
Highway Flooding on the 29th May 2018

To:	Swale Joint Transportation Board
Main Portfolio Area:	Growth, Environment & Transport
By:	Kathryn Moreton – Asset Manager [Drainages, Structures & Safety Barriers]
Classification:	For Information
Ward:	All
Division:	All
Summary:	Provides details of the flooding that occurred on the 29 th May 2018, works carried out to date and planned drainage maintenance and improvements

1. Introduction

- 1.1. The County Council maintain around 250,000 drains across the adopted highway network. Of these, 70,000 drains are located on main roads¹ and are therefore subject to annual maintenance visits. The 180,000 located on minor roads are cleaned on a targeted basis in response to reports of blockages or flooding. The volume of assets that are maintained increases year on year with approximately 60km of highway adopted or added for other reasons per annum.
- 1.2. As the Highway Authority, the County Council has a statutory obligation to, so far as is reasonably practicable, maintain the highway and associated drainage systems in a safe condition. By virtue of this, there is a duty to maintain existing highway drainage systems and take steps to maintain highway safety when flooding occurs. There is no obligation to install new highway drainage however the County Council may be found liable for causing a nuisance if reasonable steps to manage highway surface water are not taken.
- 1.3. In an average year the County Council would expect to receive around 7,000 drainage and flooding enquiries. Each enquiry is evaluated to determine the type of response required e.g. drainage cleansing, drainage improvements, an emergency response. An assessment is then made of the risk to highway safety and the risk of internal property flooding and where the risk is moderate to high, the prescribed action is taken.
- 1.4. The regime outlined above is intended to ensure that finite resource is targeted where the need is greatest both from an asset management and a customer perspective. Nevertheless, maintenance has its limitations; whilst it ensures that the available capacity is maximised, it does not enhance capacity to the extent that the drainage system will accommodate the kind of prolonged or intense downpours seen on the 29th May.

2. Report

- 2.1. Over the course of the 29th May 2018, parts of Kent experienced a month's rainfall in a matter of hours. Swale experienced some of the biggest impacts with over 90mm falling in places. The volume and intensity of rainfall far exceeded the capacity of both the highway drainage system and surrounding land drainage ditches. Large volumes of water poured off the land, exacerbating the situation on the road network and flooding occurred at numerous locations normally unaffected by heavy rain.

¹ Main roads are defined as all major strategic, other strategic and locally important routes.

- 2.2. The County Council received over 500 drainage enquiries including many reports of property flooding and impassable roads. Of these enquiries, 79 routine enquiries and 56 emergency enquiries related to locations in the district of Swale.
- 2.3. Highway drainage cleansing and emergency responses to flooding are ordinarily prioritised based on the risk to highway safety and the risk of internal property flooding. Where appropriate, minor roads are closed, or warning signs are displayed to enable the deployment of tankers and cleansing vehicles to main road and homes affected by flooding.
- 2.4. Unfortunately, on the 29th May the number and severity of flooding reports meant that, despite having additional resources in place, further prioritisation was required. It became necessary to focus the available resources on the main road network and on impassable roads where the risk to safety could not be mitigated by a road closure. This is not a decision that was taken lightly and one that was only actioned once all other options had been exhausted.
- 2.5. A recovery operation has been ongoing since the 29th May. Due to the County Council's statutory obligation to maintain highway safety it has been necessary to prioritise issues of highway safety in the first instance with an initial focus on the main road network. This recovery operation, which includes inspections, maintenance and further investigations, is expected to be ongoing over the summer period and into the early autumn.
- 2.6. Since the 29th May, the County Council have received a further 270 drainage and flooding enquiries regarding locations in Swale. 90 sites are currently programmed for inspection and assessment, 203 drainage cleansing jobs have been completed with a further 62 programmed for completion in the coming months. 40 sites are currently under investigation by the area drainage engineer.
- 2.7. In preparation for the winter, additional drainage cleansing will be carried out at number of flood prone drainage hotspots throughout October and November. These sites are identified and prioritised based on reports of safety critical flooding and include 28 locations in Swale; these locations are listed at Appendix A.
- 2.8. Finally, scheduled annual maintenance of roadside drains on main roads will be ongoing from late November.
- 2.9. As the frequency of prolonged and intense downpours appears to increase, investment in our highway drainage system becomes more and more vital. Much of the County's drainage infrastructure was installed when the roads were constructed. Over the years, settlement of the soil, ingress of tree roots and road works by third parties has caused damage limiting or obstructing the flow of water. Development and changes in land use have resulted in increased volumes of surface water being discharged into the drainage system and in many places the sewers are now running at capacity.
- 2.10. Investment in drainage renewals and enhancements is prioritised based on the frequency of flooding during normal to heavy rainfall, the risk to highway safety and the risk of flooding to inhabited buildings. In 2018/19 the County Council will invest around £3m delivering a range of routine renewals and large-scale improvements to the highway drainage system across Kent. Details of the 2018/19 schemes scheduled for completion in Swale are listed at Appendix B.

3. Legal Implications

- 3.1. Not applicable.

4. Financial and Value for Money Considerations

4.1. Not applicable.

5. Risk Assessment

5.1. Not applicable

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