

Report to: Place Scrutiny Committee

Date of meeting: 18 September 2019

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 2017.

RECOMMENDATION

To note the good progress made on the action plan agreed by Cabinet; progress since the last Highways Drainage Service update as part of Scrutiny Review of Road Repairs; and the recommendations from the Report of the review board in March 2019.

1. Financial Information

1.1 The net revenue budget for highway maintenance is approximately £9.4million per annum of which £500,000 is allocated for the routine gully cleansing and ditch maintenance service, with up to a further £500,000 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 £1.2million. In February 2017 the County Council approved an additional £1million of capital expenditure for drainage in 2017/18 and £1million in each year for 2018/19, 2019/20 and 2020/21.

1.3 In 2019/20 a total of £3.2million of revenue and capital expenditure is being targeted on drainage maintenance and improvements.

2. Background and Supporting Information

2.1 The reports provided to Scrutiny Committee in June 2017, November 2017 and the Report of the review board in March 2019 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 those reports and provides commentary on some of the findings encountered to date.

3. Improving the Effectiveness of the Drainage Network

3.1 The key elements of the strategy set out to Scrutiny Committee were: identifying, prioritising and resolving 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 previously outlined:

- resolving drainage issues;
- fence to fence design when undertaking maintenance works;
- improving our ditch and grip network;
- improving our knowledge of our drainage assets.

4. Resolving Drainage Issues

4.1 There are two main issues to address: a backlog of blocked gully outlets and; the investigation and resolution of identified flooding hotspots.

Blocked Gully Outlets

4.2 To improve our ability to react and resolve drainage issues more quickly from the initial point of identification, new resources have been introduced to minimise the number of repeat visits with the use of more powerful jetting units capable of clearing larger pipes over longer distances. Wherever possible these machines attend site first and since March 2019, 1400 blocked gully outlets have been visited with 951 (68%) working satisfactorily after a single visit.

4.3 Blocked outlets that are not resolved the first time are usually for one of reasons set out in Appendix 1. These feed into one of seven work streams for rectification and each is then prioritised by risk with the contractor then undertaking programmed repairs in work batches to provide best value for money.

Flooding Hotspots

4.4 As reported previously in June 2017, 157 'hotspot' sites required investigation. The following progress has been made:

- 121 locations have been investigated and resolved but are being monitored and will be reviewed to ensure they are no longer a flood risk.
- 3 have been investigated and are awaiting approval and progression (suitability of solution and cost);
- 26 locations have works underway or due to start imminently;
- 2 locations where extensive work has been completed;
- 5 still require investigation and are planned;

Ninety-seven percent of the originally identified hotspots will be resolved this year.

4.5 Typical issues identified and the improvement works undertaken from the 'hotspots' and the 'blocked outlet' investigations are:

- replacing broken / undersized pipes;
- removal of tree roots and other debris and pipe lining;
- repair of damaged connections; and
- the repair of outfalls and headwalls that link to other public or private networks.

5. Fence to Fence Design

5.1 Historically drainage works have tended to be reactive standalone works identified through:

- Safety Inspections;
- Stakeholders experiencing drainage issues;
- Historic flooding issues unresolved; and
- Identified need when planning carriageway works.

5.2 Drainage is now a key consideration when planning any carriageway and footway works and this has, as a minimum, ensured that the system is checked to see if it is working correctly prior to road maintenance works taking place. In many cases this has resulted in

improvements to the drainage network even where no separate specific drainage issue has previously been identified.

6. Improving the ditch and grip network

6.1 Since commencement of the current highway maintenance contract a programme of ditch maintenance to clear out and re-dig ditches has been undertaken. This covers a quarter of the ditch network each year. In addition a ditch reformation programme has been undertaken to reinstate the historic ditch network lost through inadequate maintenance. There are a small number of ditches around the county still awaiting completion where there is a need to undertake more extensive or environmentally sensitive works such as tree removal or overgrown 3rd party hedges.

6.2 To date 80,036 linear metres of ditches (55 miles) have been maintained and 296,815 linear metres (184 miles) have been reformed.

6.3 In addition, a works programme of regular grip maintenance has started this year to ensure that water can get from the highway to the ditch because, whilst ditches can continue to work without maintenance for years, grips block more regularly and stop being effective quite quickly. At present 750 grips have been reformed/reinstated this year and the current programme is scheduled to be completed by September 2019.

7. Improving our knowledge

7.1 The knowledge base of the highway drainage system has historically been built up from the work of the historic lengthsman, when stewards had personal responsibility for a length of road and paper based records were maintained. All of these records have now been updated onto a single electronic Geographical Information System (GIS).

7.2 Drainage records and knowledge are also being built up from the surveys undertaken each year to resolve drainage issues and those results are plotted onto the GIS system. Whilst our knowledge has improved we do not have a complete record of all our drainage network.

7.3 From the further information responses for the Roads Review Board held in January 2019, the Board asked *“for an estimate of how long the Team thought it would take, based on the current rate of progress, to have a more complete picture of the highway drainage network”*.

7.4 The approach we are currently taking to understand our drainage assets follows the best practice approach set out in the Highways Maintenance Efficiency Programme (HMEP) Guidance on the Management of Highway Drainage Assets. Starting with Hot Spots and known flooding areas we have investigated most of our identified hot spots which has improved our inventory and condition knowledge in the highest risk locations.

7.5 It is therefore genuinely difficult to say how long it would take at the current rate of progress to have a complete picture of the asset as we don't know what we don't know. However, it is estimated if we applied dedicated resources to survey and plot the drainage asset it could take up to 15 years to complete and cost several million pounds.

Working with our neighbours and developing Works Programmes

7.6 The Asset Management Team is engaging with all of the Councils in East Sussex to better understand their maintenance schedules for road cleaning, litter picking etc. so that the routine drainage maintenance works in future may be undertaken in partnership where possible. In investigating drainage issues, the team engage with local residents and councils

to try to understand the history of the area and the drainage issues experienced. At times this can be a very rich seam of knowledge.

7.7 In addition there is now a recognised method and strategy to produce forward work programmes using a similar logic to that for carriageway works. There is now a recognised flow of work (see Appendix 2) from an initial issue from a member of the public to the formation of a 'major' scheme. This clarity of process has provided more effective and timely resolution of problems.

7.8 However, in undertaking a programme of drainage investigations and repairs over the last few years there are a number of issues that have impacted on the solutions that can be applied and the time it takes to complete repairs, these include:

- Systems or parts of systems have been found to have been 'lost' under development or through third party actions.
- Utility apparatus has been found to have damaged or interrupted the functioning of the system and it requires considerable re-working or redesign to get the system functioning properly again.
- Where systems need enhancing because they are deemed to be under capacity and there is physically 'no space' to enable this to happen easily.
- Modern environmental constraints on wildlife protection and working mean that some repairs can only be undertaken following completion of environmental mitigation measures and at certain times of year.

All of these can add to the cost and/or time to undertake repairs.

8. Summary and Conclusions

8.1 The additional investment in drainage has enabled a marked increase in understanding and appreciation of the Council's drainage asset and the associated issues with it. In undertaking the approach we have over the last few years, there has been a substantial improvement in our knowledge and records; improvements in the techniques to investigate and resolve drainage problems; improved effectiveness of the network through reformation of the historic ditch and grip network; and the resolution of historic 'hot spots'. This combined with the introduction of enhanced maintenance regimes has led to a big improvement in the way the system works.

8.2 However, the drainage network is a dynamic asset and new issues and blockages continue to be identified and will probably continue to do so as our climate and weather patterns evolve into new regimes.

8.3 The Scrutiny Committee is asked to note the good progress made against the Strategy and approach undertaken to date to improve highway drainage network set out in this report, and previously reported to Scrutiny Committee in June and November 2017.

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LOCAL MEMBERS

All

BACKGROUND DOCUMENTS

Highways Drainage Maintenance Service Update June 2017 Scrutiny report

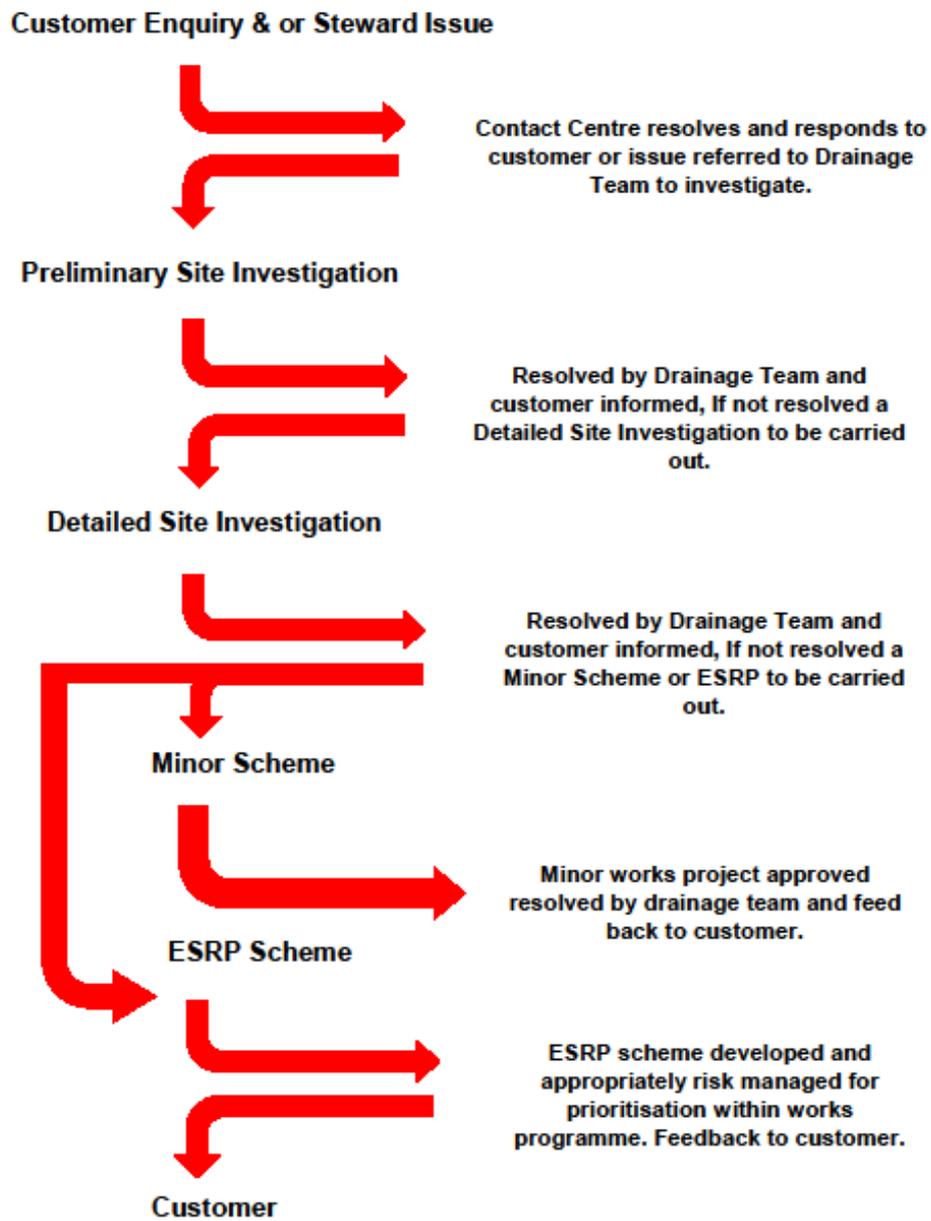
Highways Drainage Update November 2017 Scrutiny report

Scrutiny Review of Road Repairs March 2019 Scrutiny report

Blocked Outlets Table

Findings from Defect visit	Work Stream
Defect Resolved	No further action
Broken Pipe Broken Pot Iron works No Outlet Outfall Blocked Pot Defect Swan Neck Blocked Unable to Locate Pipe Collapse	Excavation Gang
Concrete Cutting Displaced Joints Root Cutting	Cutting & Lining
Ditching	Ditching / Land ownership
Further Works Mainline Issue Soakaway	Blocked Outlet lorry
Jammed Lid	Jammed Grids
Utility Strike	Network/Enforcement
To Be Reviewed	Review and Make Recommendations

Drainage Process Flow Chart



ESRP – Employers Service Requirements Plan