

Report to: Economy, Transport and Environment (ETE) Scrutiny Committee
Date: 14 June 2017
By: Director of Communities, Economy and Transport
Title: Highways Drainage Maintenance Service Update
Purpose: To update the ETE Scrutiny Committee on the progress of the highway drainage maintenance service following the recent review of the service by Scrutiny Committee in 2016.

RECOMMENDATION: The ETE Scrutiny Committee is asked to note the progress that has taken place against the recommendations to improve the service and plans to further improve the drainage network using the recently allocated additional capital funding

1. Financial Information

1.1 Highway maintenance is funded through both annual capital and revenue allocations. The net revenue budget for highway maintenance is £11.2m per annum of which approximately £500k is allocated to drainage for the routine gully cleansing and ditch maintenance service with up to a further £500k of revenue spent in year to deal with reactive drainage problems.

1.2 The annual capital budget for highway maintenance for the 2017/18 financial year is circa £20m with around £1m for drainage repairs and improvements identified from investigations. In February 2017 Full Council set out a further £1m of drainage capital expenditure for 2017/18 and £1m each year for 2018/19, 2019/20 and 2020/21.

2. Background

2.1 In May 2016 Cabinet considered a report by the scrutiny review board of the Economy, Transport and Environment (ETE) Scrutiny Committee on highway drainage (Appendix 1) and approved the response and action plan set out by the Director of Communities, Economy and Transport (Appendix 2). In summarising the report it is clearly recognised that significant investment has been undertaken in the road network over the last 5 years and it is important to protect both past and future investment with appropriate levels of investment in the highway drainage asset that underpins the functioning of the road network.

2.2 It was also recognised that the drainage network across East Sussex has suffered from under investment over many years and as a result the County Council has a dated network that was likely to cost more to maintain year on year. A well managed drainage network is critical to ensuring the controlled removal of water from the carriageway to allow customers to use it safely, to protect property and to help maintain the structural integrity of our roads to prolong their life. The impact that the failure of the drainage asset can have on other highway assets, wider transport infrastructure and private property can be significant.

2.3 The challenge in managing drainage and local flood risk is our ability to understand the nature of the problem and in turn identifying an appropriate solution. In many cases we have very little information about the location and condition of highway drainage assets which presents real challenges in making the case for investment and in targeting current funding. In East Sussex the drainage assets include approximately 98,000 gullies, 500km of rural highway ditches and grips, several hundred kilometres pipes, hundreds of soakaways, headwalls, outfalls and numerous private networks that are important features of an integrated and properly functioning drainage network.

2.4 This paper provides an update on progress on the action plan approved by Cabinet and sets out the Department's approach to improving the drainage network with existing and the additional capital investment.

3. Supporting Information

3.1 The historical approach to maintaining highway drainage assets has largely been reactive in nature with a gradual deterioration in condition and a loss of knowledge and accurate record keeping. Much of the attention and investment has been focussed on the carriageway, but now this has been improved, attention switched to developing a Highways drainage strategy. This strategy aims to drive a

more focused and asset management based approach to highway drainage with the following three key objectives:

- Define the highway drainage assets and improve our understanding
- Deliver an efficient and effective highway drainage service
- Work in collaboration with people and partnerships

3.2 Since the implementation of the new highways maintenance contract in May 2016 a number of projects have commenced focusing on providing a better understanding our drainage systems and how we can effectively improve our drainage network to achieve the three key objectives above. These are summarised below and described further in the report:

- Details of our highway gullies have been included in the contractors inspection and works management system to enable defects and actions to be recorded directly against the individual asset to improve type, condition and maintenance information.
- A drainage 'hotspots' project analysing historic data, customer reports and using local knowledge to identify drainage and flooding hotspots of consistent or recurring issues across the county. This identified over 270 drainage hotspots for action.
- Work has continued on validating existing drainage records including paper based records to improve our drainage asset knowledge to inform new and improve on existing maintenance regimes.
- The processes for investigation and determination of drainage issues has been reviewed to automate and escalate issues more effectively and ensure information is recorded effectively.

4. Improving the effectiveness of the drainage network

4.1 Our approach to implementing the drainage strategy is set out below and reflects the three key elements of the strategy by; identifying, prioritising and tackling drainage issues; improving our drainage asset knowledge through investigation and encapsulation of historic records and knowledge to deliver a more effective drainage service; and working with partners and local communities to understand and proactively manage drainage together.

5. Tackling Drainage Issues

5.1 A routine gully cleansing programme is undertaken on a targeted basis to ensure the gully network is operational and working effectively. As part of this process defects with the network are identified. These include jammed gully grates or broken gratings and pots. Many of these are dealt with 'automatically' as part of the contractors core drainage and defects services. However, blockages in the connecting pipework are also identified where the cause of the blockage is unknown. These need to be attended by specialist crews with high power jetting and CCVT camera equipment to investigate causes.

5.2 The cause of the blockage and the time taken to investigate an individual blockage can vary considerably. Some are able to be unblocked and made to be working there and then, and others require further works to replace broken pipes, remove tree roots, repair damaged connections and also repair outfalls and headwalls that link to public or private ditch networks. Where a blocked pipe is causing flooding these blockages are given a higher priority. Other pipes need to be replaced where they are simply no longer capable of dealing with the volume of water.

5.3 As a result of a two year targeted gully cleansing programme undertaken during 2015/16 and 2016/17 over 2700 blockages have been identified representing 2.8% of the total gully network. Whilst a proportion of these have been investigated and repaired in the year, investigations have created approximately £500k worth of drainage improvements to be carried out during 2017/18. Additional improvements will be identified during the year. These blockages continue to be prioritised for investigation during 2017/18 and 2018/19 and each investigation will be fully documented to collect details of the cause, condition and to 'map' the drainage network for future maintenance.

5.4 In addition, in 2016 work was undertaken that identified over 270 flooding 'hotspots' across the county by collating information from members of the public, parish and town councils, and problems identified by the Highway Stewards and information from the Councils flood management and the contractors drainage maintenance teams.

5.5 In some cases the cause of the flooding is known but in others further investigation is required. These hotspots have been prioritised for further investigation during 2017/18 and 2018/19 with initial

investigation focussed on determining the cause of the problem and then to devise and deliver a permanent solution to ensure these flooding issues are dealt with once and for all. However, by their very nature the causes of many of the flooding problems are unknown and therefore the number of hotspot issues that can be tackled each year will depend on the outcomes of the investigations and the work required against the available annual budget.

6. Fence to fence design

6.1 In undertaking the design and delivery of all capital footway and carriageway works, consideration and investigation is also given to the drainage network to ensure any drainage issues are identified and appropriately resolved as part of a fence to fence design and delivery approach.

6.2 In addition, known gully blockages and flooding hotspot sites will be prioritised where works on the carriageway and footways are planned to ensure these issues are dealt with before the footway or carriageway works are undertaken. This fence to fence approach will generate drainage works for this years and future years programmes.

6.3 This will not only include improving the gully, pipe and ditch network but may also include adjusting kerbing and in rural locations this may mean installing new kerbing to ensure surface water is efficiently channelled away from the road as effectively as possible. Where kerbing is not appropriate it may also include reconstructing verges and associated edge of carriageway haunches to help channel water away from the road surface, prevent verge softening and the undermining of the carriageway.

7. Improving the ditch and grip network

7.1 In addition to the regular gully cleansing service, and as part of the new contractual requirements, a routine ditch and grip maintenance programme was introduced in 2016/17. This targets one quarter of the ditch network each year for cleaning out and grip cutting. However, difficulties were encountered due to the poor condition of much of the ditch network with many rural ditches requiring complete reconstruction. Difficulties were also encountered with the inconsistent nature of the information held about our ditch network and overgrown private hedges.

7.2 Ditches and grips are an important part of the drainage system in rural locations where road infrastructure is not usually a modern construction, and as such its resilience to water and weather is far more limited. Therefore, a maintenance programme is being developed to reform the 'missing' ditch and grip network and at the same time to record the asset for future maintenance. To undertake this work a full survey of the network is underway to determine ditch condition and develop a prioritised programme of ditch reconstruction works and routine maintenance 'clean out' works for 2017/18. Again dependent on condition, the completion of the total network will be dependent on the works required and the annual budget but this will generate works for this years and future year's programmes. These works will be co-ordinated with the carriageway programme to prioritise ditching works.

8. Improving our knowledge

8.1 In addition to information about our drainage network collected through the works outlined above, historical paper based records are currently being digitised for inclusion in our asset management system to enable information to be shared and to help develop and maintain current and future maintenance regimes. Where gaps are identified in the network information further site surveys will be undertaken to ensure as full a record as possible can be created.

8.2 Formal consultations are also being undertaken with parish and town councils to further develop our knowledge of local and historic issues. This will help to develop relationships with local communities and particularly land owners to support future maintenance regimes whether that maintenance is undertaken by the Council, communities or landowners.

8.3 An East Sussex Flood Officers group has been established to co-ordinate and overview flood and drainage management in East Sussex.

8.4 At the same time we continue to work with our colleagues in Development Control and with district and borough councils, the Environment Agency and the flood management team to ensure resilience is built into the network in the future. This ensures new drainage networks and connections to the existing network are fit for purpose and do not impact on the performance of the existing network.

9. Comments/Appraisal

9.1 There has been significant progress to understand the network and the issues with it, but there are still many unknowns. Identifying the causes and resolving the issues presents significant challenges. Drainage problems can be complex to resolve particularly as much of the network is hidden. As a result, the cost of fixing issues and making improvements is more difficult to predict.

9.2 However, in 2017/18 East Sussex is targeting £2m of capital expenditure and around £1m (£500k on routine gully service plus £500k for reactive service) of revenue expenditure on the highways drainage network. The approach set out in this report provides the best opportunity to improve the maintenance regimes and to begin to improve the performance of the network. The next four years of additional investment therefore should provide demonstrable improvement whilst at the same time reducing the rate of decline in our carriageway and footway assets, reducing the level of incidents of highway flooding and reducing the level of flood claims.

RUPERT CLUBB

Director of Communities, Economy and Transport

Contact Officer: Dale Poore

Tel: 01273 481916

Email: dale.poore@eastsussex.gov.uk

LOCAL MEMBERS

All

BACKGROUND DOCUMENTS

Scrutiny review of highway drainage in East Sussex