

Progress on Beckington Drainage Review

As Beckington has a long history of flooding problems, Somerset Rivers Authority (SRA) agreed to fund a very detailed review of all relevant local factors. Investigations have been led for the SRA by Mendip District Council (MDC). A lot of work has now been done with a range of partners. We have surveyed land, watercourses, roads and drainage systems around the village, and the purpose of this update is to let you know more about what we have discovered and what we are proposing to do next.

Thank you to everyone around Beckington who has co-operated on this project so far. We could not have made the progress that we have without your help.

Background

Various surveys have been carried out in the past for Wessex Water (WW) and Somerset County Council's Highways Department (SCC). We collated the earlier surveys, however they did not fully show us how surface water (rainfall) is conveyed through Beckington, or how different areas are – or are not – connected.

We have completed additional surveys in and around Beckington to supplement previous information from Wessex Water and SCC Highways. We have tried to identify opportunities for attenuation and spot potential mis-connections that could be rectified to help improve the capacity of the foul sewer system.

In April 2016, Wessex Water proposed upgrading Beckington's sewer system to increase the capacity of the foul sewer in the centre of the village. Unfortunately, this scheme could not progress because of the proximity of listed buildings and the already-congested state of services in the road. Wessex Water are now considering alternative options using the extra information and better understanding of the drainage network gained through our review.

Progress

- A walk-over survey and initial assessment of the different routes that surface water can flow was carried out around Beckington. A follow-on watercourse survey was carried out with a specialist consultant in September 2019.
- Experts in land and natural flood management techniques from the Farming & Wildlife Advisory Group South West undertook initial consultations with landowners to ascertain their appetite for providing attenuation on farmland upstream of the main drainage routes into the village. This work is ongoing.
- A CCTV survey company were commissioned to undertake detailed survey works of the existing underground surface water system, under the supervision of Mendip District Council's Drainage Consultants (CALM Engineering Ltd). Surveying took place between 15-18 April, 13-16 May and 20-24 May 2019.

- In August 2019, SCC Highways undertook a programme of works to upgrade parts of the highway drainage system identified as problematic in a 2016 survey. We worked with highways to identify other areas of the system that might be added. Most notably, we identified several buried manholes and inaccessible highway drains that had previously prevented a full survey of the surface water system. Improvements at these sites has enabled a 'mop up' survey to be carried out in February 2020.
- In June, we had initial talks with Wessex Water about areas where surface water was mis-connected into the foul sewer network. We discussed areas that might require a revisit during the 'mop up' survey to prove connections to the foul sewer from other areas identified but not accessible by camera.
- In November 2019, we received drainage details from Highways England (HE) for the A36. We will be continuing discussions with HE as part of the development of the options to try to reduce the volume of surface water draining into Beckington.
- A 'Mop up' survey was undertaken in February 2020 and the results are in the process of being analysed and mapped.

Key Highlights

- Five culverted watercourses were identified within Beckington which had not previously been surveyed. These were mainly old stone-lined culverts, many beneath houses and gardens, making access difficult. Due to the lack of manhole access, some parts of the system were unable to be fully surveyed.
- Many of the older dwellings in the village have water wells within their grounds (some up to 12 metres deep). Inspecting these, we found that ground water levels were well below the surface, indicating low risk for ground water flooding.
- Most of the older properties in the village have downpipes that discharge rainwater straight onto the road via small surface grills. These discharge into the highway drainage system via the highway drains.
- All existing highway gullies were thoroughly cleaned during the survey works.
- Culverted watercourses are generally in good condition with some minor stone/slab movement in places (only one partial collapse noted on Goose Street).
- The culverts carry a substantial amount of woody debris from upstream rural areas, making some parts of the system difficult to survey. Improvements to ditch maintenance and using trash screens upstream of the culverts (where open ditches drain into the system), could help to prevent woody debris and leaves from entering the culvert. This is being looked at as part of the review.
- The sewer system suffers periodically from blockages caused by wet wipes and fat deposits in the system.

Future Work

1. Completion of an options appraisal report and mapping, summarising the Beckington Drainage Review results and outlining possibilities for reducing local flood risks, with input from all interested partners, including key landowners.
2. A public event for local residents to share key findings and highlight some key historical areas of interest. For example, many people have been very interested in older culverted systems.
3. The above event would also be used to share information about:
 - Riparian Ownership and Responsibilities. Riparian Ownership relates to watercourses that flow under, through and around privately-owned land. A land/property owner is responsible for the maintenance of a watercourse within or under his land/property. There is joint riparian responsibility for watercourses which form a boundary between two landowners.

https://www.wlma.org.uk/uploads/EA_Guide_to_rights_and_responsibilities_of_riverside_ownership.pdf

- Sewer misuse – to reduce blockages caused by fat and wet wipes.

<https://www.wessexwater.co.uk/-/media/files/wessexwater/your-home/help-and-advice/stop-the-block-flyer.pdf>

Date: 31st March 2020

Author: Caroline Murray MEng CEng MICE, (CALM Engineering Ltd)
Acting as Mendip District Council Flood Risk Manager

Special thanks to the *Farming & Wildlife Advisory Group South West (FWAG SW)*, *Somerset County Council Flood Risk Team*, *Somerset County Council Highways*, *Highways England*, *Wessex Water*, the *Environment Agency* and *Somerset Rivers Authority* for their input into this project to date.