provides an early indicator that flooding could be possible within a catchment area. They may be issued based on an assessment of real time river level information or rainfall and river level forecast information by the EA's duty staff. Flood alerts are typically issued during waking hours. They can be issued from river level gauges on the Winford Brook, the Chew Stoke Stream or the River Chew, so may not be specific to Chew Stoke. The Flood Alert gives an indication that rivers are beginning to respond in the wider catchment area.

Flood warnings are provided for more targeted areas and warn that flooding is expected to property. As with Flood Alerts the Environment Agency makes use of real time river level information as well as rainfall and river level forecast information to determine when a Flood Warning is required. River levels on the Chew Stoke Stream are monitored 24hrs a day to help us make this judgement.

The third level of warning is a Severe Flood Warning. This is only issued in exceptional circumstances when the risk posed by flooding is particularly dangerous. These three levels are summarised in the diagram below;

	<b>Flood Alert</b> – Flooding is possible. Be prepared. <i>(NB. You will only receive flood alerts if you register for the full service and request to do so)</i>
	<b>Flood Warning</b> – Flooding is expected. Immediate action required
	<b>Severe Flood Warning</b> – Severe flooding. Danger to life.

Residents are advised 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)

### 1.2 Who monitors and measures groundwater levels? How are these observations fed into Flood Alerts/Warnings?

Groundwater data does not currently form part of the Alert and Warning service. The Environment Agency provide a free flood warning service for flooding from Main Rivers only- this does not include surface water or ground water flood risk but in the case of Chew Stoke the flood risk from the Chew Stoke Stream. The Catchment Wetness Index (a measure of how much moisture is in the soil in a catchment) is monitored by our duty staff and these observations are fed into our Flood Alerts and Flood Warnings.

### 1.3 When will the Environment Agency start making more use of rainfall gauges and weather forecasts to inform their flood Alerts/Warnings?

The Environment Agency already makes use of rainfall gauges and weather forecasts to inform their flood alerts/warnings. Data from rainfall gauges cannot be used solely to make flood warnings decisions, but it is a key element in the assessment of flood risk by EA duty staff. This is used alongside data relating to river levels, catchment wetness and forecast rainfall to make the best informed decisions possible.

### 1.4 Will rainfall forecasts be factored into flood warnings in Chew Stoke in the light of rapid catchment area issues?

As part of the Rapid Response Catchment project we are piloting the use of rainfall forecast to provide an operational message to those communities that have a community flood plan. If intense rainfall is predicted to fall within the catchment area it will trigger an alarm that will be issued to the flood group co-ordinators. The flood plan coordinators will then be required to have a cascade system in place to disseminate the message to the community and respond appropriately.

Through the use of forecast heavy rainfall we hope to give an increased lead time to our warning service. However the use of forecast weather information carries the risk of an increased false alarm rates. This is a trial and is aimed at complementing the existing Flood Warning Service, not replacing it.

Chew Stoke will need to have a community flood plan drafted and express an interest in receiving this 'operational message' before February 2014, this service is due to go live in June 2014.

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## **2. River Maintenance**

### **2.1 What maintenance has been done over the last 12 months in Chew Stoke?**

The Environment Agency does not carry out routine maintenance on the Chew Stoke stream. The responsibility of river maintenance ultimately rest with the Riparian Owner (the landowner adjacent to a river). We have permissive powers to undertake maintenance which has a justifiable reduction to flood risk on residential properties.

Inspections and blockage removal are carried out at key locations on the Chew Stoke Stream on an ad hoc basis. These inspections are instigated from a predicted period of unsettled weather or the issuing of a flood alert. This was carried out 17 times over the last 12 months.

Emergency or reactive works to remove potential flood risk obstructions are also carried out by the Environment Agency.

### **2.2 What are the forward maintenance schedules over the next 6-12 months for the Chew Stoke Stream?**

The Environment Agency will continue with the ad hoc check round inspections and blockage removal at key locations on the Chew Stoke Stream. However, this is dependent on our national funding allocation. We have no future plans to start routine maintenance on the Chew Stoke Stream.

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## **3. Road and Field Drainage**

### **3.1 What improvements do B&NES intend to make to drainage in Chew Stoke, particularly in Walley Court Road?**

We are committed to carrying out highway drainage improvements in Walley Court and Bilbie Road.

We have spoken to land owners and residents to get a first-hand account of how surface water travels through the area and why they thought the area suffered flooding. We have produced a topographical survey to better understand how surface water ponds and travels on the surface.

The topographical survey informs the design options of the new highway drainage improvements.

We carried out a closed-circuit TV (CCTV) survey of all the existing highway drainage system.

The survey identified sections of pipes that have root ingress. It also showed up sections of pipe that had large amounts of silt, this was removed from the pipes so that they can now operate at full capacity

We also cleared the river outfall next to the play area at the bottom of Bilbie Road.

The CCTV survey established that the main surface water drain running from Wally Court Road to the Chew Stoke Stream is in good condition and will be used when developing the highway drainage improvements.

We are currently using the information we have gathered to develop options to improve the conveyance of surface water from the area and help reduce the risk of flooding to properties. These options of our work in progress are detailed on plans.

### **3.2 What is being done to control the runoff from fields particularly in Walley Court Road?**

We are developing different design options to improve the highway / surface water drainage.

Last year was the wettest ever recorded in England and the ground became totally waterlogged this meant that even relatively small rainfall events caused large amounts of surface water runoff. We can all be better prepared if we see these sort of conditions developing in future years.

### **3.3 Will clearance and maintenance of drains in Valley villages at high risk of surface water flooding be a priority henceforth and given special care and attention?**

In common with other Local Highway Authorities our highway road gullies are cleared out annually on cyclic program.

We have a list of special attention gullies that get emptied at 4 monthly intervals. New cases can be reported, these will be investigated and if appropriate can be added to the specials list or the council can carry out investigations and identify where any improvements to drainage can be made the proposed improvements can be added to our drainage priority list for prioritising.

Anyone who experiences any surface water flooding is encouraged to report it to the Council via Council Connect (01225 394 041).

## **4. Property Level Protection (PLP)**

### **4.1 What PLP works are included in the Chew Stoke PLP scheme?**

PLP to privately owned properties identified within the scheme as being suitable for PLP protection. This includes property on The Street, Pilgrims way and Quarry Hay.

### **4.2 What is the likely delivery programme for the above?**

Hoping to complete the works this financial year. Delivery of the products is likely to be end of January 2014.

### **4.3 What additional advice can be given on PLP?**

Please see attached Chew Stoke Flood Risk Workshop sheet.

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## 5. Modelling

### 5.1 Are the Environment Agency, B&NES and Bristol Water carrying out the modelling with open minds regarding possible mitigations, or is the exercise merely to justify existing prejudgements? What is the objective of the modelling and how will the results be used?

Any modelling is always carried out using scientific, repeatable methods and with an “open mind”. The results will be visualised to make them clear to the communities and partners and will help understand if there is justification for work within the community in the future; this work could include possible flood warning and flood map improvements.

### 5.2 Will the model be maintained and updated for the foreseeable future? Will it include data from this winter’s flooding?

Models are based on currently best available data and information at that time. The model will be reviewed and updated as required, i.e. if new data comes to light that may significantly change the output of the modelling (e.g. significant new flow data). The floods of 2012 form a key part of the model improvements. Incorporating the flood flows and data from these events will help improve model confidence.

### 5.3 Who owns the model and is running the modelling? How much funding is available for modelling? What are the arrangements for accessing the model and running scenarios?

The model is owned by the Environment Agency. The current budget for the modelling work is just under £16,000 with potential for additional funding to produce visualisations. Once the modelling is complete it can be obtained from the EA under licence by individuals or private companies. However, specialist software is required to run the modelling and a significant background/skill base is required to re-run a hydraulic model – it is not an “off the shelf” application.

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## Contact Details

For further information regarding these questions please use any of the following contact details.

### Flood Forum

Secretary: [chewvalleyfloodforum@gmail.com](mailto:chewvalleyfloodforum@gmail.com)

Website: [www.cvff.info](http://www.cvff.info)

### Environment Agency

Jody Grabham, Flood and Coastal Risk Management - 01278 484806

[SouthWestEnquiries@environment-agency.gov.uk](mailto:SouthWestEnquiries@environment-agency.gov.uk)

### Bath and North East Somerset Council

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