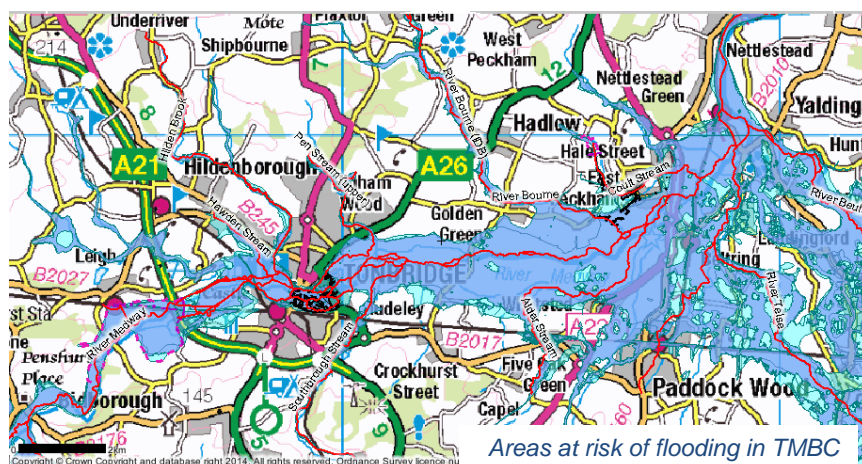


## Managing flood risk - who is responsible for what?

This newsletter summarises progress on a range of technical matters that are being coordinated by a multi-agency group to help manage future flood risk locally.

There are a number of organisations who have a part to play in managing flood risk. These organisations have permissive powers that allow them to do works with the money allocated to them.

- Main Rivers are managed by the Environment Agency. The River Medway, the Gasworks Stream and the Botany Stream are all Main Rivers.
- Ordinary Watercourses are overseen by the Lead Local Flood Authority, in this case Kent County Council.
- Highway drains are managed by KCC Highways.
- Foul and surface water sewers are managed by Southern Water.
- Internal Drainage Board Watercourses are managed by the Upper Medway Internal Drainage Board (UMIDB) who have a duty to exercise general supervision over all matters relating to the drainage of land within the Board's area.
- Riverside or "Riparian" owners have a legal duty to manage a water course that they own. This can be summarised as having a duty to receive water and pass it on.
- The Borough Council take an overview of other watercourses and has permissive powers to maintain flows where appropriate.



## The Technical Group

Following the Christmas floods, a technical group was set up to help coordinate the activities of all of the organisations working to reduce flood risk in the borough of Tonbridge and Malling.

The group includes the Environment Agency, Tonbridge and Malling Borough Council (TMBC), Southern Water, KCC Flood Management, KCC Highways and the Upper Medway Internal Drainage Board (UMIDB). The group meets as and when needed to work together on joint problems. Communities have also selected representatives who can attend to observe and support the various activities.

This newsletter provides a brief update on some of the activities of the group.

### Borough-wide activities

#### **Maintenance**

Before the Environment Agency could start their usual annual maintenance programme, substantial works were needed to remove trees and debris from rivers across the whole catchment. In Tonbridge, 11 mature trees fell into the River Medway, severely obstructing flows. These have been removed and four debris dams have also been removed in East Peckham. Now that this is complete the Environment Agency operations teams are working through the normal maintenance programme.

#### **Improvements to the Flood Warning Service**

The Environment Agency's Flood Warning Service warns of the risk of flooding from the River Medway and the River Bourne. To be effective, Flood Warnings need to be received, understood, and trigger appropriate actions. Since the flooding, many more people have registered to receive Flood Warnings, or

update their contact details to ensure that messages are received as easily as possible. If you are not registered, or have not checked your details recently, please contact Floodline on 0345 988 1188.

After the floods, residents requested several improvements to the Environment Agency's Flood Warning Service. Following this, the Environment Agency has revised the Flood Warning Areas to make them more focussed, providing targeted information to communities that is easier to understand. Flood plans also help people to respond quickly if flooding occurs. The Environment Agency is also working with communities affected to develop community plans. For more information about personal or community flood plans, please contact Pete Curry on 01732 222969.

### **Flood Wardens**

Flood Wardens carry information between the Environment Agency and the community, helping everyone to understand what's going on in the event of a flood. A training session for new wardens was held at TMBC offices on 12 July, and another is scheduled for 18 October for areas in West Kent. The level of involvement across the borough has generally been good, but we are looking for more volunteers, especially in Tonbridge. If you're interested, please contact Pete Curry on 01732 222969, he will introduce you to the people already working in your community.

### **River levels on the internet**

Checking river levels can help understand what is happening, and what the impacts might be. The Environment Agency is aware that their River Levels on the Internet is not as good as it could be. There is a national project to improve this service, and the Environment Agency is working to ensure that the feedback from customers is fed into this project. An independent company has also recently taken the Environment Agency data and presented it in their own package called Gauge Map (<http://www.gaugemap.co.uk/>). The Environment Agency does not control or endorse this site, but it may be helpful to some people.

### **Increasing the capacity of the Leigh Flood Storage Area (FSA)**

Prior to the floods, the Environment Agency had planned to carry out works to extend the life of the Leigh FSA to 2035. Following the floods the Environment Agency has been working with Kent County Council and Tonbridge and Malling Borough Council to increase the capacity of the Leigh FSA. Maidstone Borough Council is also participating in this project with a view to reducing flood risk in Yalding.

This partnership is now funding and working on development and design to accelerate the scheme. Although nothing is yet guaranteed, it is planned that a design will be in place by 2018 to enable preliminary works to commence; this should allow the main construction to be completed by 2022.

This will be of direct benefit to communities and businesses in Tonbridge and Hildenborough and will also reduce the risk of flooding further downstream in East Peckham. Open days are being held at the Leigh FSA to give the public a chance to see the structure and learn how it works.

### **Flood Resilience**

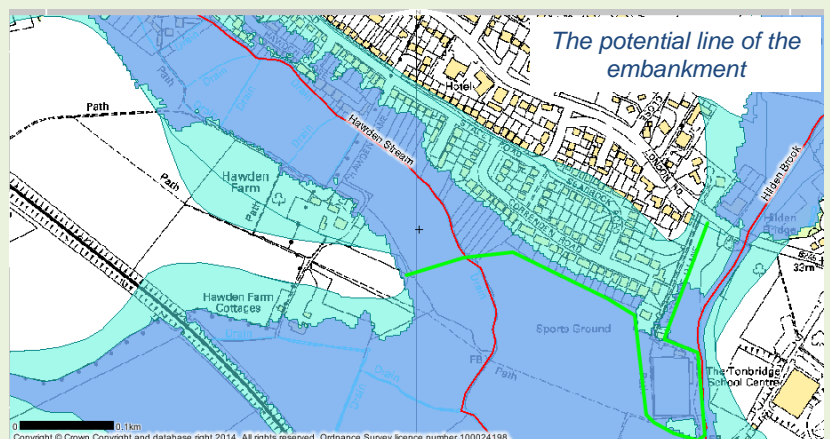
TMBC is pleased to have received 92 applications to date for the government's 'Repair and Renew' grant, providing up to £5000 for resilience improvements including flood proof doors, air brick covers and non-return valves. New applications can still be accepted although the scheme ends next year and improvement work will practically need to have been completed by the end of January 2015.

### **Hildenborough**

#### **Reducing flood risk**

Flooding in Hildenborough is driven by the River Medway. The Environment Agency has secured £200,000 of funding from the Regional Flood and Coastal Committee to design a scheme to reduce the risk of the Medway flowing up the Hildenbrook and the Hawden Stream.

The scheme will store water from the Hawden Stream on the meadows next to Hawden Farm but it is likely that a facility



to pump water from the Hawden Stream onto the sports pitches will need to be included. Design will take place over the winter and spring. Construction is planned to take place in summer 2015.

### **Flood Warnings**

The introduction of a new targeted flood warning system for Hildenborough together with trained local Flood Wardens will improve the quality of information to and from the community.

### **Maintenance works**

KCC Highways have completed the repairs to Stocks Green Road culvert. The Environment Agency are completing weed cutting and mowing of the Hawden Stream.

KCC Highways have carried out a number of cleansing and investigation jobs around Hildenborough and completed engineering works at both Nobel Tree Road and Leigh Road.

They are also investigating drainage issues at Foxbush and Bank Lane and aim to complete any outstanding works by Christmas.

## **Tonbridge**

### **New flood wall for Avebury Avenue and Barden Road area**

The Environment Agency has secured funding from the Regional Flood and Coastal Committee (RFCC) for a project to build a defence in the Avebury Avenue area. The flood defence is likely to be a low level flood wall behind the footpath. This project is in the planning stages but the Environment Agency hope to start construction in early 2015.

In the meantime, a contingency plan is in place to protect the community around the Avebury Avenue area if there are high river levels this winter before the permanent scheme is constructed next year. An exercise was run in September to test this contingency plan.

### **Surface water and highway drainage**

The highway drainage system in the Danvers Road area of Tonbridge has been cleansed and surveyed and no defects were found.

Highways drains in Danvers Road and the area in the immediate vicinity have been placed on an enhanced cleansing regime by KCC and will now be attended to twice a year. The next cleanse is scheduled to take place in late October before the onset of winter.

Finally, residents advised the Technical Group that they were concerned that some of the drains had become blocked as a result of the silt and debris caused by the ongoing building and repair works in the area. In response we arranged for additional cleansing to be done and this was completed in August.

### **Sewer system and sewer flood risk**

In addition to river and surface water flooding, the local sewer system, which is designed to deal with wastewater flows, for example, from toilets, bathrooms and kitchens, was overwhelmed by huge amounts of water entering it as a result of heavy rainfall and the presence of floodwater. As a result, a number of actions were identified by Southern Water. These include:

- Reviewing the maintenance programme for Southern Water's sewer / wastewater system serving the Danvers Road / Barden Road area. Southern Water will be carrying out jetting work on the foul sewers in Danvers Road at least every 12 months to ensure they operate as effectively as possible.
- Carrying out an inspection & CCTV survey of the foul and surface water sewers in the Danvers Road area. The results have been reviewed, with targeted jetting work carried out to clear any restrictions. Southern Water has also inspected the sewer outfalls (or discharge points) to the River Medway and Botany Stream and carried out work on them, for example, cutting back undergrowth around them.
- Reviewing the operation of Southern Water's Tonbridge Waste Water Treatment Works (WTW) to

ensure it performed effectively at the time of the flooding. This concluded that it operated as it should and did not contribute to the flooding.

- Reviewing the hydraulic computer model for the Tonbridge catchment. It has been verified against a flow survey and covers the foul and combined sewer systems (the surface water sewers are not modelled). The model will be used to identify any possible risks to inform the local Drainage Area Plan.
- Inspecting the various chambers on the public sewers leading from the Danvers Road / Barden Road area to Southern Water's Tonbridge WTW.
- Carrying out high pressure jetting of a small section of sewer discharging into Southern Water's Tonbridge treatment works to remove any possible restrictions (for example, build up baby-wipes or fat, oil and grease). None were found, but the work has allowed Southern Water to confirm that sewer flows into the works are unrestricted.
- Confirmed that wastewater from properties in Danvers Road, Barden Road and the surrounding area flow (by gravity) to the treatment works. This means they do not discharge to Southern Water's wastewater pumping station at Sovereign Way. This pumping station was reported locally to have had an issue with one of its pumps, but due to the above, any issue would not have any impact on flooding in the Danvers Road and Barden Road area.

### **Repair Projects**

Throughout the town the floods caused extensive damage to the retaining walls and defences. The Environment Agency is carrying out repair projects at Buleys Weir, upstream of the Big Bridge and just below the castle. Collectively the projects will cost £1.7million. The works have started and will continue though to March.

### **East Peckham and Little Mill**

The Coult Stream dam stored water five times over the Christmas period reducing the flooding in the Snoll Hatch area. In line with best practice, the dam was designed using statistical techniques to estimate flow. Now the structure has been in place for nearly 10 years, there is sufficient data to review the design. Early results from the review suggest that the dam can be upgraded to increase the standard of protection offered. The Environment Agency hopes to be able to progress this project in 2015 – 2016.

The Environment Agency has secured funding from Defra Flood Defence Grant in Aid to progress the construction of an embankment to reduce the risk of flooding to homes in the village. However, additional funds are being sought to extend the area protected to the businesses in Branbridges and to Little Mill, both of which were badly affected over Christmas.

In the area around Little Mill substantial blockages have been removed from the River Bourne.

### **Contact us**

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<b>Tonbridge and Malling Borough Council</b> <b>Steve Medlock</b> <b>01732 844522</b>	<b>Kent County Council</b> <b>Joseph Williamson</b> <b>03000 41 41 41</b>
<b>Southern Water</b> <b>Mike Tomlinson</b> <b>0845 278 0845</b>	<b>Upper Medway Internal Drainage Board</b> <b>Mike Watson</b> <b>01622758345</b>