

# Chew Magna Q & A

## Responses to questions raised by Chew Magna Flood Forum

Following the serious flooding in Chew Magna in 2012 Bath and North East Somerset Council (B&NES) and the Environment Agency (EA) commissioned an investigation into the floods and the performance of the property level protection measures installed at properties in the area. The results of these investigations were published during September 2013. This joint document with B&NES and Bristol Water (BW) 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.

## Contents

1	Insurance	2
2	Flood warnings	2
3	River maintenance	4
4	Reservoir and lake management	5
5	Road and field drainage	7
6	Property level protection	8
7	Funding of property level protection	9
8	Modelling	9
9	Post flooding support/action	11
	Contact Details	11

## 1. Insurance

### 1.1 How close are the Environment Agency to providing householders with improved/property specific flood risk assessments based on this year's threshold survey? What is the definition of "threshold"? Can the Agency share an example and explain the detail?

The modelling work currently being carried out for the Chew Valley will provide the best information on flood risk for individual properties in Chew Magna. Work on this modelling should be completed early next year.

The property threshold is the point above which flooding will enter the property - generally it is considered to be the top of the door sill, but may vary from property to property.

### 1.2 Will the return periods/probabilities of occurrence for the September and November floods be more soundly and consistently assessed, taking into account all the flooding events since 1960, and also more clearly explained?

The Environment Agency do not intend to carry out further work regarding the return periods of the September and November floods, although the model will improve understanding. The flooding report already gives a broad indication of return periods. Additionally, the new modelling work could change any estimated return periods as it provides new information on flood extents within Chew Magna. It should be recognised that return periods of flood events do not change the risk of flooding in the future.

### 1.3 Who in Defra can the Flood Forum contact regarding the "Flood Re" Insurance proposal?

Contact details on the Defra website for flood insurance issues are as below:

Floods & CBRN Programme  
 Department for Environment, Food and Rural Affairs  
 3rd Floor, Nobel House  
 17 Smith Square  
 SW1P 3JR

Web: <https://www.gov.uk/government/policies/reducing-the-threats-of-flooding-and-coastal-change>

Email: [floodinsurance@defra.gsi.gov.uk](mailto:floodinsurance@defra.gsi.gov.uk)

Defra will be publishing a response to the flood re consultation on 25<sup>th</sup> November, which should answer many questions raised by the wider public. This will be available on the Defra website.

## 2. Flood Warnings

### 2.1 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 and so may not be specific to Chew Magna. 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 River Chew and Winford Brook 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)

## 2.2 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.

## 2.3 How long does it take for the automated telephone alerts/warnings to ring all households? Is there a quicker/simpler mechanism for people who are not on line?

The Environment Agency use an automated system to ensure our flood warnings are sent as quickly as possible when there is a risk of flooding. There are various options available to the public- warnings can be received by automated phone call, SMS text, email or fax. The Environment Agency website is another source of information as well as local radio and news coverage.

When a flood warning is issued by the EA, those registered to receive it will typically be contacted within a matter of minutes. Messages are prioritised depending upon their severity during very busy periods. So a flood alert may be delayed for a few moments if lots of flood warnings need to be issued. If a telephone number is engaged, the automated service will wait and try again until the message is successfully delivered.

## 2.4 Based on past experience and current procedures, are Flood Alerts more likely to prove mistaken/nugatory than Flood Warnings?

Flood Alerts are issued to give an early indication that flooding is possible. In order to achieve this, particularly in areas prone to rapid flooding, the Environment Agency relies to some extent on forecast information. A decision to issue a flood alert will be based to some extent on the forecast rainfall and forecast river level information. In contrast a Flood Warning will not be issued as far in advance – typically between 30mins and 2hrs before flooding is expected. Issuing a Flood Warning closer to the expected onset of flooding means that there can be greater confidence that flooding is going to occur. Inevitably there is a balance to be struck between giving people enough time to prepare for flooding and unnecessarily alarming people when the risk doesn't materialise.

## **2.5 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 Magna the flood risk from the River Chew and Winford Brook.

---

## **3. River Maintenance**

### **3.1 What maintenance has been done over the last 12 months, beyond de-silting at Tun Bridge, in Chew Stoke and Chew Magna?**

The Environment Agency carried out routine maintenance on the Winford Brook and River Chew in August 2013 which included vegetation management of the channel bed/banks and removal of blockages in the channel and culverts/bridges. Routine maintenance is not carried out on the Chew Stoke stream. Tunbridge de-silting was undertaken in April 2013

Inspections and blockage removal are carried out at key locations on the Winford Brook and River Chew on a weekly basis. This activity is also carried out on an ad hoc basis which is instigated from a predicted period of unsettled weather or the issuing of a flood alert. Inspection of the Chew Stoke Stream is only carried out on an ad hoc frequency and it does not form part of the weekly checks – 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.

### **3.2 What are the forward maintenance schedules over the next 6-12 months for the Chew Stoke Stream, Winford Brook and River Chew?**

The Environment Agency will continue with the check round inspections and blockage removal at key locations and is planning to undertake routine maintenance on the Winford Brook and River Chew in Spring/Summer 2014. However, this is dependent on national funding.

Bank stabilisation works upstream of Tunbridge will take place in Nov/Dec 2013 and tree/hedge management on Environment Agency land by Dumpers Lane in Nov/Dec.

### **3.3 What will the Environment Agency do to encourage riparian owners to do maintenance?**

The Environment Agency will continue working with the Parish Council and Chew Valley flood forum to highlight the legal rights and responsibilities of a riparian owner.

### **3.4 A comprehensive clean up is required to then make future maintenance more manageable – and provides an incentive for riparian owners.**

The Environment Agency does not believe that a 'comprehensive clean up' is required from a flood risk management perspective and there are no future plans to increase the maintenance regime. It is important to recognise that under the current funding regime, the challenge is to maintain existing levels of maintenance rather than add anything further.

---

## 4. Reservoir and Lake Management

### 4.1 Will Bristol Water and the Environment Agency provide their data/calculations that lead them to assert, in advance of the modelling work, that keeping water levels low at the Chew Magna Reservoir and Chew Valley Lake makes little or no difference to the flooding?

Bristol Water have already provided some supporting data at various presentations and have explained the volumetric calculations to the Chew Valley Flood forum and letters in response to direct queries. It is clear that the data is difficult to understand, but Bristol Water are happy to continue to provide the data in whatever form would help stakeholders understand the situation.

The new modelling is essential, as it will link the two systems together and be able to demonstrate much more clearly than raw level and flow data the combination, downstream and temporal effects of high inflows.

The JBA Technical Report states the Lake provided significant flood mitigation during the 1968 flood because the water level was low enough for the Lake to hold back two-thirds as much water again as flowed down the valley, without overflowing.

If that event had occurred with a full reservoir it is reasonable to assume the flood damage would have been exacerbated, but it unclear by how much. It was fortunate that Chew reservoir was in place. If the reservoir had not existed, it is possible that properties could have suffered the same level of damage as at Pensford. Because of Bristol Water's current obligations to ensure a secure and resilient water supply, it is unlikely to be possible to maintain the Chew reservoir 2m underhead as a permanent flood control measure (without the need for large new resource developments).

### 4.2 What does Bristol Water do currently to manage the Reservoir and Lake during the winter and when rainfall is forecast to be high? Does it liaise and work with the Environment Agency?

Bristol Water do not control reservoir levels with respect to providing flood management freeboard.

Chew is a water storage reservoir and estimation of yield is based on a full reservoir at the start of every year to be able to cope with extreme drought events such as 1922, 1933, 1975 etc. At present Bristol Water aim to get the reservoir full over winter and maintain that condition until spring.

Bristol Water do not have the infrastructure to make high volume releases that would impact reservoir volumes significantly during periods of high inflow. Even if large releases were possible, the river systems downstream would need to be modified and monitored to ensure flooding did not occur at other points downstream.

Bristol Water would not undertake to make any releases of water from a large reservoir undirected, unless this was part on an overall multi- agency strategy with clear legal and operating conditions.

### 4.3 If it can be shown to be beneficial to flood mitigation, does Bristol Water have a legal or societal obligation to manage water levels in the Reservoir and Lake?

Bristol Water would have obligations under the Flood and Water Management Act to assist in finding a solution with other stakeholders and costing that solution. Such work would have to be prioritised alongside other national work and would be dependent on finding necessary funding. Bristol Water would not be in a position to make unilateral changes without understanding what the cost recovery mechanism would be.

### 4.4 In the light of last year's flooding would Bristol Water act any differently (i.e. apparently do nothing) if similar weather/ground conditions re-occurred now?

2012 was a highly unusual year. In extreme events, all reservoirs will overflow unless they are designed specifically as flood detention reservoirs. When long term rainfall exceeds the storage

capacity of large reservoirs such as Chew and they overflow, they are still providing a considerable mitigation of the flood peaks inherent in a natural river system. Without the reservoir in place, most of the post 1960 development in low lying areas of Chew Magna would not be viable.

#### **4.5 What will be done this winter to keep the water level in Chew Valley Lake low to avoid overflow?**

Although Bristol Water would maximise the use of the reservoir and this may reduce rate of refill, they are constrained both by demand for water and by licence conditions governing the volumes pumped out of the reservoir. There is very little that can be done to artificially keep the reservoir low if above average rainfall occurs on catchment.

#### **4.6 Why cannot the Chew Magna Reservoir be kept low throughout the winter, at least to effect some delay to the Winford Brook flooding? An hour for the Chew Magna Reservoir to fill up is an extra hour for homeowners to implement their flood plans and/or get home from work. What is Bristol Water's response to this fact?**

Until 2012, Bristol Water attempted to maintain 1 to 1.5m of freeboard in the winter. In practice this was quite difficult to do as in heavy rain, the inflow rapidly removed this freeboard and reservoir overflowed.

In practice the flood record showed this operation made no difference - there were still regular intervals of flooding taking place. There is also the secondary issue of flood masking to consider - in a flood there would be no downstream warning of impending discharges from the reservoir until the point the reservoir overflows at the peak of the flood event. (I.e. no steady rise in water level to alert residents). The reservoir would fill to overflow within 30 minutes and then discharge at close to flood peak. The stream rise would appear to be almost instantaneous when observed downstream.

#### **4.7 Explain why the Chew Magna Reservoir weir overflow discharge is significantly greater than the Chew Valley Lake's overflow, when both are full. The Winford Brook catchment is only 1/3 size of River Chew's catchment to Chew Magna and the Lake is at least 250 times bigger than the Reservoir?**

It is because Chew reservoir is so large that acts as a means of detaining flood water even when full. In response to the flood, the reservoir rises above top water level by up to 300 mm. The volume that the reservoir is temporarily storing can be calculated by multiplying by the area, and is a large amount of water. The discharge from Chew Magna is effectively the full flood peak - the reservoir offers no mitigation at all as it is too small relative to inflow and discharges the full flow within minutes.

In Chew the full flood peak could have been 2 to 3 times the flood peak at Chew Magna (if it had been 10m<sup>3</sup>s at Chew Magna, say 20 to 30 m<sup>3</sup>s at Chew. The large reservoir acts as huge shock absorber, holding the flood waters. Instead of discharging in a few hours at what would be damaging flows of 30 or 40m<sup>3</sup>s, the reservoir increases in level and discharges the volume of water at much lower rates over a number of days.

#### **4.8 What is being done to maintain the capacity of the Chew Magna Reservoir i.e. dredging etc?**

Bristol Water do not dredge or plan to dredge Chew Magna reservoir; they assess volume has stabilised at about 70 Mld with only minor increases over time. Bristol Water clear small volumes of silt away from operating structures when the opportunity arises. The extra volume that dredging would provide would be unlikely to have any mitigating impacts on flooding (even if the reservoir could be maintained in an empty condition at all times)

#### **4.9 What is being done to mitigate fast flows caused by development upstream?**

The Local Planning Authority and the EA have no retrospective powers regarding existing developments where planning permission has been granted and construction has been carried out to the approved plans.

Under current planning guidance developers must demonstrate that their proposals will not increase surface water runoff into the catchment.

During assessments of new developments the Environment Agency insist that there must be no interruption to the surface water drainage system of the surrounding land as a result of a development, and surface water run-off should be controlled as near to its source as possible. The use of Sustainable Urban Drainage systems is also encouraged; these seek to mimic natural drainage systems and retain water on or near the site as opposed to traditional drainage approaches which involve piping water off site as quickly as possible, which potentially increases the risk of flooding elsewhere.

#### **4.10 How frequently would we expect flows into the Chew Magna Reservoir to exceed 4m<sup>3</sup>/s?**

The answer is often in winter periods during rainfall events, but cannot be quantified precisely as our data is based on daily inflows not sub daily. This would be an output from the model.

## **5. Road and Field Drainage**

### **5.1 What improvements do B&NES intend to make to drainage in Chew Magna, and when?**

Highway drainage is designed to deal with the rain that falls onto the highway. Bath and North East Somerset Council are investigating the problems in Tunbridge Road. B&NES Public Rights of Way team are about to start drainage improvement works in Hannys Lane.

All the surface flows in the area discharge into the rivers. It is believed when the river is in flood the surface water can't escape into the river as the outfall are underwater and so flood waters back up in the highway drains. This is commonly why blockages are often reported on Norton Lane – the river levels are too high for the highway water to drain.

### **5.2 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?**

B&NES are asking the community to report cases of internal property flooding in Chew Magna caused by surface water flows. There is a list of special attention gullies and new cases can be added to this list.

Anyone who experiences any property flooding from surface water is encouraged to report it to the Council via Council Connect (01225 394 041). Once reported, the council can carry out an investigation and identify where any improvements to drainage can be made.

### **5.3 Will B&NES and the EA be talking to the farming community throughout the Valley regarding land management, ditches, contour ploughing? Can run off be held back/slowed by better management of agricultural land**

B&NES intend to work closely with Bristol Water but realise there is a limit to the work that private landowners can do to attenuate surface flows on their land.

### **5.4 What is B&NES's policy regarding mitigation of pluvial flooding (run off diversion, drainage improvements etc)**

B&NES will be working with Bristol Water and local land owners to improve the situation. It's important to remember that the exceptional weather in 2012 (with intense rain falling on saturated

land) meant that the land shed water onto the highways and byways, turning them into overland flow routes. It would be extremely difficult to attenuate (or hold back) the sorts of volumes of water that were coming off the fields last year.

B&NES try to investigate all reported flooding incidents. As a consequence of investigation a list of drainage work is drawn up and reviewed. Internal property flooding is given the highest priority. The investigations can lead to cost-effective mitigation works.

### **5.5 Why did gully clearing on Tunbridge Road following the floods of 2012 take several days – it meant water stayed around much longer than needed?**

This could have been cleared sooner but priorities may have been elsewhere at the time. It is important to get this sort of information so that it can be planned for should something similar happen in the future.

## **6. Property Level Protection**

### **6.1 Has anything positive emerged from B&NES's discussions with UK Flood Barriers regarding remedial work on the installed PLP the latter will undertake now at no cost to B&NES and householders?**

UK flood barriers indicated that they would consider any manufacturing/ installation defect with the original property level protection (PLP) equipment apparent during the 2012 flooding. UKFB have confirmed that they are not prepared to upgrade seals on the barriers previously supplied. Following the public meeting UKFB have also indicated that they are not prepared to fund further works and B&NES will be asking for UKFB to attend a workshop to discuss and review outstanding issues.

### **6.2 Will there be an opportunity for householders to input evidence to B&NES and the Environment Agency regarding the deficiencies of the installed PLP?**

It is expected that the proposed audit and resurvey of affected properties would provide householders with an opportunity to feed in their experiences of the installed PLP.

### **6.3 Will the Environment Agency/B&NES be providing householders with detailed advice on what to do with PLP measures for this winter and also on what to install for additional protection, with estimates of likely costs (e.g. which are the most effective pumps - make, model, petrol/electric)? Who can people contact for advice/assistance?**

The proposed audit and resurvey will provide householders with a personal report on PLP measures relevant to their property. In the meantime residents should ensure that their PLP measures are in working order and practice installation. Where residents are concerned about the effectiveness of the seals, they should contact UK Flood Barriers directly for advice.

### **6.4 Will the Environment Agency provide more information regarding groundwater flooding and its mitigation? What is the usefulness of pumps without sumps?**

It is important to note that in Chew Magna, the flooding experienced through the floors was not true 'groundwater' flooding, which is where water levels in the ground rise above the surface. In Chew Magna the flooding experienced through floors was a result of sufficient pressure from flood waters forcing water through the structures and up into the properties through the floors. In these situations, pumps provide a method by which the rising levels of this water can be controlled, up to a certain design limit.

A fixed pump within a sump is the preferred solution and likely to be recommended in any updates to the PLP in Chew Magna. However, it can be more expensive and needs regular maintenance. A hand held pump is a cheaper alternative. It will not prevent flooding to floor level but can help to maintain flooding at floor level thus limiting the extent of flood damage and clear up required.

## **6.5 Who is compiling the feedback on the pilot schemes and when will we see the conclusions? Based on experience from other PLP schemes around the country, what lessons have been learned?**

JBA were commissioned by Defra to provide an overall assessment and review of the pilot scheme across the country. The report is available to download from our website here; <http://www.environment-agency.gov.uk/research/planning/129526.aspx>. This report sets out lessons learnt, key findings and recommendations for improvements in future.

## **6.6 Which products and suppliers have the best track record?**

The evaluation report did not assess the track record of specific suppliers; it focused on the overall scheme. All suppliers used are required to meet the appropriate kite mark standards.

## **6.7 Will the EA be re-assessing the Chew Magna PLP scheme in the light of the JBA Report and other PLP schemes?**

The JBA report on the Chew Magna flooding provides the EA and B&NES with an evaluation of the scheme as it stands and makes recommendations for improvements in future - a further reassessment would not be required.

## **6.8 Will better/more complete statistics be produced for the flooding that occurred and the causes e.g. the number of properties that flooded in both September and November?**

The Environment Agency holds records for flood events but is always looking to expand and improve data with local information and knowledge. The numbers of properties flooded and the cause of the floods has been explored in the Flood Investigation and PLP reports but further information from the local community is always valuable. If residents are aware of any further flooding not previously reported please let either the Environment Agency or B&NES know.

## **7. Funding of Property Level Protection**

### **7.1 How much funding (Environment Agency and B&NES) will be available in this FY13/14? What work will be carried out this FY – surveys of all houses with PLP? When will work start?**

Work to carry out an audit and resurvey of the properties fitted with PLP during the pilot scheme is expected to cost around £20,000. Funding will be provided by Bath and North East Somerset Council, and the aim is to commence work on the resurveys this financial year.

### **7.2 Will the Environment Agency grant further funding for enhanced PLP?**

At present, Bath and North East Somerset Council have bid for funding for the enhanced PLP scheme. A contribution towards the total cost will also be sought from the local levy.

## **8. Modelling**

### **8.1 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 prejudices? 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 continuing current maintenance practices and possible flood warning improvements and additional PLP measures.

**8.2 Why is the Environment Agency asking the CVFF which scenarios should be modelled? Surely the general modelling of the water courses and run off will identify the potential problem areas and then potential solutions would be run through the model? Is the modelling too unsophisticated/lacking data to identify the problem areas?**

Members of the community and the CVFF have raised a number of concerns with regard to flooding mechanisms in Chew Magna. The Environment Agency is keen for the modelling to respond to these questions so has asked for any specific scenarios the community wish to see included. Modelling these should help answer these questions and reassure residents that the appropriate measures are being taken to mitigate flood risk. However, it should be recognised that there is a limit to the number of scenarios that can be tested without delaying the model and increasing the costs.

**8.3 How reliable/consistent are the Environment Agency's and Bristol Water's base data e.g. river/stream flow and Lake/Reservoir overflow figures? The JBA report talks of spreadsheets that are difficult to interpret, inconsistent information for the September and November floods, overflow discharge being estimated using "weir flume ratings" and high overflow discharge figures for the Reservoir compared with peak flow for the Winford Brook at the gauge only a short distance downstream of the reservoir.**

It is fairly common when looking at historical records and data for flood risk studies that there will be inconsistencies found. However the purpose of this study, and of JBA's previous study, was to highlight these inconsistencies/limitations and to address them wherever possible. It is important to understand the limitations of the data being used in any modelling study as this will allow the results to be interpreted correctly.

There is a lot of historic information, particularly from the 2012 floods which will assist in verifying the model outputs to ensure that they match what happens on the ground as best as possible. There will always be a limit to the confidence that can be placed in any study such as this, however a key deliverable of this project is to minimise and then fully understand these limitations

**8.4 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.

**8.5 How will householders' experience/historical knowledge of flooding be taken into account? Modelling seems very technical yet people's experience and knowledge should be greater.**

Modelling provides an objective assessment based on sound science and data which is repeatable. Historical data/knowledge and local experience is a key part of verifying the model outputs. Where possible, at every step of the modelling process, outputs are verified against real data and information from local experiences.

**8.6 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 on the River Chew 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.

## 9. Post Flooding Support/Action

### 9.1 What is in place/planned to help communities/householders, both materially and in the form of counselling, for this winter if flooding occurs?

There is a large range of information and guidance on our website <http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx> setting out actions to take in the event of flooding - these are a good starting point. More locally, the Parish Council have a detailed flood plan in place and we recommend that all residents at risk complete a personal flood plan - a template is available on our website <http://www.environment-agency.gov.uk/homeandleisure/floods/38329.aspx>. There are a number of charities and flood groups who can provide support in the event of flooding - please contact Bath and North East Somerset Council for more details.

### 9.2 Who will collect data and how, on any flooding in Valley villages this winter?

Both the Environment Agency and Bath and North East Somerset Council routinely collect data on flooding across the area - this would continue in the event of any further flooding.

### 9.3 What does “Rapid Response Area” mean to residents of Chew Magna – or is this just a title?

Rapid response catchments are a selection of rivers and streams (including smaller tributaries and ordinary watercourses) that are expected to react rapidly to extreme rainfall, resulting in extreme flash flooding. Extreme flash flooding is where a river or stream reacts very rapidly to rainfall, and generates dangerous flood depths and high velocities of water that pose a threat to life.

By categorising the flood risk within these catchments we can better support the community to respond appropriately. Until March 2014 there is additional resource available, in the form of staff time, to work with communities and individuals to be better prepared to respond to flash flooding by supporting the production of flood plans. The Rapid Response Catchment Officer for the Chew Valley is Rose Lloyd. For further information please contact [SouthWestEnquiries@environment-agency.gov.uk](mailto:SouthWestEnquiries@environment-agency.gov.uk).

## 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

Jim Collings – 01225 394041

[Engineering\\_Design\\_Land\\_Drainage@bathnes.gov.uk](mailto:Engineering_Design_Land_Drainage@bathnes.gov.uk)

### Bristol Water

Martin Berry - 0845 702 3797

[corporate.affairs@bristolwater.co.uk](mailto:corporate.affairs@bristolwater.co.uk)