



Scrutiny Review of Pothole Management

Report by the Review Board:

Councillor Matthew Beaver
Councillor Julia Hilton
Councillor Ian Hollidge (Chair)
Councillor Eleanor Kirby-Green
Councillor Philip Lunn

November 2023

Place Scrutiny Committee - 23 November 2023

Cabinet - 23 January 2024

Full Council - 6 February 2024

The report of the Scrutiny Review of Pothole Management

Contents.

Recommendations	3
Introduction	5
Background	7
Review Board Findings	8
Factors Leading to Potholes Forming and Poor Road Condition	8
Water and Drainage	8
Utility Company Excavations	9
‘Sink Holes’ and Voids under the Road Surface	10
Highway Maintenance Policies and Procedures	11
Pothole Intervention Criteria	11
Highway Steward Risk Assessments	12
Defect Reporting	13
Asset Management Approach and Performance Targets	14
Asset Management Approach	14
Road Condition Performance Targets	15
Pothole Repair Methods	16
Quality Assurance and Monitoring	17
Clusters of Potholes and the use of ‘advisories’ and ‘observations’	18
Repair Gang Flexibility	19
Finance and Investment	20
Revenue and Capital Budgets	20
Budget Allocation and Investment Modelling	22
Budget Allocation	22
Investment modelling	23
Communication with stakeholders	24
Footway Maintenance	25
Conclusions	25
Appendix:	26
Scope and terms of reference of the review	26
Board Membership and project support	26
Review Board meeting dates	26
Witnesses providing evidence	27
Evidence papers	28

Recommendations

	Recommendation	Page
1	<p>The Board recommends that officers develop a strategy for highway drainage, in order to target highways drainage investment requirements more accurately and to help prevent water damage to road surfaces.</p>	9
2	<p>The Board recommends the Council lobbies Government to make changes to the way utility companies operate and are regulated under the New Roads and Street Works Act and in particular to:</p> <ul style="list-style-type: none"> • Lower the time allowed for permanent reinstatements from 6 months to 3 months; • Extend the reinstatement works guarantee period from 2 years to 5 years; • Raise the level of financial penalties for failing to comply with the requirements of the Act; • Introduce timescales for utility companies to repair defective apparatus once it has been reported to them, with penalties for non-compliance; and • Increase the number of utility company inspections that can be recharged from 30%. 	11
3	<p>The Board recommends officers explore the feasibility of increasing the amount and type of inspections of utility company reinstatement work to drive up quality and lobby Government for funding to do so.</p>	11
4	<p>The Board recommends that Guide to Highways is amended to include a reference to the current practice of risk assessing reported road defects which ensures the risks posed to different types of road user are appropriately met through repairs.</p>	13
5	<p>The Board supports the Cabinet report recommendation that a greater proportion of capital funding is allocated from the highways structural maintenance budget to patching and surface dressing in future years, and reviews are undertaken on a periodic basis.</p>	15
6	<p>The Board recommends that it is made clear in reporting information that the road condition performance targets refer to the percentage of road length, and that all roads are likely to have a mixture of green, amber and red condition sections of road.</p>	16

7	The Review Board recommends that annual performance monitoring reports are presented to the Place Scrutiny Committee to maximise transparency and scrutiny of pothole repairs, contract key performance indicators (KPIs), and planned highway maintenance work, with the first report scheduled for July 2024.	17
8	The Board recommends that officers continue to allocate specific, defined levels of investment within the existing highways infrastructure maintenance capital budget, to tackle clusters of potholes and address public concerns about this issue, for example by undertaking patching repairs and surface dressing.	19
9	The Board recommends that the Guide to Highways on the East Sussex Highways web site is amended to reflect that repairs gangs, BBLP and the Council exercise a degree of flexibility in their approach to repairing safety intervention level defects and will repair other safety intervention level defects they find whilst on site.	19
10	The Board recommends that the Council continues to lobby Government for better long-term funding arrangements for pothole repairs, and highways maintenance, so that it can plan effectively, does not have to expend resources bidding for funding and can address local road conditions.	22
11	The Board recommends that if funding pressures ease or additional funding becomes available, the Council considers making additional investment in highway drainage.	23
12	The Board recommends that the Department continues to maintain an active approach to modelling highway investment levels needed to achieve the Council's road condition targets and feed the outcomes into the Reconciling Policy, Performance Resources (RPPR) budget setting process.	24
13	The Board recommends that officers review the visibility and usability of website information on planned maintenance work on potholes to make it easier to find and use online, including via the East Sussex County Council website and the upcoming app, and in particular information for patching, resurfacing and revenue funded advisories.	25

Introduction

1. The Place Scrutiny Committee and its predecessor the Economy, Transport and Environment Scrutiny Committee have previously carried out scrutiny reviews on Road Repairs and Highway Drainage. However, residents and businesses continue to be concerned about the number of defects and potholes in the county's roads and the impact on them as they travel around the County. Potholes are the number one issue residents contact their local councillor about, and there are concerns about damage to vehicles and road safety, as drivers try to avoid driving over damaged road surfacing.
2. In particular, the repair of clusters of potholes in the same section of road is of concern to people, especially when only the potholes that meet the Council's intervention criteria are repaired and other potholes or defects developing nearby appear not to be tackled. Although repeated visits to the same location do not cost the Council any more money under the lump sum pricing arrangements of the highway maintenance contract, residents see this as inefficient and do not consider this approach represents the best value for money.
3. Councillors have also highlighted their view that the Council's current intervention policies and defect reporting system might not sufficiently take into account other vulnerable road users such as those who walk, wheel, cycle or motorcycle, who may be at risk from defects that would not meet the current intervention criteria.
4. During 2022 the Place Scrutiny Committee discussed these issues and agreed to establish a Scoping Board to examine this subject in more detail. The Scoping Board met on 6 February 2023 and recommended that the Committee proceed with a scrutiny review focussed on pothole repairs, as this was considered to be the most important issue for residents. The Place Scrutiny Committee agreed to proceed with a Scrutiny Review of Pothole Management at the meeting held on 28 March 2023.
5. The scope of the review included:
 - Pothole repair techniques and costs;
 - Quality of pothole repair works;
 - Alternative pothole intervention levels and costs;
 - Consideration of current policies to take into account vulnerable road users (e.g. those who walk, wheel, cycle, and motorcycle etc.)
 - Consideration of budgets for pothole repairs and safety defects; and
 - Consideration of the effectiveness of the Council's patching programme.
6. There are a number of factors that cause road surfaces to deteriorate and defects such as potholes to develop. The factors affecting road condition are:
 - Weather conditions - sunlight, rainwater and freezing which cause the surfacing to degrade;
 - Wear and tear caused by traffic, which increases with traffic volumes and vehicle weight;
 - Utility company excavations; and

- The construction of the road - historically many roads in East Sussex, particularly in rural areas, have not been constructed with a sub-base that would meet modern standards.
7. This review has sought to focus on the factors that the Council can influence, and improvements in our own internal policies and procedures for pothole management, in order to make a difference to the number of potholes and road condition. It has sought to identify areas for improvement that are affordable, cost effective, and represent value for money, bearing in mind the financial constraints and cost pressures the Council faces. Based on the evidence examined, the Review Board has made a number of recommendations for improvements which are explained in more detail in this report.
 8. During the course of the review the Cabinet and Council agreed additional capital investment in highways maintenance for 2023/24, in order to help tackle the problem of potholes and deteriorating road condition. As the review progressed it became evident that the situation is changing and that the Council, together with its highway maintenance contractor, are taking action to address the issue of potholes through a proactive, 'right first time' approach within the financial constraints that exist for the Council.

Background

9. The Highways Act requires the Council to keep roads in a safe and usable condition. The Council does this through two types of maintenance programme:
 - Reactive maintenance, where reported safety defects such as potholes are repaired in line with the Council's maintenance policies to keep roads safe to use. This is funded from the Council's revenue budget and includes the work to repair potholes that meet the Council's policies contained in the [East Sussex Highways Inspection Manual](#).
 - Planned maintenance, funded from the capital programme, where a programme of planned works such as patching, surface dressing, resurfacing and road reconstruction is undertaken to maintain road condition against the Council's performance targets (see paragraph 41 below).
10. The Council uses intervention policies and an asset management approach to ensure safety defects are repaired and available resources are used in the most effective way to maintain road conditions and prolong the life of road surfaces. The Council's [Asset Management Strategy](#) and [Asset Management Policy](#) are published on the Council's website. The use of an asset management approach is also a requirement of the Department for Transport (DfT) in order for the Council to secure the maximum road maintenance grant funding from central Government.
11. Highways maintenance work is undertaken on behalf of the Council by a contractor, Balfour Beatty Living Places (BBLP), operating under the name of East Sussex Highways. The Council also has a Client Team of officers employed by East Sussex County Council (ESCC) who manage and supervise the highway maintenance services contract. The highways contractor has recently changed, and Balfour Beatty Living Places took over the operation of the highway maintenance services contract in May 2023.
12. The terms potholes and defects are used throughout this report. Potholes refers to holes in the road surface that have developed and are big enough to cause a safety problem. Defects includes other faults in the road surface such as cracks, joints (in concrete roads) crazing, channels, depressions, utility exaction scars, larger areas where a thin layer of asphalt has come loose or worn away, missing surfacing around drains and damaged utility inspection covers etc. [The Highways Inspection Manual - Appendix 1 East Sussex Highways Investigatory Levels](#) on the Councils website contains examples of the types of defects that occur on the highway and the various intervention criteria and repair categories that the Council uses to prioritise repairs.

Review Board Findings

Factors Leading to Potholes Forming and Poor Road Condition

13. As set out in the introduction of the report, there are a number of factors that cause road surfaces to deteriorate and potholes to form. These are mainly things which cause wear and the surfacing material to break down. Some of these factors are outside of the control of the Council such as weather conditions and the weight and volume of traffic using the county's roads. Trends such as increased home deliveries and increases in the weight of electric and freight vehicles are something that the Council takes into account when looking at deterioration rates but cannot influence directly. There are however two factors which the Board examined in more detail below, where the Council may be able to have some influence.

Water and Drainage

14. The Board heard that keeping water off the road surface, including through effective drainage, is a key issue. Once water penetrates the road surface it can cause the surfacing to deteriorate and break up through the hydrostatic pressure exerted by vehicles passing over the road surface and freeze/thaw action in cold weather conditions. The presence of water on the road surface can therefore accelerate the formation of potholes and exacerbate any weaknesses in the road structure.
15. An additional £3.1 million one-off capital investment for drainage works has been agreed for the financial year 2023/24. This figure was based on the number of work requests and BBLP's estimate of the amount of drainage work backlog that needs to be carried out to optimise the resilience of the road network. Works include repairs to broken pipes, collapsed drains, blocked outfalls etc. It is also estimated that 20%-30% of the drainage network could be under capacity and this is something that will need to be addressed in the future to protect the condition of roads and stop potholes forming.
16. The Board heard that developing an investment strategy for highway drainage would provide a better understanding of the future investment levels needed. This is something that officers have started work on and would mean that the Council would have a more accurate picture of the type and quantity of investment needed to support and protect the road network infrastructure in the future. Information from the drainage strategy could then be fed into the Council's budget setting process for consideration alongside other spending priorities, or if new funding sources become available.
17. The Board heard that changes have been made to routine drainage maintenance in the new contract, so that ditches are maintained on a two-year cycle (instead of a 4 year cycle as previously) and all grips (the channels that connect the edge of the road with the ditch) are maintained every year. The prioritisation of drainage works has also been adjusted to more adequately reflect the impact on road users, so there is better targeting of works for drainage activities. The previous prioritisation system gave more weight to the number of properties affected by highways flooding issues, rather considering the impact on the road network and road users.

18. Based on the evidence considered, the Board concluded that developing an investment strategy for drainage would be desirable, so the Council can more accurately forecast how much ongoing investment in highway drainage is needed. This would support the effective targeting of resources available for drainage works, in order to help protect and prolong the investment in road surfacing, prevent road surfaces deteriorating and stop potholes developing.

Recommendation 1

The Board recommends that officers develop a strategy for highway drainage, in order to target highways drainage investment requirements more accurately and to help prevent water damage to road surfaces.

Utility Company Excavations

19. The Board heard that after highway drainage, the second most important factor in maintaining good road condition is the quality of utility companies' reinstatement works following their excavations in the highway. This is because, once the road is dug up, if it is not re-instated properly it creates a weakness in the road which can lead to potholes and depressions in the road surface forming more quickly. The Asphalt Industry Alliance in their annual reports have highlighted the impact of utility company excavations on the integrity of road structures, thereby reducing the life of the road. The Board has also seen at first hand the impact of utility company excavations on roads surfaces. Evidence from officers also suggests that poor quality reinstatement works are a contributory factor to potholes forming, and tighter controls may be necessary.
20. Utility companies have up to six months to permanently repair an excavation in the road after either planned or emergency utility repair work. Utility companies are then responsible for the quality of reinstatement works for the next two years, during which time they have to rectify any defects. The BBLP Network Management Team carries out a coring programme to sample 10% of the utility company reinstatement work to test the quality by taking samples of between 150mm - 300mm deep, which covers the topmost bound layers of road surface. This is to ensure that sub-base of the road has been reinstated correctly with the right materials and levels of compaction, which cannot be checked through visual inspections alone. If the sub-base is not reinstated properly, the road surface is liable to subside or break up. Dealing with historic or legacy defects after the two-year guarantee period can be difficult.
21. The Council cannot stop utility companies undertaking works necessary to maintain their infrastructure, and the Board is aware that members of the public are unlikely to have an understanding of the rules the Council is constrained by when dealing with utility companies to tackle poor quality reinstatement work. Members of the public may also think that it is the Council's contractor carrying out road works if adequate signage is not provided by the utility companies who are carrying out the work.

22. The rules regarding the reinstatement of utility company works are set out in the New Roads and Street Works Act and the permit scheme. The current rules give utility companies up to six months to carry out permanent repairs and in the Board's view this is too long and leads to unsatisfactory temporary repairs. The guarantee period of two years for works is also too short and does not provide an incentive for utility companies to provide a long-lasting reinstatement. This is evident by the number of historic reinstatements that are failing after the two-year period, which then become the responsibility of the Council to repair. In addition, the current fines of £120 for breaching permit conditions (reduced to £80 for swift payment) does not incentivise utility companies to meet permit conditions.
23. Other councils have started to lobby central Government for changes in the way utility companies are regulated and operate when they carry out works on the highway, with the aim of improving the quality of reinstatement works. The Board has considered the type of changes being requested and agrees that it is important to hold utility companies to account through the type of changes being proposed. This is in order to ensure reinstatement works are done properly and changes to regulations are necessary to enforce this. Such changes are also supported by officers. The Council and BBLP may also need to increase their quality checks and other measures where they are able, to ensure the adequate quality of utility company reinstatement work.

'Sink Holes' and Voids under the Road Surface

24. The Board heard that there are procedures in place for dealing with 'sink holes' or voids under the carriageway (which are different from depressions in road surfaces and subsidence). The Council is initially responsible for investigating the cause, which is usually where material has been washed out either by a highway drain or leaks from a public sewer or water supply pipe. Where the cause is not a highway drain, it can be difficult and take time to gain agreement from the water utility companies that it is their responsibility and for them to undertake a repair.
25. The Council has the power to fix sink holes (but not work on the utility companies' pipes or infrastructure) and recoup the cost from utility companies, but better engagement from the utility companies would be beneficial. The Board considered that it would be useful for there to be greater awareness of who is responsible for the repair once the initial investigations have been completed. If the local councillor was informed, they could let their residents know and could lobby the utility company directly for action to fix the sink hole. It would also be helpful if timescales could be introduced for utilities to repair defective apparatus once it is reported to them with appropriate penalties for non-compliance.

Recommendation 2

The Board recommends the Council lobbies Government to make changes to the way utility companies operate and are regulated under the New Roads and Street Works Act and in particular to:

- Lower the time allowed for permanent reinstatements from 6 months to 3 months;
- Extend the reinstatement works guarantee period from 2 years to 5 years;
- Raise the level of financial penalties for failing to comply with the requirements of the Act;
- Introduce timescales for utility companies to repair defective apparatus once it has been reported to them, with penalties for non-compliance; and
- Increase the number of utility company inspections that can be recharged from 30%.

Recommendation 3

The Board recommends officers explore the feasibility of increasing the amount and type of inspections of utility company reinstatement work to drive up quality and lobby Government for funding to do so.

Highway Maintenance Policies and Procedures

Pothole Intervention Criteria

26. The Board explored whether changes to ESCC's pothole intervention criteria would improve the way the Council deals with potholes, and the potential impact of any such changes. The Council uses a risk-based approach to repair potholes. At present, the minimum intervention criteria for a pothole to be repaired is that it has to be at least 40mm deep and 300mm wide in every direction. Potholes meeting these criteria will be repaired within 28 days (repair category 3). There are other pothole repair categories based on the level of hazard to road users - category 1 repair within 2 hours; category 2 repair within 5 days (for full details please see the [East Sussex Highway Inspection Manual](#) and [Appendix 1 East Sussex Highways Investigatory Levels](#), on the Council's website).
27. The Council's investigatory levels have been developed over time and are based on experience and local conditions. Officers review the criteria in the investigatory levels at least once every two years. The review includes comparison with other local authorities (particularly neighbouring ones), complaints and claims, and feedback from Highway Stewards (also known as Community Stewards in the new contract). The Board saw evidence that other councils have slightly different intervention criteria, but most use the 40mm depth criterion and mixture of different dimensions for the extent of the pothole (e.g. 300mm wide or less in one direction).

28. The Board heard that if the depth criterion was changed to 30mm, it would roughly double the cost of reactive pothole repairs from £2.5 million to £5 million per year. Similarly, if the width criterion were to be changed it may double costs thereby taking money away from other methods of repairing potholes, such as patching and resurfacing, that represent better value for money.
29. Further research and evaluation of the impact of changing the intervention criteria would need to be carried out over a period of time to assess whether this would be feasible, and whether it would improve pothole repairs more effectively than increasing the patching and resurfacing programmes. The value for money of changing the intervention criteria would also have to be established compared with other repair methods.
30. The June 2023 Cabinet report on highway investment states that long term programmes of planned maintenance provide the most efficient way of working and provide best value for money. This is supported by evidence seen in the Metis Consultants report, the Association of Directors of Environment, Economy Planning and Transport (ADEPT) Guide to Pothole repairs and the Well Managed Highway Infrastructure Code of Practice. In addition, the Board heard that in the officers' view, the best way to achieve visibly better roads with fewer potholes is to spend any additional funding on patching and surface dressing, and not spend more money reactively fixing individual potholes. Consequently, the Board is not recommending changes to the intervention criteria at this point in time.

Highway Steward Risk Assessments

31. The Board heard evidence that Highway Stewards have some discretion to change the intervention category of a defect based on the specific location of the pothole or other relevant context. Stewards carry out risk assessments of defects when they undertake inspections which includes taking into account the likely risk to road users. For example, if the position or shape of the defect would pose a hazard to particular road users such as those who walk, wheel, cycle, motorcycle etc. Around 7%-8% of reported defects have the repair category changed as a result of the Steward's risk assessment. Most are changed to a higher repair category. This flexibility means that safety defects that may not precisely meet the intervention criteria are being addressed where there are specific additional factors. It was also clarified that the intervention criterion applied to defects in the road surface of designated crossing points is the same as for footways.
32. The Board considered that there would be a benefit to demonstrating that the Council and Balfour Beatty Living Places (BBLP) use a risk-based approach to repairs where there is a risk to non-car users (i.e. those who walk, wheel, cycle, motorcycle etc.), as this is not widely understood by members of the public.

Recommendation 4

The Board recommends that [Guide to Highways](#) is amended to include a reference to the current practice of risk assessing reported road defects which ensures the risks posed to different types of road user are appropriately met through repairs.

Defect Reporting

33. The Board heard that since the start of the contract in May 2023 there have been upgrades to defect and drainage reporting on the East Sussex Highways website to include additional detail and defect types that members of the public can report. People can also now notify any potential risk factors such as their mode of transportation and position of the defect in the road when reporting a defect. However, the facility to see whether a specific defect had already been reported on a map was not yet available (at the time of the review) and this was something that BBLP were working on. BBLP also plans to introduce a mobile phone app to allow members of the public to report defects.
34. The Board heard that changes to the defect reporting system were made in response to feedback from members of the public where they wanted to be able to provide more information about the location of the defect and the likely risk to road users. The Board has also seen feedback from a survey of ESCC councillors who would like the ability to see all reported defects on a map (and not just the ones they have reported). The Board understands that a general enquiry form has also been added to the website for those issues which do not neatly fit into one category following feedback from councillors.
35. The Board concluded that by enabling a wider range of defects to be reported online it would provide better visibility to the public that the Council was aware of and gave consideration to all highway issues. It is also important that members of the public and councillors can see which defects or potholes have already been reported, as was possible with the previous contractor's system, as this would allow them to see those potholes and other defects that had already been reported and that repairs were in hand. The Board understands that the change in IT systems used by the different contractors has temporarily meant this facility is not available.

Asset Management Approach and Performance Targets

Asset Management Approach

36. The Board heard that under the Council's asset management approach, the assessment of road condition across the road network is based on annual surveys, steward observations and inspections, and public reports of road conditions, which produces a red, amber or green (RAG) rating. The rating is given for 10 metre sections of road, meaning that every road will generally have a mixture of red, amber and green sections of road condition. To determine the condition of each 10 metre road section, all the information available about the current condition of a road is inputted into the UK Pavement Management System which is the standard system for assessing a road network's condition.
37. The asset management approach determines the most appropriate interventions to be made for the condition of the road, taking into account the whole life cost. The maintenance options, based on the condition of the road, are:
- Preventative measures (such as surface dressing) aiming to stop conditions deteriorating further on roads with a high number of amber sections as well as some red ones.
 - Intervention works (such as overlay resurfacing) which are usually done on roads with a higher number of red sections than amber sections and are therefore assessed to be near the end of their life cycle.
 - Structural works (such as road recycling and reconstruction) are necessary when a road had completely failed and needs to effectively be rebuilt.
38. The Board heard that in terms of cost, preventative works are the least expensive, then interventional resurfacing works, with structural works being the most expensive. While resurfacing roads is the most cost-effective intervention taking into account whole life costs, there is insufficient funding available for it to be done in every circumstance.
39. The Board has seen evidence in the ADEPT Guide to Pothole repairs and the Well Managed Highway Infrastructure code of practice that preventing potholes from forming is preferable to reactive repairs. The DfT also advocates an asset management approach that takes into account the whole life cost of road repairs. The Board heard that under the asset management approach this translates into focussing more work in preventing amber sections of road becoming red by surface dressing and patching. As these interventions are less costly than road resurfacing and extend the life of the road surface, it would allow more of the road network (including amber and green sections of road) to be covered than just resurfacing red sections.

40. Evidence from officers and BBLP also supports this approach as the most cost effective way to address the number of potholes in the County’s roads, with works funded from the capital programme. This will enable more roads to be treated and will seal them against water penetration, making them more resilient to adverse weather conditions, than if the focus was on resurfacing and reconstruction alone. Resurfacing works and other interventions will still continue to be used where appropriate, but more money should be spent on patching and surface dressing.

Recommendation 5

The Board supports the Cabinet report recommendation that a greater proportion of capital funding is allocated from the highways structural maintenance budget to patching and surface dressing in future years, and reviews are undertaken on a periodic basis.

Road Condition Performance Targets

41. The current performance targets and actual position for road condition are:

<u>Road category</u>	<u>Target</u>	<u>Actual</u>
Principal roads	4% requiring maintenance	5%
Non-principal roads	4% requiring maintenance	6%
Unclassified roads	14% requiring maintenance	13%

42. The percentage of roads ‘requiring maintenance’ refers to the 10 metre sections of roads that are in red condition. Consequently, the target refers to the overall length of road (in 10 metre sections) that is in red condition, rather than the number of roads. The definition of these targets is set nationally by the DfT and allows comparisons to be made with other councils. Comments from members of the public and councillors indicated to the Board that many people do not understand this and believe the figures refer to the number of roads requiring repair. Members agreed this is something that should be addressed when the Council reports its performance on road condition.

43. The asset management approach is used to prioritise the available funding to achieve the targets set by the Council for the different categories of road. For comparison, the Board reviewed evidence on other councils’ road network performance targets from LG Inform and DfT statistical data. ESCC’s road network targets, and performance in terms of roads requiring repair, are similar to other neighbouring local authorities and Chartered Institute of Public Finance and Accountancy (CIPFA) statistical neighbours. Other authorities are experiencing similar issues with potholes and road maintenance backlogs. Consequently, the Board finds that despite some members of the public having a perception that the roads in East Sussex are in a worse condition than those in neighbouring authorities, this is not supported by the evidence from the latest available published road condition performance data.

Recommendation 6

The Board recommends that it is made clear in reporting information that the road condition performance targets refer to the percentage of road length, and that all roads are likely to have a mixture of green, amber and red condition sections of road.

Pothole Repair Methods

44. The Review Board examined the various pothole repair methods to ensure that ESCC was taking the best approach possible to repairing potholes, so repairs are effective and long lasting. This included case studies and best practice examples contained in the Pothole Repair Guide produced by the Engineering Board of the ADEPT in conjunction with the DfT. The Board also considered the Well Managed Highway Infrastructure Code of Practice and heard evidence from BBLP on the best repair techniques as they operate a number of highway maintenance contracts across the country and are specialists in this field. New techniques and innovations in materials were also considered, such as the JCB mounted repair system which BBLP had trialled on their West Sussex contract. The Board heard that where pothole repairs need to be undertaken a range of techniques can be used, depending on the road conditions.
45. The Review Board heard from Balfour Beatty Living Places (BBLP), that they are using a different specification to repair potholes, compared to the previous contract. The specification as required in the new contract is to cut out the area up to 250mm around the pothole to ensure the repair is made into sound surrounding surfacing material and then fill it with hot tarmac. This specification is based on what is regarded as industry best practice and removes the damaged material around a pothole, making the formation of a new pothole immediately adjacent to the repair less likely. The result is a square or rectangular patch of new material. High quality cold lay tarmac material may be used where traffic management or weather conditions make it necessary to do so. Any temporary repairs will be marked with a 'T' so the public know they are not permanent (information on temporary repairs is provided in the [Guide to Highways](#)).
46. BBLP is also using three velocity or jet patching machines under the new contract, with two of them being used to proactively 'find and fix' potholes and defects (30mm or deeper) in unclassified roads. This innovation is based on a tried and tested approach and will reduce the number of defects prior to the next routine inspection by Highway Stewards. This repair technique is also used in urban areas. It bonds well to existing surfacing and has good results in terms of the longevity of the repairs. The Board strongly supports the proactive use of jet patching machines to find and fix defects and would like to see this approach expanded if possible.

47. The Board's considers that this proactive approach to pothole repairs and the changes in specification and repair methods being used will to lead to better quality and quicker repairs. Although we are in the early stages of the operation of the new contract, residents and councillors have started to notice the difference in approach.

Quality Assurance and Monitoring

48. BBLP are responsible for self-monitoring the quality of all their work and reporting the results to the Client Team. For reactive pothole and defect repair work, 90% of pothole repair works are inspected by BBLP at present, to ensure they have been undertaken to agreed standards, although this may reduce to 50% - 60% of works as the contract matures and settles in. In addition, audits are carried out by BBLP's senior management team and managers across the organisation. Monthly joint inspections are carried out with client officers and all planned works schemes are quality inspected by client officers. The Council also has dedicated staff in the Client Team monitoring reactive repairs, and under the new contract arrangements 20-30% of pothole repairs are being quality checked by this team.

49. The Board heard that before and after photographs are taken of all pothole repairs and as a result of the quality assurance processes that are in place there are very few, if any, pothole repairs that require follow up work to be undertaken. This is in line with the 'right first time' approach taken by the contractor and there are further quality checks by the Client Team, so there is independent verification of the quality of the work being undertaken. This approach avoids the duplication of effort involved with client officers checking all works and provides an appropriate level of oversight.

50. Based on the evidence heard by the Board it found that the quality assurance arrangements for pothole repairs are effective. However, it would be beneficial for the Place Scrutiny Committee to maintain an overview of the contractor's performance, especially after the first year of the new contract, once the contractor has become established.

Recommendation 7

The Review Board recommends that annual performance monitoring reports are presented to the Place Scrutiny Committee to maximise transparency and scrutiny of pothole repairs, contract key performance indicators (KPIs), and planned highway maintenance work, with the first report scheduled for July 2024.

Clusters of Potholes and the use of ‘advisories’ and ‘observations’

51. When Highway Stewards inspect reported potholes or carry out routine inspections, they can raise a works request called an ‘advisory’ if they think a larger area of resurfacing needs to be undertaken to deal with clusters of potholes and other defects near to safety intervention level potholes, which don’t in themselves meet intervention level criteria. This approach is generally taken when Stewards consider that the road surface is likely to deteriorate and develop more safety intervention level potholes. Once checked against any planned resurfacing schemes, an advisory work request can be approved in two to three days. This is then added to a scheduled list of works which can be found on the [East Sussex Highways](#) web site.
52. An ‘observation’ is used by a Highway Steward to report areas of surfacing likely to deteriorate and develop intervention level defects in the near future (e.g. areas of cracking, crazing, subsidence or showing signs of breaking up). These are then checked against planned resurfacing work programmes and works added to the most appropriate work programme (e.g. surface dressing, patching or re-surfacing).
53. The Board heard that the best way of dealing with clusters of potholes and defects at or near safety intervention levels, is through the use of ‘advisories’ which would lead to patching repairs being carried out. Patching repairs are where small areas of road (usually under 10 square metres in size) are resurfaced rather than repairing individual potholes. Carrying out patching and resurfacing works is a more cost-effective way to repair clusters of potholes and defects in comparison to individual reactive pothole repairs in a relatively small area (repairing potholes individually costs around £200 per square metre compared with £30 per square meter for resurfacing). Individual potholes which meet the Council’s safety intervention criteria may still be repaired to keep road users safe whilst awaiting larger patching or resurfacing repairs.
54. The Council allocated additional capital funding for patching repairs during the last financial year (2022/23) and the current financial year (2023/24) to deal with a backlog of advisory works. Good progress was made in 2022/23 but this has been masked by the accelerated deterioration of road surfaces and more potholes forming due to weather conditions, particularly during the winter of 2022/23.
55. As part of the evidence gathering for the review, the Board examined the highway investment modelling carried out on behalf of the Council by independent consultants, Metis Consultants. This indicated that the Council should spend proportionately more on patching and surface dressing to improve the resilience and longevity of road surfaces. The Board also heard that West Sussex County Council had been spending more on surface dressing and this may account for the lower maintenance backlog they have.

56. The Board also sought the views of BBLP and officers on what they consider to be the best approach is to tackling clusters of potholes based on their engineering experience. In an ideal world it would be preferable to resurface the road, but the Council does not have sufficient resources to resurface all the roads. In these circumstances, both officers and BBLP considered that patching, preferably followed up with surface dressing, is the best approach particularly on sections of road assessed as being in ‘amber’ condition. This is in terms of effectiveness, value for money, and increasing the life of the road surface.
57. The Board considers that increasing spending on patching and subsequent surface dressing is the best way to tackle clusters of potholes and prevent them from developing, bearing in mind the constraints on the Council’s finances and that it might not be possible to resurface all the roads we would like to. This demonstrates that the Council is doing all it can to reduce the number of potholes within available resources and addresses the perception that the Council’s approach to pothole repairs is inefficient.

Recommendation 8

The Board recommends that officers continue to allocate specific, defined levels of investment within the existing highways infrastructure maintenance capital budget, to tackle clusters of potholes and address public concerns about this issue, for example by undertaking patching repairs and surface dressing.

Repair Gang Flexibility

58. The Board heard that at the present BBLP is operating nine to twelve repair gangs to fill intervention level potholes which are 40mm or deeper and are at least 300mm in each direction. Asking repair gangs to repair additional defects not at the agreed safety intervention level, would risk safety defects not being repaired within the specified timescales and leave safety hazards that may affect road users.
59. However, there is flexibility for repair gangs to repair other safety intervention level defects that they may find, whilst carrying out reported safety defect repairs. Repair gangs can send a photograph of any additional safety defects they find and contact the BBLP control centre to ask for authorisation to carry out the extra work immediately whilst on site.
60. The Board considered that it is important to emphasise to the public that repair gangs do have this flexibility and mechanisms exist to carry out additional work required for safety reasons whilst on site if necessary.

Recommendation 9

The Board recommends that the [Guide to Highways](#) on the East Sussex Highways web site is amended to reflect that repairs gangs, BBLP and the Council exercise a degree of flexibility in their approach to repairing safety intervention level defects and will repair other safety intervention level defects they find whilst on site.

Finance and Investment

Revenue and Capital Budgets

61. The Review Board heard from officers that over the last ten years the level of revenue funding for highway maintenance had generally reduced, whilst the amount capital funding has been increasing. The revenue funding for the 2023/24 financial year had been increased to take into account contract inflation for the new highway service maintenance contract and is around £12 million per year (up from £11 million).
62. Under CIPFA Accounting Code of Practice guidelines, pothole safety defect repairs are funded from revenue budgets as they are deemed not to add to the overall value of the asset/road. Other works such as surface dressing, patching, re-surfacing and reconstruction are funded from capital budgets as they are judged to extend the life of the asset. Currently around £2.5 million a year is spent from the overall revenue budget for highways maintenance on reactive pothole repairs.
63. The grant funding for highway maintenance that the Council receives from the Department for Transport (DfT) Structural Maintenance Grant (Needs & Incentive) and Pothole funding is around £13 million to £14 million per year, which is used to support the capital programme. Investment in highways from the Council's highways structural maintenance capital programme is substantially above this level with around £20 million allocated to road surfacing, £4 million on bridges and £5 million on street lighting this financial year, plus the additional £15.7 million agreed earlier in 2023.
64. The Board heard from the Chief Finance Officer that borrowing may need to be undertaken to fill the gap between the grant funding received from Government, and planned expenditure from the capital programme. Consequently, the Council may need to borrow around £23 million to support the planned additional capital expenditure on highways maintenance over the term of the three-year Medium Term Financial Plan (MTFP). Over the 10 years of the capital programme the borrowing requirement is estimated to be in the region of £213 million. For every £10 million borrowed there is a £750,000 ongoing annual charge to the revenue budget to cover the cost of borrowing (interest and other charges) and the Minimum Revenue Provision (MRP), which is required by local government accounting rules.

65. Any proposal to increase the capital programme would therefore need to take into account the cost of borrowing, and whether this is affordable and sustainable. The Board recognises that continually borrowing money to fund highway maintenance may not be sustainable in the longer term. Any additional borrowing would need to be considered through the Council's Reconciling Policy, Performance and Resources (RPPR) budget setting process, alongside other financial and cost pressure considerations the Council is facing, such as the significant cost pressures being experienced in Adult Social Care and Children's Services.
66. The Board understands that it is a widely held view by members of the public and by national motoring organisations that not enough is being spent on highways maintenance and additional spending would be welcomed. However, it would be difficult for the Council to invest further to improve road conditions, however much it would like to, given the financial constraints it operates within and the cost and sustainability of borrowing more. The Local Government Association nationally is saying that the Government should provide more funding for local highways maintenance, and it should be longer term in nature so local authorities can plan to maintain the local road network in an effective way. The Board heard that the current ESCC road maintenance backlog is around £300 million, which is the sum that would be needed to be invested to eliminate red sections of road across the road network.
67. East Sussex and other county authorities in the South East are all experiencing similar issues with a lack of resources to deal with maintenance backlogs. The latest estimates to deal with road maintenance backlogs in neighbouring counties are:
- £650m in Kent
 - £300m in Surrey
 - £377m in Hampshire
 - £151m in West Sussex (on carriageways alone).
68. The Board has reviewed all sources of Council funding (e.g. income, borrowing, Government grants and council tax) and finds that there is no obvious source of additional funding to further improve road conditions over and above that which has already been committed.
69. The Board also heard that additional one-off funding from the national Pothole Repair Fund is welcome, but it is sometimes hard to plan to spend it effectively given its short term and sometimes short notice nature. It would be preferable for longer term funding to be allocated so that work can be planned more efficiently, effectively and carried out at the right time of year. There is currently approximately a £10 million per year gap between the Government grant funding the Council receives for highways maintenance and what the Council needs to spend on road surfacing alone.

70. The Government announced in early October 2023, that it would spend a further £8.3 billion on local road maintenance over the next ten years. This will be in addition to the existing DfT road maintenance grant funding. As part of this there will be a combined £2.8 billion pothole fund for the South East, South West and East of England, which will start to become available from April 2024. It is not clear at this stage how much will be allocated to East Sussex or whether the Council will have to bid for the additional funding, and whether it will come with any conditions.

71. The Board considers that long-term funding is important in being able to take a planned and the most cost-effective approach to reducing potholes and improving road condition. In relation to the newly announced funding it will be important for the Council to have certainty and clarity about the allocation, without needing to spend time and money bidding for funds, so that it can plan effectively for how to invest in the local road network.

Recommendation 10

The Board recommends that the Council continues to lobby Government for better long-term funding arrangements for pothole repairs, and highways maintenance, so that it can plan effectively, does not have to expend resources bidding for funding and can address local road conditions.

Budget Allocation and Investment Modelling

Budget Allocation

72. The highways structural maintenance capital budget expenditure is split across a number of areas. On average:

- 75% on carriageway repairs;
- 10% on footways;
- 11% on drainage; and
- 4% on other works such as signs and safety barrier repairs.

73. Of the 75% spent on carriageway repairs, on average 44% of that was spent on resurfacing schemes, and 31% was spent on other carriageway treatments, including surface dressing, crack and joint repairs and concrete rehabilitation.

74. The Board heard that in the officers' view additional funding should be directed towards footway maintenance and drainage if possible, in addition to that being planned for carriageways. The £3.1 million one-off funding agreed for drainage works in 2023/24 will be used for known issues that need repairing, but the highway drainage network would likely struggle to cope with the continued impacts of warmer, wetter weather conditions.

75. The Board concluded that investment in drainage is important to prevent water damaging road surfaces and prevent potholes forming. Whilst the Board would like to see the condition of the whole road network improved, the cost would be too great, and therefore the focus should be on improvements to the service that is currently being funded. It was suggested that if the Council could find additional funding for highways investment in the future, it should be spent on drainage.

Recommendation 11

The Board recommends that if funding pressures ease or additional funding becomes available, the Council considers making additional investment in highway drainage.

Investment modelling

76. The highway investment modelling undertaken by Metis Consultants presented a number of scenarios which modelled the impact on road condition of different levels of investment to achieve the Council's agreed road condition targets. The recommendation agreed by the Council's Cabinet is to increase the structural maintenance carriageway budget to £23.2 million a year but front-loaded so that £28 million is available for each of the first two years. The modelling suggests that this will keep the County's roads in a steady state condition, but with visible improvements early on and maintaining the target condition over the next ten years. Work will therefore be prioritised to get the roads in as good a condition as they can be, in a cost-effective way.
77. The Board supports the planned investment and increased spending on patching and surface dressing as the most cost effective way of maintaining road condition against the Council's agreed targets. The Board understands that the Medium Term Financial Plan (MTFP), which covers the next 3 years, has the revenue impact of proposed increases in the highway capital programme factored into it. However, the funding position for the remainder of the 10 year capital programme for highways will depend on the Council's financial circumstances at the time.
78. In addition, the Board heard that the standard deterioration rates used in modelling are based on previous years, and therefore the modelling is not able to account for changes in the weather conditions or increases in traffic volumes and vehicle weights which significantly contribute to the deterioration of road surfaces. The Board heard that investment modelling ideally needs to be reviewed on a two-to-three-year basis to take into account changes in deterioration rates.
79. The Board considers regular remodelling is the best approach to understand, as best as possible, the future investment requirements to keep the roads in East Sussex in a steady state condition. This should be included in reviews of the capital programme in the Council's budget setting process.

Recommendation 12

The Board recommends that the Department continues to maintain an active approach to modelling highway investment levels needed to achieve the Council's road condition targets and feed the outcomes into the Reconciling Policy, Performance Resources (RPPR) budget setting process.

Communication with stakeholders

80. The Board heard that, most of the time, the Council's priorities for carriageway repairs are aligned with those of local communities, and this is often reflected in the upcoming planned works shown in the publicly available [Highway Schemes and planned work programmes](#) section on the [East Sussex Highways website](#). A link to the [carriageway patching programme](#) is also on East Sussex Highways website. However, it is apparent that members of the public are often either unaware of the planned programmes or find it difficult to find information about them.
81. The Board considered how communications could be improved so that the public had more awareness of what is in the capital programme and the extent of these planned repair works. It was noted that, while there is an East Sussex Highways website separate from the ESCC main website, most members of the public would likely not be aware of this fact, and that it could be made simpler to access the former from the latter. It was suggested by the Board that the link to get to the East Sussex Highways website should take one fewer click than it does at present and could be on the main ESCC website landing page. The Board also considered whether there could be better signposting to the East Sussex Highways website on Parish, District and Borough council websites.
82. The Board found that it can be difficult for members of the public to find specific information on planned repairs works. Information on dates for scheduled work could be clearer so that it is explained that "to be scheduled" means that work will take place this year and the list will be updated with a more precise timescale at a later stage. Better access to information on planned works may help convey the fact that the Council is taking proactive action on repairing potholes and sections of deteriorating road.
83. The Board has also considered the outcomes from the recent survey of ESCC councillors on highway maintenance issues. This has highlighted the need to have information available to councillors on all reported defects and works that are taking place in their Divisions. This can then be passed on to members of the public and Parish and Town councils. The Board has been advised that making all reported defects information available is being worked on by BBLP and will be available shortly for councillors and members of the public.

Recommendation 13

The Board recommends that officers review the visibility and usability of website information on planned maintenance work on potholes to make it easier to find and use online, including via the East Sussex County Council website and the upcoming app, and in particular information for patching, resurfacing and revenue funded advisories.

Footway Maintenance

84. Throughout the course of the review the Board also heard evidence about the maintenance and condition of footways (pavements). A similar approach to defects and repairs of footways is taken, with condition surveys, defect reporting, intervention criteria and an asset management approach which is used to guide investment in repairs. It is clear that members of the public are also concerned about defects in pavements and there are similar issues concerning the availability of funding and investment to address footway condition. The results of the last footway network condition survey categorised 18% of footways as in red condition, 25% as dark amber, 23% as light amber, and 34% as green.
85. As footways were outside the scope of this review, the Board considered that a further scrutiny review could be considered to explore these issues fully.

Conclusions

86. It was evident to the Board that, during the course of the review, the picture regarding pothole repairs was changing. The new highways contractor, with their proactive and 'right first time' approach, was starting to make a difference. The Council had agreed further capital investment and it will take time for the impact of that additional investment to become apparent, as the planned repair programmes start to be delivered. More time should be given to allow the new contractor to consolidate the improvements it is making and to deliver the capital investment programme before reviewing performance. The Place Scrutiny Committee can assist with this process and will review performance in July 2024.
87. The Board has made a number of recommendations which it believes will further develop the approach to pothole management and will help address residents' concerns about road conditions in East Sussex. Overall, the Board believes good progress and plans are being made to reduce the number of potholes within available resources and to address residents' concerns as far as possible.

Appendix:

Scope and terms of reference of the review

The Review was established to consider and make recommendations on the following:

- To improve the repair of potholes and tackle pothole clusters;
- To have a visibly better highway network; and
- To ensure the needs of vulnerable road users are taken into account in the defect reporting system and when carrying out repairs.

The scope of the review included:

- Alternative pothole intervention levels and costs;
- The quality of pothole repair works;
- Alternative pothole repair techniques and costs;
- Consideration of current policies and procedures to take into account vulnerable road users (cyclists, pedestrians, wheelchair users, and motorcyclists) and promotion of Active Travel and alternative methods of travel;
- Consideration of budgets and investment for pothole repairs and safety defects; and
- Consideration of the effectiveness of the Council's patching programme.

Board Membership and project support

Review Board Members: Councillors Ian Hollidge (Chair), Matthew Beaver, Julia Hilton, Eleanor Kirby-Green and Philip Lunn.

The Project Manager was Martin Jenks, Senior Scrutiny adviser with additional support provided by Patrick Major, Scrutiny and Policy Support Officer

Dale Poore and Stephanie Everest provided ongoing support to the Board throughout the review.

Review Board meeting dates

Scoping meeting - 06 February 2023

Board meetings

18 May 2023

01 August 2023

10 August 2023

17 August 2023

11 September 2023

20 September 2023

03 November 2023

Witnesses providing evidence

The Board would like to thank all the witnesses who provided evidence in person:

ESCC officers

Karl Taylor, Assistant Director Operations

Dale Poore, Contracts Manager, Highway Infrastructure Services

Pippa Mabey, Performance and Service Development Team Manager

Stephanie Everest, Project Manager - Highways Funding and Development

Ian Gutsell, Chief Finance Officer

Balfour Beatty Living Partnerships (BBLP) representatives

Nicola Blake, Contract Director

Jack Beckley, Principal Operations Manager

Mark Robinson, Network Assurance Manager

Conteh Nixon, Performance and Hub Manager

James Kelly, Stewards and Assurance Manager

Nicola Carly, Construction Manager

Contact officer: Martin Jenks, Senior Scrutiny Adviser.

Telephone: 01273 481327

E-mail: martin.jenks@eastsussex.gov.uk

Evidence papers

Item	Date
Well Managed Highway Infrastructure: A Code of Practice. UK Roads Liaison Group.	March 2017
Potholes - A Repair Guide. Association of Directors of Environment, Economy, Planning & Transport (ADEPT) and the Department for Transport (DfT).	March 2019
ALARM Annual Local Authority Road Maintenance Survey Report. Asphalt Industry Alliance.	March 2023
Highway Asset Management Strategy 2022 - 2028. East Sussex County Council (ESCC).	December 2022
Highway Asset Management Policy. East Sussex County Council.	December 2022
Guide to Highways. East Sussex Highways.	June 2021
East Sussex Highway Inspection Manual. East Sussex County Council	May 2021
Highways Inspection Manual - Appendix 1 East Sussex Highways Investigatory Levels. ESCC.	March 2022
Highways Investment Planning. METIS Consultants.	June 2023
Pedestrian Slips, Trips and Falls: An Evaluation of Their Causes, Impact, Scale and Cost. Living Streets.	February 2023
Highway Services Contract Re-Procurement Reference Group - Second Report. ESCC.	May 2021
Scrutiny Review of Road Repairs. ESCC.	March 2019
Scrutiny Review of Highway Drainage. ESCC.	March 2016
LG Inform road condition statistics for East Sussex and East Sussex CIPFA nearest neighbours. LGA Research. Local Government Association.	November 2022
Road condition statistics: data tables (RDC) . Department for Transport (DfT).	November 2022
Highways survey for Members of East Sussex County Council: Summary report. ESCC.	August 2023