

From: David Brazier, Cabinet Member – Highways and Transport  
Simon Jones, Corporate Director – Growth, Environment and Transport

To: Environment and Transport Cabinet Committee – 5 July 2023

Subject: Road Maintenance Update

Classification: **Unrestricted**

**Past Pathway of report:** None

**Future Pathway of report:** None

**Electoral Division:** Affects all divisions

**Summary:** This report describes the vital role our roads play in Kent and delivering *Framing Kent's Future* and seeks to provide the Cabinet Committee with an overview of the current status of our road assets. It also sets out the potential impact on service delivery resulting from MTFP revenue savings to our drainage budget.

**Recommendation(s):**

The Environment and Transport Cabinet Committee is asked to note the contents of this report.

## 1. Introduction

- 1.1 There are around 5,445 miles of local roads in Kent (616 miles of A roads, 279 of B roads, 1172 of C roads and 3378 of unclassified roads), one of the largest local authority networks in the country. It includes a high-speed road network of around 119 miles which has a bespoke annual maintenance programme.
- 1.2 Uniquely, our extensive road network comprises a high proportion of classified or urban roads, many undesigned 'evolved' roads, difficult and variable geology, a large fast-growing population, and high volumes of heavy goods vehicles and other traffic as a result of our proximity to London and our position as the gateway to Europe.
- 1.3 Our local highway network is the most valuable asset we own in Kent, with a replacement value of around £24 billion. All highway assets that form a part of that network, and particularly roads, play a vital part in delivering council objectives set out in *Framing Kent's Future* by enabling safe and reliable journeys around and through the county.
- 1.4 Our roads support social wellbeing and economic prosperity. They are essential for emergency services to execute their work: policing, healthcare, fire, and emergency response provision all require an effective highway network. These services are a key part of a functioning society which cannot exist without well-maintained and well-managed roads.

1.5 Our current approach to road maintenance is set out in our [Highways Asset Management Plan for 2021/22 to 2025/26](#) (HAMP) which was formally adopted and published in July 2021. That document and its predecessors have meant we have been able to maximise available Department for Transport (DfT) capital funding, make an evidenced-based case for additional KCC investment, and consistently enable KCC to demonstrate it is not negligent as a Highway Authority so that it can put forward a defence in any claim as required under the Highways Act. This approach has particularly benefited road maintenance given that it is the largest and most valuable asset group.

1.6 The majority of road spend is on planned data-driven maintenance to prevent potholes and surface defects occurring in the first place, a key principle of asset management. In the financial year of 2022/23, our multi-pronged approach was:

- Planned road surface renewal - £30m\*
- Planned road surface preservation - £10m\*
- Pothole Blitz - £7m\*
- Routine maintenance/safety inspections/customer enquiries – circa £8m\*

\* - all at 2022/23 prices

1.7 The 2021 HAMP document described what then assumed levels of DfT and KCC funding would buy in terms of future road asset condition, service levels and risk.

## **2. Discussion**

2.1 Since 2021, there have been a number of funding and inflationary pressures, in addition to exceptional winter weather conditions, all of which have added to the challenge KCC faces in maintaining its road network, and these are discussed below. It is intended to bring a HAMP update paper to ETCC later in the year which will include detailed updated analyses which take these factors into account.

### *DfT Capital Funding*

2.2 The level of capital funding received from the DfT is insufficient to maintain our highway assets, and KCC continues to lobby government on this matter. However, one of the main barriers to effective road maintenance is the inconsistency of DfT funding. Efficient road asset management (and reducing potholes) is dependent on certainty of both funding and approach over the medium- to long-term. The table below indicates the extent to which DfT capital funding has varied in recent years. This funding, which is to maintain all highway assets, not just roads, has not been incrementally increased over this period, either for inflation purposes or to reflect traffic or network growth.

<b>£millions (for all assets)</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>	<b>2023/24</b>
Maintenance Block Grant	21.949	21.949	15.137	15.137	15.137
Incentive Fund	4.571	4.571	3.784	3.784	3.784
Integrated Transport Block*	6.681	6.681	6.914	6.914	6.914
Pothole Funds	1.464	16.434	15.137	15.137	15.137
One-off Spring Budget					6.055
<b>TOTAL</b>	<b>34.665</b>	<b>49.815</b>	<b>40.972</b>	<b>40.972</b>	<b>47.027</b>

\* - only a portion of this grant is allocated for highway maintenance

### KCC Capital Funding

- 2.3 As mentioned earlier, as a result of our ability to use asset management methodology to model different outcomes, KCC investment in planned road maintenance started to rise in 2019/20. Prior to that, KCC had not contributed additional capital investment into the planned maintenance of our road network to enhance DfT grant funding. The annual budget for planned road maintenance had, compared to 2016/17 trebled by 2020/21 to around £40m, and after several years this had a positive effect, reducing the volume of contacts members received from the public on road condition matters. Even so, that level of investment was still not sufficient to maintain our roads in a steady state condition. Since then, in the last couple of years, annual budgets for planned road maintenance have reduced as a result of removing a revenue contribution to capital as a savings measure, and other adjustments.
- 2.4 At the time of writing the HAMP in early 2021, the DfT had only confirmed the levels of capital grant to be provided for highway maintenance in 2021/22, which was, in real terms, around 20% lower (around £9m) than 2020/21. KCC was able, exceptionally, to maintain existing budget levels overall in 2021/22 using one-off funding from a variety of sources. This essentially meant that a pothole blitz, which is not a core road asset management activity, could not initially be resourced in 2022.
- 2.5 In May 2022, a KCC key decision (22/00039) was made to fund a £7m pothole blitz campaign in each of 2022, 2023 and 2024. However, during 2023/24 County Council budget setting, the pothole blitz funding for 2023 and 2024 was removed as it was unaffordable given the funding constraints the Council faced. The Spring Budget delivered by the Chancellor on 15 March announced an additional £200m of national capital funding for road maintenance, resulting in a £6m allocation for Kent for potholes for 2023. There is currently no allocated funding for a pothole blitz campaign in 2024 or beyond.

### Inflation

- 2.6 The highway maintenance sector has, like the wider economy, generally experienced very low levels of price inflation in recent years, typically around 2%. Consequently, inflation has not previously been included in our assessment of future road condition, not least as market competitiveness would generally counter-balance the effect of inflation at that level.
- 2.7 Since the 2021 HAMP, inflation has been higher. In 2022, an average inflation rate of around 6% was applied to our highway maintenance contracts. The

position in the last year has been much more severe with prices being affected by hyper-inflation.

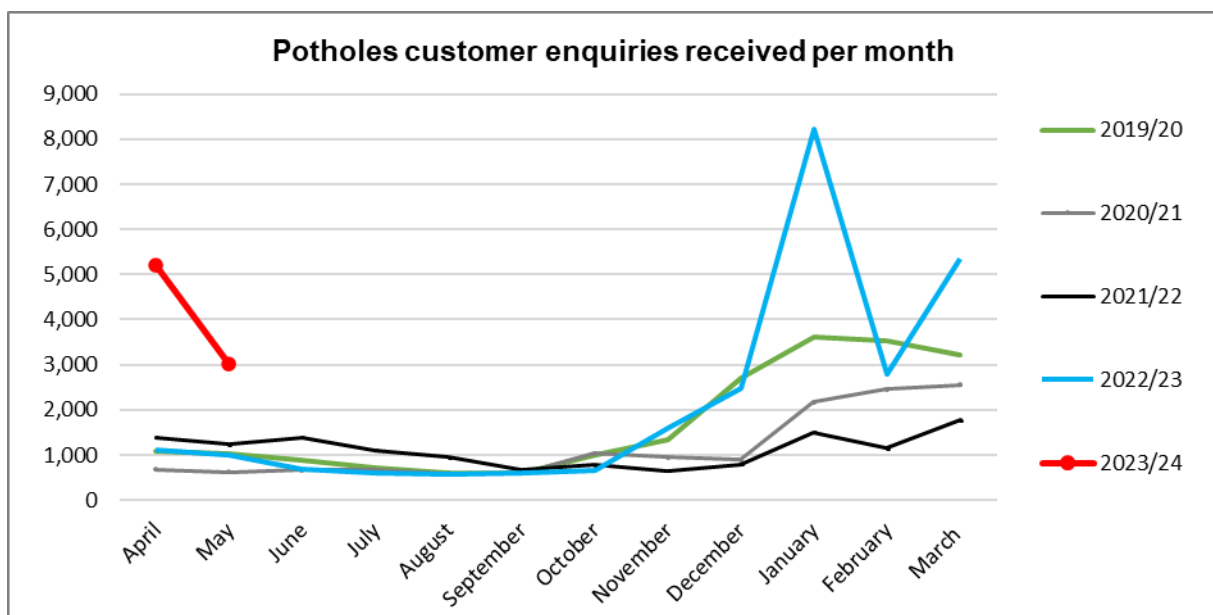
- 2.8 Given its heavy use of bituminous products, quarried aggregates and reliance on fuel use, road maintenance work has been particularly affected by high rates of inflation in 2023, affected by worldwide pressures. The price of planned road resurfacing in 2023 has increased by 30% compared to 2022. Similarly, road preservation work and reactive repair prices have increased by 20%. Neither DfT capital grants nor KCC funding have increased to reflect this significant and unprecedented pressure.
- 2.9 As a result, the quantity of road asset renewal and preservation work will reduce by almost 17% in 2023 compared to 2022, as illustrated in the table below. The 1,310,000 square metres of planned road maintenance we plan to deliver in 2023, to prevent to potholes forming in the first place, equates to around 2.7% of our road network.

Square metres	2022	2023	Reduction
Road asset renewal	470,000	350,000	25.5%
Road asset preservation	1,100,000	960,000	12.7%
<b>TOTAL</b>	<b>1,570,000</b>	<b>1,310,000</b>	<b>16.5%</b>

- 2.10 As part of our carbon reduction and climate change adaptation programmes, we intend to further increase the preservation programme as a percentage of the overall planned road maintenance programme in future years.

Winter weather

- 2.11 Kent experienced very poor weather conditions this past winter with a snow emergency in December and regular freeze-thaw weather cycles in the months that followed. The weather we experienced was the worst for a number of years leading to a significant increase in potholes enquiries from the public, five times that of recent years – see below graph.

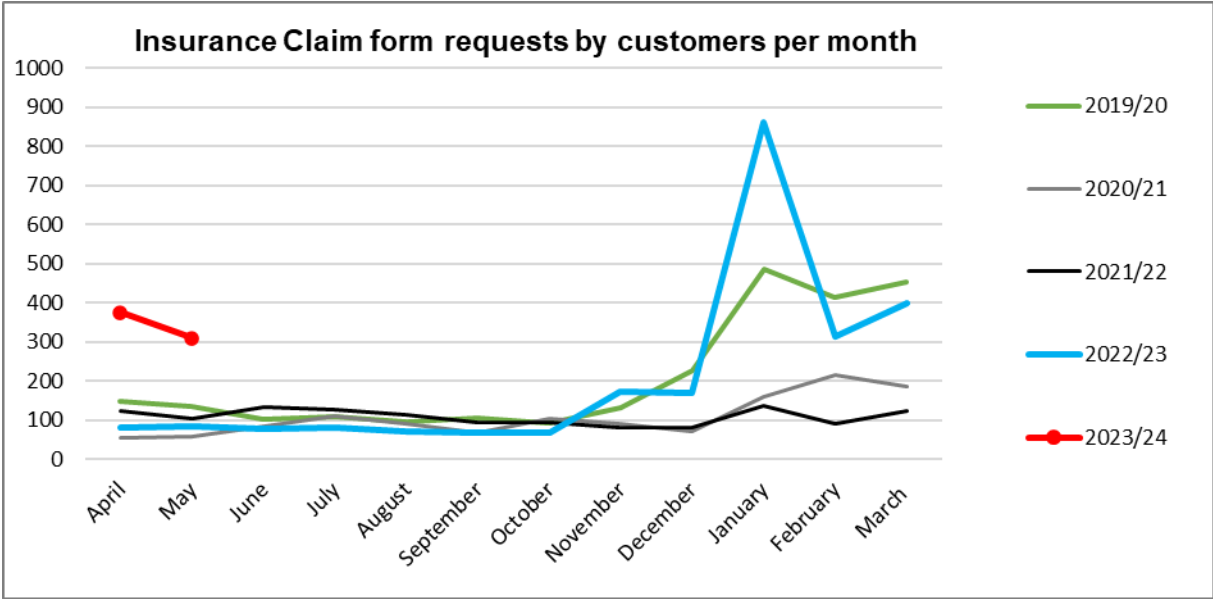


2.12 Essentially, the exceptional weather conditions had the effect of accelerating the end-of-life failure of structurally unsound or weaker roads. It is worth observing that well-maintained roads are able to withstand winter weather and this illustrates perfectly why it is important to invest before roads reach this stage of their life.

2.13 KCC’s highway stewards and highway safety inspectors responded dynamically and positively to address the huge volume of pothole reports it received, prioritising their repair using a risk-based approach. We have brought in additional resource such as JCB’s PotholePro, and are also delivering a £6m pothole blitz campaign which is due to start in early July.

2.14 As of the end of May, we estimate we have repaired around 150,000 square metres of potholes and other surface defects since December, equating to around 0.3% of the overall road network, though there is more winter damage to repair over the summer months as part of our pothole blitz campaign.

2.15 Pothole damage claims have also risen on the same scale of pothole reports – see below graph - but we continue to be able to successfully repudiate a very high percentage of these (93-97% since the start of 2023) as a result of our sound asset management and inspection regimes, as set out in the HAMP document and highway safety inspections manual.



2.16 Members may have seen media reports of concerns of a rise in fraudulent insurance claims, but we are confident that KCC has appropriate measures in place to detect false claims.

Road Condition

2.17 Roads deteriorate and fail for a number of reasons. These include heavy use (mainly by HGVs), oxidation caused by UV light, insufficient design and poor material choice, underlying geology, standing water, water ingress, and insufficient planned maintenance. Potholes will occur for a variety of reasons but the volume of them can be significantly reduced with a medium to long-term consistent investment approach as set out in the HAMP document.

2.18 Prior to the additional KCC investment mentioned in paragraph 2.3, the annual budgets for planned road maintenance in 2015/16 and 2016/17 were £16m and £13m respectively. This is reflected in a rise in the percentage of roads in poor condition in these years and those that followed – see table below - though there is some lag between investment and recorded change in condition due to the nature of the road survey regime.

% in poor condition	Year				
	2015/16	2016/17	2017/18	2018/19	2019/20
<b>A roads</b>	2.2%	3.3%	4.1%	4.1%	3.9%
<b>B roads</b>	3.2%	4.5%	5.6%	5.3%	5.8%
<b>C roads</b>	3.4%	4.8%	5.7%	4.7%	4.3%
<b>U roads</b>	20.3%	21.5%	23.2%	19.4%*	16%*

\* - the condition data regime for unclassified roads changed around this time, so this does not represent a real improvement in asset condition.

2.19 The July 2021 HAMP estimated then that the backlog of road maintenance was £464m (the estimated for all highway assets was £648.6m) and that the cost of maintaining steady state road asset condition was £50.3m per annum, both at 2021 prices. It also included medium-term forecasts that, by 2025, 5.2% of A-roads, 6.6% of B&C-roads and 18% of unclassified would be in poor condition – see below table. This was based on an annual effective spend of £45m at 2021 prices, consisting of our planned road maintenance budget of £40m and reflecting that a sizeable portion of our pothole blitz campaign focusses on delivering larger repairs and is delivered mechanically as contributes to road asset management.

% in poor condition	Year				
	2021	2022	2023	2024	2025
<b>A roads</b>	3.8	4.7	4.9	5.1	5.2
<b>B&amp;C roads</b>	4.5	5.4	5.7	6.2	6.6
<b>U roads</b>	17.3	17.4	17.6	17.9	18.0

2.20 Given the inflation and budget pressures mentioned earlier, officers are re-assessing those analyses, which will form part of a detailed HAMP update paper later, that will be brought to this Committee.

2.21 Applying inflation prices and using updated road condition data from our detailed survey regime, our provisional estimate is that our road maintenance backlog is currently £625m. (Our current estimate of the backlog of maintenance across all highway assets is £1,075m.) Our estimate of the average amount we would need to spend each year on planned road

maintenance at 2023 prices to keep our roads at steady state condition over the next five years is £73.3m.

2.22 In 2023/24, our planned road maintenance budget (our road asset renewal and preservation programmes) is £36.5m and taking into account our planned pothole blitz campaign we have taken the view that our *effective* annual road maintenance budget is around £39.5m leading to an annual shortfall of around £33.8m, assuming that the current level of funding broadly continues, and inflation returns to normal levels.

2.23 Officers have used that as an assumption of future annual budget to provisionally remodel forecast future road condition in advance of the detailed work that will inform that HAMP update paper – see table below.

% in poor condition	Year				
	2024	2025	2026	2027	2028
<b>A roads</b>	5.2	5.3	5.5	5.8	6.2
<b>B&amp;C roads</b>	5.6	7.6	8.0	8.5	9.3
<b>U roads</b>	18.1	18.9	19.2	19.6	19.9

2.24 As expected, the percentage of the road network forecast to be in poor condition and needing maintenance is expected to increase in all categories, and particularly B and C-roads. The variance between road categories is likely because many A-roads form part of [Kent's Resilient Highway Network](#) (see map [here](#)) which we prioritise investment in, since roads on this network are considered to be those most critical to the county's resilience to extreme weather events, industrial action and major events. Unclassified roads, whilst poorer in design and more liable to winter damage usually have much lower traffic volumes.

2.25 The HAMP update paper will include more in-depth and refined modelling of different investment options. However, we have modelled the likely effect on future road condition of increasing the annual planned maintenance budget by £10m and £20m, and this is illustrated below.

Current budget + £10m per annum

% in poor condition	Year				
	2024	2025	2026	2027	2028
<b>A roads</b>	5.2	5.2	5.3	5.5	5.7
<b>B&amp;C roads</b>	5.6	7.5	7.7	8.3	9.1
<b>U roads</b>	18.1	18.8	19.0	19.3	19.4

### Current budget + £20m per annum

% in poor condition	Year				
	2024	2025	2026	2027	2028
<b>A roads</b>	5.2	5.1	5.1	5.2	5.3
<b>B&amp;C roads</b>	5.6	7.3	7.6	8.2	9.0
<b>U roads</b>	18.1	18.7	18.8	19.0	19.0

2.26 Essentially, the basic principle is the more we invest and spend on highways asset management, the less future deterioration of highway assets we would be forecasting, resulting in fewer potholes. The opposite is true if funding is reduced or if the spending power of funding is reduced, for example through high rates of inflation.

### Drainage– £1m MTFP Revenue Savings

2.27 Our drainage assets, if properly maintained and cleansed, play a vital role in maximising the lifecycle of our roads and preventing potholes. Rain gullies remove water from the road surface ensuring that the bond between bitumen and aggregates is not prematurely weakened, and effective sub-surface drainage ensures that the structural integrity of our roads is not compromised.

2.28 Early this year, given the very challenging financial landscape KCC faced, it was decided to reduce the 2023/24 drainage revenue budget by £1m as part of 2023/24 County Council budget setting. The full effect of that reduction in terms of service levels and risk assessments will be included in the HAMP update paper mentioned earlier. However, there have been a number of significant improvements and developments in the way this asset management service is delivered, and these are outlined below.

- Our Cyclical Main Road (Yearly) and Minor Road Programme, which cleanses approximately 100,000 gullies per financial year, has moved to a lump sum payment mechanism, thus putting the contractual responsibility and financial risk on the contractor to ensure this service is resourced correctly and the programme is kept on track.
- The Minor Programme is a six-year programme in which 250,000 gullies are cleansed either annually, biennially and triennially, using a risk-based approach which takes many factors into account, and ensures that gullies are not needlessly cleansed.
- The High-Speed Road Programme will also be continuing and changes have been made to ensure all assets are cleansed during each annual visit.
- We shall also be continuing to resource Kaarbontech asset management system and hardware costs, which is critical for service delivery and asset management data collection.



- 2.29 Whilst the £1m revenue reduction will not impact the above regimes, or affect our capital drainage improvement programme, it will have a significant impact on KCC's ability to deliver routine revenue repairs to drainage system issues, identified via cyclical cleansing regimes or from customer enquiry requests. KCC will continue to fulfil its statutory duties but its ability to investigate and address blockages and other issues will be further restricted. This will include fewer dig-outs of blockages, more unresolved slow or non-running gullies etc, less CCTV surveys to investigate problems, less root cutting, less pipe lining and less soakaway cleansing being carried out. The backlog of reactive works will continue to grow.
- 2.30 This has long been an under-resourced area of work and will mean that there will be more areas of unresolved localised flooding which will in turn have a negative effect on road condition and will likely lead to an increase in emergency responses to flooding if any are judged to cause a risk to highway users.
- 2.31 All customer enquires will continue to be risk-assessed to determine if cleansing is required and checked against the cyclical programmes. We are also raising emergency cost codes, when a Met Office Weather Warning has been issued, as this allows us to capture all costs from each weather event.
- 2.32 All estimates concerning backlogs, steady state funding requirements and future asset condition are provisional and subject to change as officer complete their analysis for the HAMP update paper.

### **3. Financial Implications**

- 3.1 This paper is seeking to update committee members on our approach to road and drainage maintenance and the challenges we face and is not seeking to make any specific policy decision. It therefore does not have direct financial implications other than to identify the impacts of under-investment and budgetary savings.
- 3.2 A further HAMP update paper will be presented to this committee for a Cabinet Member key decision to be taken. This paper will reflect the effect of budget changes and inflation on the various asset condition forecasts, service level assessments and risk assessments contained in the 2021 HAMP. This update paper will inform 2024/25 budget setting.

### **4. Legal implications**

- 4.1 We continue to follow the asset management principles set out in the HAMP document published in 2021 setting out our carefully considered approach to highway maintenance, which helps us to demonstrate that we are a competent highway authority and are fulfilling our duty under the Highways Act 1980 to maintain a safe network.

### **5. Equalities implications**

- 5.1 There are no equalities implications.

## 6. Other corporate implications

6.1 N/A

## 7. Governance

7.1 N/A

## 8. Conclusions

8.1 The publication of the 2021 HAMP document, which set out our approach to road maintenance and made forecasts around future road condition, was made at a time of low and stable inflation. Since then, inflation in the highway maintenance sector has risen to very high levels, budgets have reduced and pothole number have risen as a result of poor wintry weather, resulting in bigger maintenance backlogs, larger steady state maintenance costs and bleaker asset deterioration forecasts.

8.2 We have also carried out an initial assessment of the effect of a MTFP saving taken earlier to reduce the drainage revenue budget by £1m. The main effect of this reduction will be to further reduce the ability of KCC to investigate and resolve drainage issues identified via public reports or through our cleansing regimes, and this will lead to longer backlogs and more incidences of localised flooding.

8.3 In both cases, these impacts will be fully assessed and quantified in a HAMP update paper which will come back to the committee later in the year.

## 9. Recommendation(s): *select relevant wording from below:*

9.1 The Environment and Transport Cabinet Committee is asked to note the contents of this update report.

## 10. Background Document

- *Highways Asset Management Plan 2021/22 to 2025/26 - A safer, more sustainable and more resilient highway network*

This document can be found via the following link - <https://www.kent.gov.uk/about-the-council/strategies-and-policies/transport-and-highways-policies/managing-highway-infrastructure>.

## 11. Contact details

Report Author:  
Alan Casson, Strategic Asset Manager  
03000 413563  
alan.casson@kent.gov.uk

Relevant Director:  
Haroon Chughtai, Director – Highways & Transportation  
03000 412479  
haroon.chughtai@kent.gov.uk