

Report to: Economy, Transport and Environment (ETE) Scrutiny Committee

Date of meeting: 22 November 2017

By: Director of Communities, Economy and Transport

Title: Highway Drainage

Purpose: To provide Scrutiny Committee with an update on the action plan approved by Cabinet and the progress made since the last Highways Drainage Service update in June 2017

RECOMMENDATIONS

1) To note the progress made on the action plan agreed by Cabinet and since the last Highways Drainage Service update in June 2017.

1. Financial Information

1.1 The net revenue budget for highway maintenance is approximately £11m per annum of which £500k is allocated for the routine gully cleansing and ditch maintenance service, and up to a further £500k spent in-year to deal with reactive drainage problems.

1.2 The annual capital budget for drainage repairs and improvements identified from investigations is approximately £1m. In February 2017 the County Council approved an additional £1m of capital expenditure for drainage in 2017/18 and £1m in each year for 2018/19, 2019/20 and 2020/21.

1.3 In 2017/18 a total approaching £3m of revenue and capital expenditure is being targeted on drainage maintenance and improvements.

2. Background and Supporting Information

2.1 The report provided to Scrutiny Committee in June 2017 (Appendix 1) set out the proposed approach for the continued management and improvement of the highway drainage network. This report provides an update against the approach set out in that report and provides commentary on some of the issues encountered to date.

3. Improving the Effectiveness of the Drainage Network

3.1 The three key elements of the strategy set out to Scrutiny were: identifying, prioritising and tackling drainage issues; improving our drainage asset knowledge through investigation and encapsulation of historic records and knowledge; and working with partners and local communities to understand and proactively manage drainage together.

3.2 Progress on the delivery of this strategy is summarised against the four key approaches outlined: tackling drainage issues; fence to fence design; improving our ditch and grip network; and improving our knowledge.

4. Tackling Drainage Issues

There are two approaches to tackling current drainage issues, dealing with a backlog of blocked gully outlets and investigation and resolution of identified flooding hotspots.

4.1 Blocked Gully Outlets

In undertaking the two year targeted routine gully cleansing programme, between 2015/16 and 2016/17 some 2,700 blocked outlet defects were identified. These require investigation with a high pressure water jetting machine to clear the blockage, if possible, but also using CCTV cameras to check the condition of the pipework. To date, 949 blocked outlet defects have been investigated with the following results:

- 733 sites cleared and running requiring no further action
- 137 sites requiring no immediate action but to be monitored
- 22 sites requiring works of high priority
- 57 sites requiring works of medium priority

The remaining 1,700 blocked outlet defect investigations will be complete by the end of March 2018.

4.2 Flooding Hotspots

The flooding 'hotspots' project initially identified 270 flooding hotspots from historic data, customer reports and local knowledge. These sites were identified from various information and data sources and further work has been undertaken to validate the multitude of reports. This has reduced the number of actual hotspot sites requiring investigation to 157. Of these 57 were investigated in the first year of the contract and from these:

- 19 required works that have been completed or are in progress
- 19 were cleared during investigations with no further works required
- 9 have not been totally concluded and require further investigation and will be progressed for works if required
- 3 Hotspots were identified as ditches that were not on the four year cyclical programme for routine ditch clearing and have therefore been added to the ongoing ditching reform programme and with regular inspections and maintenance thereafter
- 7 Hotspots have been identified as requiring ongoing regular inspections and clearing either leading up to or after certain weather events. They do not require any immediate change to the infrastructure. Examples of these are:
 - Barcombe Mills Road after tidal flooding during high rainfall periods
 - Old Lydd Road Camber which requires clearing after adverse weather due to sand washing out and clogging gullies

The remaining 100 hotspot locations are currently being investigated and of these:

- 4 investigations have been completed and works instructed, 2 examples of these are:
 - Hurtiss Hill - Root Cutting, excavation and line replacement plus ditch clearing
 - Beacon Road – Root cutting, excavation and lining, further cleaning survey once downstream damage repaired
- 31 investigations have been completed and are being reviewed for works
- 12 investigations are ongoing
- 53 investigations are outstanding

Typical improvement works resulting from both the hotspot and the blocked outlet investigations include: replacing broken pipes, removal of tree roots and other debris, repair of damaged connections and repair of outfalls and headwalls that link to public or private ditch networks. Some examples of sites where the above works have been required are:

- Netherfield Hill - The carrier drain between two gullies was found to be free flowing however infested with roots. The work was to root cut the carrier drain for a distance of 71 linear metres then reline the carrier drain a distance of 36 linear metres to prevent continued root infestation via pipe joints.
- Friars Hill, Guestling – Works were completed to uncover a buried out fall pipe in private woodland. This was done by hand as there was no access for machinery, plus high pressure water jet clearing and CCTV to 15 linear metres to ascertain condition, repairs completed and a small brick headwall and concrete splash tray were built.

These details have also now 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.

5. Fence to Fence Design

5.1 When investigating and undertaking carriageway design works, including drainage and kerbing improvements, all aspects of the highway are considered. Carriageway repairs and improvement schemes now routinely include packages of drainage improvement works including kerbing, ditch/grip and gully works.

Two examples of such schemes are:

- Nettlesworth Lane - Surfacing scheme of length 3,379m including adjustment of ironwork in the carriageway, reforming of 500m of ditching and grips, cleaning of gullies, 700l/m of kerb replacement and cutting of 236m of hedges.
- Stubb Lane - Surfacing scheme of length 2,352m including reforming of 350m of ditching and grips, cleaning of gullies, 74m of kerbing to be raised and 30m of hedge cutting.

6. Improving the ditch and grip network

6.1 The County is split into four zones for ditch improvement and maintenance. The following progress has been made:

In Zone 1

- 45,810linm of the 87,647linm of identified ditch network requiring reconstruction has been completed equating to 52% of the total. The remainder will be completed by the end of November 2017.
- The maintenance clearing of debris and re-cutting of grips of Zone 1 has also been completed.

In Zone 2

- Approximately 83% of the ditch network in Zone 2 requires the reconstruction and currently 17% can be maintained by clearing of debris and re-cutting of grips.
- Reconstruction work will commence in December following on from the work in Zone 1 and is targeted to be completed by end March 2018.
- The annual maintenance work of clearing of debris and re-cutting of grips in Zone 2 will commence mid-November and will be completed in January 2018.

In Zone 3

- Approximately 72% of the ditch network in Zone 3 requires the reconstruction of the ditch and 28% can be maintained by clearing of debris and re-cutting of grips.
- The maintenance clearing of debris and re-cutting of grips in Zone 3 will commence mid-November and will be completed in January 2018.
- Reconstruction of the ditch network will be completed in Service year 2018-19.

In Zone 4

- Approximately 74% of the ditch network in Zone 4 requires the reconstruction of the ditch and 26% can be maintained by clearing of debris and re-cutting of grips.
- The maintenance clearing of debris and re-cutting of grips in Zone 4 will commence service year 2018-19 and will be delivered along with the maintenance of the newly reconstructed ditches of Zone 1.
- Reconstruction of the ditch network will be completed in Service year 2018/19.

All the newly reformed ditches have been added to the routine ditch maintenance programme and will be continued to be maintained as part of the annual core service works.

7. Improving our knowledge

7.1 As part of the ongoing investigation and improvement works, knowledge of the drainage system has continued to be captured for future maintenance including:

- Historic paper based maps scanned and information being loaded onto GIS mapping (see Appendix 2 for an example)
- Enhancement and revision the cyclical maintenance programme
- Using knowledge from investigations to add new asset information
- Using knowledge gained from investigations to update existing asset records
- Validation of the information with local parishes and land owners

7.2 However, in undertaking this work, it has also highlighted other problems when trying to resolve drainage issues that it is important to recognise. Examples include third party equipment or works causing issues to the highway drainage network and connections to third party drainage systems of unknown ownership.

7.3 An example of this is St Michaels Terrace, Lewes, illustrated in Appendix 3, where the infrastructure is, at times, not fit for purpose and inadequate records mean resolving the issue is not straight forward. In this case ownership needs to be determined because the potential cost of solving the problem permanently is significant and the work would be very disruptive.

7.4 Other typical issues encountered that illustrate the difficulties of easily resolving drainage issues include:

- highway systems in towns that feed directly into water company owned sewer/drainage systems that are essentially at capacity e.g. Gilbert Road, Eastbourne and Steyne Road, Seaford
- inability to determine ownership of parts of the drainage network that our systems feed into
- assets listed as highways but upon investigation are in fact utility company or third party owned.

8. Summary and Conclusions

8.1 Good progress is being made to improve highway drainage across all the approaches that were set out in the report to Scrutiny Committee in June 2017.

8.2 Improvement works to date have largely focused on the more urgent priority issues. However, other drainage issues are now being progressed to the works stage following completion of investigations, and this will increase the total amount of drainage improvement works delivered during the first year of additional capital funding.

RUPERT CLUBB

Director of Communities, Economy and Transport

Contact Officer: Dale Poore

Tel. No. 01273 481 916

Email: dale.poore@eastsussex.gov.uk

LOCAL MEMBERS

All

BACKGROUND DOCUMENTS

None