

CET/24/28
Cabinet
8 May 2024

County Road Highway Maintenance Capital Budget and Progress on 2023/24 Schemes and Proposals for the 2024/25 Programmes and the On-street Parking Account 2024/25

Report of the Director of Climate Change, Environment and Transport

Please note that the following recommendations are subject to consideration and determination by the Cabinet (and confirmation under the provisions of the Council's Constitution) before taking effect.

1) Recommendations:

That the Cabinet be asked to:

- (a) Note the progress on 2023/24 capital funded highway maintenance programme detailed in Appendices B and C to this report.
- (b) Note that due to the Department for Education Special Educational Needs and Disabilities Safety Valve Programme Grant funding agreement being more than anticipated at budget setting in February it is now possible to release £10 million of Capital Receipts to support Highways Infrastructure.
- (c) Approve an increase of £10 million to the Climate Change Environment and Transport 2024/25 capital programme funded by capital receipts.
- (d) Approve a further increase of £639,551 to the Climate Change Environment and Transport capital programme, being £455,000 in 2024/25 and £184,551 in 2025/26, funded by the DfT Traffic Signal Obsolescence Grant and Green Light Fund.
- (e) Approve the capital funded highway maintenance programme for 2024/25 as set out in Appendices D and E.
- (f) Approve that the detailed allocation of the available budget be determined by the Director of Climate Change, Environment and Transport, in consultation with the Cabinet Member for Highway Management, on the basis of the Highways Infrastructure Asset Management Plan, and within the limits of the approved budget.
- (g) Approve the programme funded from the On-street Parking Account for 2024/25 as set out in Appendix F.

2) Background/Introduction

This report deals with both capital funding for highway maintenance and the On-street Parking Account (OSP). It reviews the progress delivered in 2023/24 for the capital programme and details the proposed programmes for capital funding and OSP for 2024/25.

Restoration or replacement of highway components which are dilapidated due to traffic loading, weather impacts or aging of assets is funded through capital investment. Effective capital investment in the highway network will ensure assets are kept structurally sound over their design life enabling officers to better plan future budget expenditure and mitigate the impact of unforeseen high-cost revenue funded reactive repairs. When investment is made at the right time, long term maintenance costs will be reduced.

The 2024/25 indicative funding awarded to Devon County Council (DCC) from central government included in this report, was approved by Full Council in February 2024. Consideration has been given to the deteriorating condition of the road network, and the need for additional investment, to try to prevent a further decline in the condition of the asset. As such an in-year increase of £10 million to the capital programme is proposed as set out in the recommendations and further information below, utilising capital receipts funding now available following conclusion of the Government's SEND Safety Valve settlement. The commitment from Devon County Council for this year and Government to increased funding during the next 10 years, enables the Council to improve planning and decision making on the intervention timing and type of treatment to optimize network condition. This report seeks approval from Cabinet to allocate the total capital funding across the programmes and schemes proposed in 2024/25 as listed in appendices D and E.

An overprogramming element within the programme helps to manage in year pressures such as inflation or unforeseen delays to design or delivery schedules. The allocations include an anticipated overprogramming carry forward value of Local Transport Plan (LTP) monies from 2023/24 of £185,000 subject to approval of the revenue and capital outturn report, which is expected to be brought before Cabinet at the same meeting.

The report also seeks approval from Cabinet for the programme of work identified in accordance with the provisions of the Traffic Management Act 2004, to be funded from the On-street Parking Account as listed in appendix F.

3) Learning and Innovation

Like all authorities, Devon is facing significant financial pressures which have been compounded further by recent high inflation. The additional effects of climate change bring real challenges for the Council, in maintaining its road network. The Highways and Infrastructure Development Service has continued to focus on improving efficiencies, alongside innovation, recognising that in the absence of adequate funding, the Council must prioritise and make evidence-based decisions.

This continued learning can be demonstrated through benchmark data provided by the National Highway and Transport (NHT) Network. The NHT has analysed cost, network size and road condition data for a number of Highway Authorities over a number of years and this work demonstrates that the service has saved over £2 million in the 2022/23 financial year by adopting more efficient practices.

The Highway Infrastructure Asset Management Plan (HIAMP) approved in April of 2023 is positive output of consolidated learning in recent years, providing a framework to enhance existing good practice and improve the effectiveness of decision making. To better reflect current working practices, elements of the Plan are updated dynamically to better match the changing environment the Service operates in. This is driven forward by newly created Asset Owners who act as champions for individual asset groups, ensuring that changes are reflected upon within a risk framework, and improvement actions driven forward.

To meet the changing dynamics and challenges in managing highway infrastructure the service must continue to engage with the market sector to encourage innovation that will serve to provide the service with the means to be more versatile in meeting changing environmental, political and funding pressures. Increased engagement through formal programmes of testing and trialling of new proprietary treatments and technologies will inspire development and add value to how the service is delivered.

Building on the success of the Cross Asset Innovation Programme that was established in 2022/23, this year saw teams and individuals within the Service submit 34 innovation proposals. By using assessment criteria linked to service plan objectives this resulted in 11 innovations being proposed within the upcoming programme, including a trial of alternative materials for use on off-road multi use trails and relining of damaged drainage pipes to minimise network disruption.

In 2023 Devon County Council (DCC) was one of 7 successful bidders to ADEPT's (Association of Directors of Environment Economy Planning and Transport) Live Labs 2 programme, a £30 million Department for Transport (DfT) funded scheme aiming to decarbonise the local road network. DCC's bid, in partnership with Milestone Infrastructure and the University of Exeter, will receive £3.68 million to use on bringing innovations together on the A382 Major Road Network (MRN) scheme with the aim of constructing a carbon negative project. Following production of a business case, the project team received confirmation of funding in May 2023 and are also investigating additional sources of funding. Since receiving funding, the team have been exploring the construction sector and beyond for products and innovations that will reduce the carbon value of the project. In parallel with this work, the University of Exeter has been working on the carbon calculation tool. This work brings together DCC's and Milestone's knowledge to create a hybrid that is better suited to measure the carbon in large projects as well as the ongoing carbon for maintenance.

One of the key objectives of the Live Labs and Cross Asset Innovation programmes is to share learning. In an effort to improve the capture and cascade of this learning across the Service a central portal is being set up to store innovation records along with an easily completed innovation record sheet to ensure consistency.

The use of Artificial Intelligence (AI) in the capture and monitoring of asset condition is an exciting development which is developing at pace. This has also been recognised by the DfT who are currently reviewing its road condition data standards through the trial of emerging AI technologies. ([Road condition data and technology review: position paper - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/road-condition-data-and-technology-review-position-paper))

The service continues to observe the development of the new condition data standard with a keen interest and will also ensure that it keeps practically informed through engaging in Devon trials to establish how this technology could add value to our data source for risk-based decision making. Two trials are currently underway focusing on road condition and inventory capture of our strategic network and mirroring of our inspection process.

4) Capital Programme

Financial Considerations and Sources of Funding for 2024/25

In 2024/25 the indicative Highway Maintenance Block (HMB) funding is £29.346 million and consists of:

- HMB funding LTP 'Needs' based formula is £23.477 million and is for maintaining and improving the network, based upon local knowledge, circumstances and priorities. This is equivalent to the same level of funding compared with the previous three years.
- HMB funding 'Incentive' element allocation is £5.869 million and is a mechanism to enable an authority to receive additional funding over and above the 'Needs' based formula.

In addition to the HMB funding is the 2024/25 Potholes Fund indicative allocation of £23.477 million, plus an extra allocation of £6.663 million from the Network North announcement, which totals £30.140 million.

The Department for Transport indicative total of £59.486 million, was included in the capital programme, approved by full Council 15 February 2024. This is in line with the figures above.

On the 26 March 2024 the Council was informed that further to the application submitted to a challenge process, the DfT has allocated funding of £639,551 from the Traffic Signal Obsolescence Grant and Green Light Fund.

- the Traffic Signal Obsolescence Grant, to upgrade traffic signal systems by replacing obsolete equipment and,
- the Green Light Fund, to provide funding to tune up traffic signals to better reflect current traffic conditions and get traffic flowing.

It is proposed to increase the level of investment in the highways network in 2024/25 with a recommended increase of £10 million to the currently approved Capital Programme. This can be funded using capital receipts, avoiding the need for

additional borrowing, due to the Department for Education (DfE) Special Educational Needs and Disabilities Safety Valve Programme Grant funding agreement being more than anticipated when the budget was approved by Council in February 2024. At that time, it was necessary to plan for a significant requirement for capital receipts to support the Safety Valve however following the conclusion of discussions with DfE this requirement is lower than previously anticipated, making this in-year budget increase affordable.

Further funding support for the 2024/25 capital budget is expected as follows.

- £189,000 associated with ecological mitigation works for the Slapton Line scheme, is expected to be brought forward from 2023/24, subject to approval of the revenue and capital outturn report which is expected to be brought before Cabinet in May 2024.
- The existing capital programme also includes a continued budget funded by internal borrowing, for street lighting Central Management System. £2.057 million is profiled in 2024/25.

Table 1 summarises the funding sources for 2024/25 as:

	£'000
LTP Needs Formula Allocation 2024/25	23,477
Incentive Funding (Band 3) 2024/25	5,869
Potholes Fund 2024/25	23,477
Network North Funding	6,663
Devon County Council capital receipts	10,000
Traffic Signal Obsolescence Grant and Green Light Fund	640
LTP projected Overprogramming brought forward from 2023/24 (subject to approval)	-185
Central Management System Street lighting budget, funded by internal borrowing	2,057
A379 Slapton Line projected brought forward grant from 2023/24	189
Total	72,187

Table 1 – Funding Sources

5) Road Condition and Strategy

Assessment of road surface condition of classified roads throughout the United Kingdom is provided using automated survey vehicles (SCANNER) and through visual surveys which ensure a consistent method of determining and comparing road condition across the UK network. The main measure of road condition is the Road Condition Indicator (RCI), this is made up of several parameters, such as cracking and rutting which combine to give an overall measure of the state of the road and an indication of surface condition. The underlying data can then be used along with other data to inform decisions about maintenance and future programmes.

Under the Local Government Act, Local Authorities (LA) are required to provide, over a two-year cycle, data to the Department for Transport (DfT) on the conditions of their 'A', 'B' and 'C' roads. In addition, because the percentage of unclassified roads make up more than 52% of the total road network in Devon, we also measure the road condition of this important part of the network, and this survey is undertaken over a three-year cycle.

Based on the RCI data, sections of road are split into 3 categories (red, amber, green) representing the general condition of that piece of highway with red being the worst condition and green carriageways in a good state of repair.

The roads categorised in a 'red' condition indicate poor overall condition and are roads likely to require major maintenance soon, some possibly immediately. If left untreated, the cost of maintaining these roads increase significantly the longer they are left. Those roads within an 'amber' condition are roads that are in a reasonable condition but have some apparent deterioration requiring further investigation to determine the optimum timing for planned maintenance. Often intervention maintenance on these roads will extend the life of the road at a considerably reduced cost than if the section of road was allowed to deteriorate to a 'red' condition category where more extensive and major works will be necessary.

Road Network

Figure 1 shows the proportion of classified and unclassified roads across the network.

Almost every journey begins and ends on local roads. The local road network is of critical importance in connecting people and driving economic growth and should be treated as an important national asset which must be managed appropriately.

Individuals, families, and communities in Devon depend on their local road network, and it acts as the key arterial system that drives economic growth in villages, towns and cities. Unclassified roads combined with 'C' roads make up 87% of Devon's total road network.

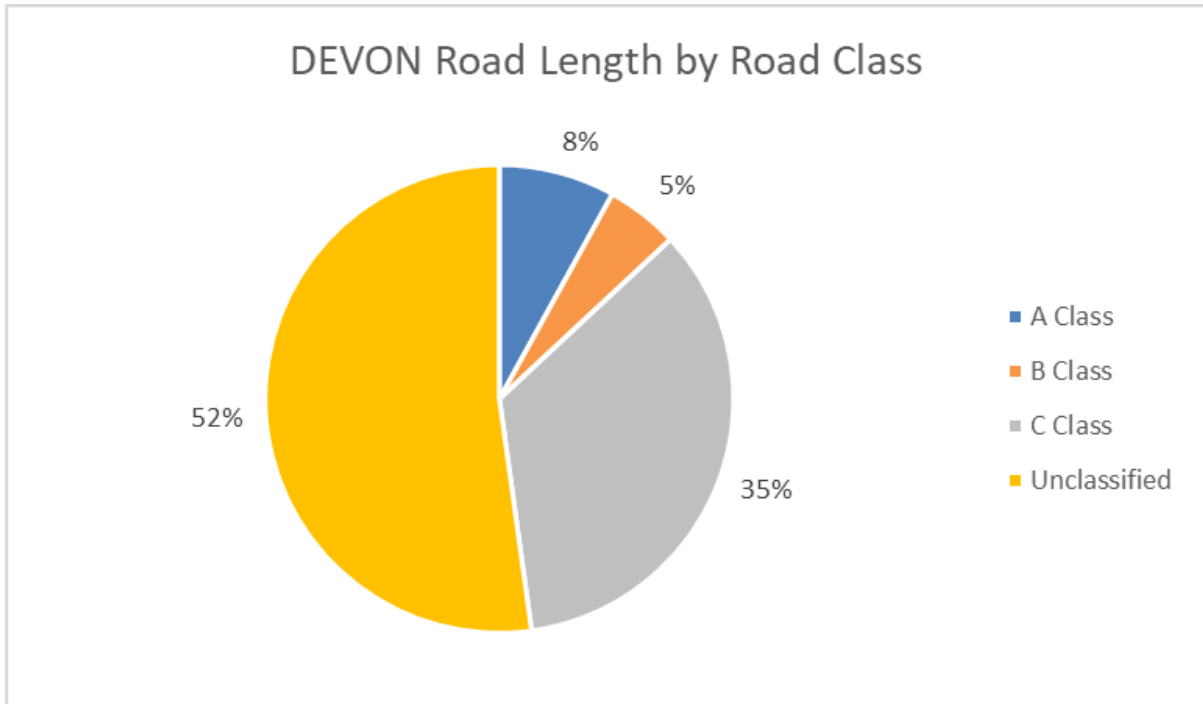


Fig 1 - Devon's Road Length by Road Class

6) Road Statistics and Analysis

The Council has a commitment under the refreshed Highway Infrastructure Asset Management Plan to maintain the 'A' and 'B' class road network to a minimum condition of below 4% in the 'red' national indicator band. This commitment absorbs a significant part of the funding streams with the remaining budget spread across Devon's lengthy road network of 'C' and unclassified roads.

Reviewing the 2023 survey data for Devon, the percentage of roads categorised in red condition was:

- 'A' road's 2%
- 'B' road's 3%
- 'C' road's 13%
- Unclassified road's 23%.

Appendix A, Figures 1 to 4 inclusive, provides a summary of Devon's RCI data in a graphical form over time by road classification using the national indicator bands.

The condition of the A and B road network remains on target for the 12th successive year, and the condition of C road network has improved, however, there is a further decline in unclassified roads. The graph in Fig.2 below indicates how the effect of inflation together with a reduction of funding has impacted on the unclassified road network and demonstrates the erosion of what has been achieved with the former higher level of annual investment.

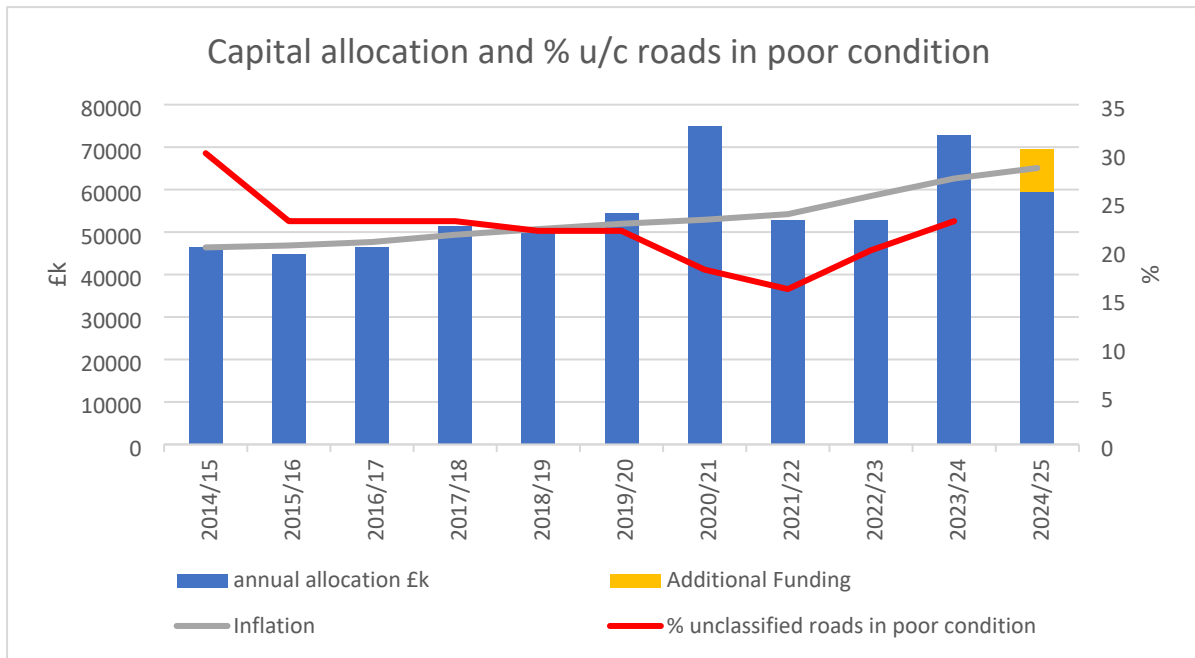


Fig 2. Impact of inflation and funding on unclassified road condition

When additional funding has been available, the condition of roads has improved. The additional boost in funding of £16 million in 2023/24 (additional Pothole Fund and Network North Funding) is likely to have a positive impact on the next year's survey. If the 2014/15 allocation had increased in line with inflation, the 2024/25 settlement would have been £65.083 million which is an additional £5.597 million. Whilst there is a reduction in investment this year, the Government have signalled additional allocations for the next 10 years in the Network North statement identifying an intention to invest an additional £208 million in allocation to Devon between 2025 and 2034. The profile of this additional funding is currently unknown.

For many years funding restrictions have seen a growing reliance on preventative and short-term less expensive treatments, however such treatments, although providing an excellent short to mid-life solution, cannot be used indefinitely. At some point more robust treatments are required to avoid the repetitive cycle of pothole repairs. With Devon's road network being predominantly rural and with instances of minor roads structurally poor, a high proportion of the network is more vulnerable and susceptible to the formation and propagation of potholes. In addition, the long term under investment in the asset has resulted in a very fragile road network that deteriorates rapidly during periods of extended wet weather or freezing temperatures. The increased funding during the next 10 years, enables the Council to improve planning and decision making on the intervention timing and type of treatment to optimize network condition.

Although most of Devon's bridge stock remains classed as "very good" to "good", the large size of Devon's bridge asset still means there are over 300 bridges (10%) classed as "fair" and 21 "poor" to "very poor" condition. Those bridges with a "poor" condition rating are managed through mitigations such as weight restriction signs,

physical measures, monitoring or strengthening to reduce the risk to the travelling public.

It should be noted the condition scores do not accurately reflect a safety related defect. The Council's bridge engineers undertake an ongoing review of the bridges with fair to very poor condition scores to ensure issues relating to safety are dealt with. In line with good industry practice, bridges are subject to a General Inspection every 2 years and the Council's bridge inspectors ensure any serious safety related issues are raised with the Bridges and Structures Asset Management Team and dealt with urgently.

Programmes of work over recent years are showing the condition of the retaining wall stock continues to require a large proportion (30%) of the Bridge Assessment and Strengthening (BAS) budget being allocated to the maintenance of this asset type. Inspections of retaining walls continue to obtain a better understanding of condition to allow, where possible, planned rather than reactive work to be undertaken to manage retaining walls in future years.

7) Capital Highway Maintenance Programme: 2023/24

Progress on the 2023/24 Highway Structural Maintenance Programme is shown in Appendix B of this report and the 2023/24 Bridges Assessment and Strengthening Programme can be found in Appendix C.

The Prime Minister's Network North announcement on 4 October 2023 included a commitment to an additional £8.3 billion for local highway maintenance nationally from 2023/24 -2033/34, over and above what local authorities were expecting to receive. The first £150 million of this was allocated in the 2023/24 financial year, in addition to the £200 million already announced at Budget 2023.

At the end of November 2023 DCC received an additional £6.663 million of funding from the Network North funding for local highways maintenance, particularly for the resurfacing of carriageways, cycleways, and footways to prevent potholes and other road defects from occurring.

Of the additional funding, approximately £1.5 million was allocated to the funding of extra serviceability patching gangs to prepare the network in advance of the more extreme winter period. This aimed to build resilience and arrest the traditional spike in the creation of potholes during this period. The remainder of the funding was allocated to surfacing and larger patching schemes which will provide targeted resilience across the network.

More information and a list of sites can be found here: [Additional Maintenance Funding 2023/24 – Network North - Roads and transport \(devon.gov.uk\)](https://www.devon.gov.uk/transport/roads/additional-maintenance-funding-2023-24-network-north)

Since 2020 there have been additional challenges due to the impact of high inflation. This has had an impact on the spending power of the items within the programme. However, prudent monitoring of progress has ensured successful delivery of the

annual programme. This has been achieved through the remarkable efforts of our officers and a collaborative approach with our supply chain partners.

In 2023/24 a total of 212 bridge and structures projects were included in the annual programme for design, inspection or works. As reported last year the number of landslides and retaining wall failures has increased in recent years and the Bridge Assessment budget has been under increasing pressure year on year to cover this unplanned engineering work. In instances where embankment failures and slippages occur affecting highway stability the funding for this work will be provided through the Highway Structural Maintenance (HSM) budget.

A programme of inspecting and testing circa 10,000 ageing columns has been undertaken during 2023/24 to understand their condition. In parallel, over 1,000 ageing street lighting columns have been replaced.

In support of the Authority's Carbon Reduction Plan and to save revenue funding on energy, £8.7 million was allocated to convert 45,000 street lighting assets, which are principally in residential areas, to LED over a three-year period. This funding concluded in 2023/24, taking the total of LED conversion to circa 69,000 made in total. Although the ongoing programme has had some delays outside the control of the Service, over 5,000 conversions were carried out during 2023/24. There remains just over 10,000 units that have not yet been converted.

The Traffic Signal Government Grant has been used to replace several existing traffic signal sites in the 2021/22 and 2022/23 financial years. This has allowed for the full replacement of traffic signal equipment at those sites with all equipment being replaced with the extra low voltage traffic signal equipment and LED signal heads, helping to reduce power consumption and subsequent carbon emissions whilst simultaneously improving safety at these sites. Additionally, service ducts were repaired where required to ensure these sites can be maintained more easily in the future.

In total, 4 traffic signal junctions have been replaced with updated equipment whilst 10 Toucan crossing sites have been replaced.

8) Capital Highways Maintenance Programme: 2024/25

The 2024/25 total allocation of £72.187 million (as detailed in Table 1) is to be allocated funding as follows:

	£'000
Highway Structural Maintenance	64,707
Bridge and Structures Programme	7,480
Total	72,187

Table 2 – Programme Allocation

A detailed breakdown of the respective programme elements can be found in Appendix D and E.

This includes the additional £6.663 million Road Resurfacing Fund for local highways maintenance which will enhance the volume allocated to surface treatments and larger patching schemes which will provide targeted resilience across the network. More information and a list of sites can be found here:

[Additional Maintenance Funding 2024/25 – Road Resurfacing Fund - Roads and transport \(devon.gov.uk\)](https://www.devon.gov.uk/Additional-Maintenance-Funding-2024-25-Road-Resurfacing-Fund-Roads-and-transport)

Appendix D also includes the proposed extra £10 million to be invested by Devon County Council utilising capital receipts, which is focussed on increasing the amount of patching (£7.25m), drainage repairs (£2m) and acceleration of the road marking programme (£0.75m) to improve road safety and quality of the road network.

An annual cross-asset prioritisation exercise has been conducted as recommended in the Well Managed Highway Infrastructure Code of Practice. This covered all major asset groups, focusing on needs and improvement actions as identified in the HIAMP. This resulted in allocations being adjusted to best deliver identified maintenance standards and ensuring that best use is made of resources.

In addition to the Term Maintenance Contract (TMC), there are several other contracts in place that deliver other significant elements of the capital programme. A framework contract provides alternative supply chain delivery options for surfacing and patching works, high friction surfacing and in-situ and ex-situ recycling. There are also separate contracts for the delivery of specialist works such as surface dressing, micro texturing and footway slurry sealing. A new contract for road restraint systems has recently commenced also.

Key elements of the proposed programme include:

8.1 Highway Structural Maintenance (HSM): Principal Roads (A class roads)

Overall condition of principal roads has remained steady in the past 3 years. To ensure principal roads are retained at less than 4% 'red' condition, it is proposed to allocate £3.5 million for carriageway resurfacing and patching. This will ensure those roads which need immediate attention are treated whilst also optimising the treatment for planned maintenance on those roads which are beginning to show signs of deterioration.

8.2 Skid Resistance Treatment (SCRIM)

Skidding resistance surveys (SCRIM Surveys) are undertaken by local authorities and National Highways. They provide a measure of the road surface contribution to the frictional forces developed between a vehicle's tyres and the road when accelerating, braking or cornering. Skidding resistance figures do not necessarily reflect safety levels on the network but rather sites where further investigation is required.

Devon limits routine annual SCRIM surveys to the principal (A class) road network only as it is considered neither affordable nor practicable for all roads on the highway network to be surveyed for skid resistance. The remaining untested network is covered under the strategy in the Annual Wet and Dry Collision Review, other roads

identified as requiring further investigation are also included in the programme of assessment.

It is not possible to treat all parts of the principal road network that are currently below the Devon's investigatory level therefore the work is prioritised and limited to potentially high-risk sites with a history of collisions. This includes sites with a reported skidding resistance deficiency and a history of collisions on wet surfaces, others with a high deficiency and collisions on dry surfaces.

The allocation for SCRIM deficient sites is £1.7 million.

8.3 All Roads

Key elements include:

8.3.1 Local Asset Programme

The ongoing evolution in collaborative working both across the service and with partners and supply chain ensures work programmes are developed having access to a wide scope of knowledge that informs on the best and most practical solutions to engineering works. Collaboratively it ensures the approach utilises the best mix of tried and tested and innovative solutions to deliver best value and quality whilst adding to the pool of knowledge and expertise to drive through continuous improvement. With programme development and scheme selection increasingly looking towards a local perspective, there is confidence that a combination of technical data in the form of asset management principles and local need ensures limited resource is being prioritised to those areas where the local need is the greatest.

A significant element of the HSM capital budget is allocated to the Local Asset Programme, which for 2024/25 is £18.013 million (25%), it is essential that scheme selection is based on a combination of asset management principles and local priorities. Using an integrated approach that combines both these important attributes ensures the determination of allocation through the consideration of factors such as road length and condition, usage, potholes and other defects and footway length and condition along with local priorities that review physical condition and knowledge secured from Neighbourhood Teams and discussions with local members, communities and Parish and Town Councils.

An integrated approach to repairs and maintenance both in terms of highway improvement works and also the inclusion of external undertakers ensures many activities are combined where possible under one traffic management establishment, thereby reducing the disruption to the travelling public.

8.3.2 Preventative Programme

Preventative maintenance treatments such as, but not limited to, surface dressing, micro asphalt and footway slurry sealing are used to preserve and extend the life of road pavements and footway surfaces that are already in a reasonable to good condition. By their very nature they are intermediate maintenance treatments that

can often be used more than once in the life of a surfacing and are relatively low cost and of low carbon usage offering good value for money and benefits in terms of carbon footprint. Crucially these treatments should be considered before serious deterioration has taken place as they do not provide structural protection however, they do restore texture and protect the surface from further deterioration thereby arresting the development of potholes within the pavement.

The preventative programme is the backbone of the maintenance programme and is a major activity that drives other aspects of current and future work programmes such as, patching and drainage. Consequently, investment in this area of treatment is considered fundamental in the management of the deterioration and depreciation of the network, thus in 2024/25 the service is investing £7.5 million in a preventative programme. This expenditure is targeting 120 surface dressing sites totalling in excess of 1 million sq.m. including 66,000 sq.m. on the strategic road network. In addition, 19 sites will receive micro asphalt treatment totalling 55,000 sq.m with 70 footway sites (70,000 sq.m) also receiving full slurry seal treatment.

8.3.3 Minor Road Strategy

A significant portion of the HSM budget is being targeted towards minor repairs across the network, this pro-active strategy endeavours through early intervention to capture deterioration before the situation becomes severe and necessitates more extensive treatments.

Positioned strategically around the county, the fleet of Dragon Patchers provide an additional option to more traditional methods of patch repairs for highway improvements. The machines focus on the effective and efficient repair of selected small to medium sized patches on all parts of the network. In 2024/25 £2.2 million is allocated to support the Dragon Patcher fleet in the delivery of minor patching programme.

Traditional highway improvement hand patching is allocated £14.55 million and will deliver the programme of serviceability patching and assist in supporting the Dragon Patcher where required. It will focus on localised issues identified by officers and members of the public in respect of serviceability patches and small to medium sized patches that are unsuitable for Dragon Patcher treatment.

8.3.4 Road Restraint Systems

Road Restraint Systems (RRS) are roadside safety barrier that contain and redirect vehicles. They reduce the severity of crashes for occupants and the public. Designed and installed on the verge and central reservations of road, they are used to contain and redirect errant vehicles. Allocation to RRS in 2024/25 is £0.6 million and this will focus on the continued delivery of the RRS strategy based upon the upgrading and replacement of systems on high-risk sites. Work continues in delivering elements of the bridge vulnerability programme where impact protection for elements of structural assets on high-speed roads require upgrading. Further work being carried out in the upgrade of legacy road restraint systems on our minor road network.

8.3.5 Highway Lighting Column Upgrades and LED Replacement

15% of street lighting columns are over 40 years old and a significant proportion of younger columns have been identified with specific failure modes that need to be checked. In response to this, £1.5 million has been made available annually to facilitate a continuing programme of column replacement, to mitigate the liability that this represents.

Testing columns was a key process last year and enabled high risk columns to be prioritised. During 2024/25 this work will continue with the risk-based column replacement programme along with testing a further 10,000 columns. Inspections and testing have enabled better identification of risk and management of stock.

A further £2.057 million was approved by Council for the street lighting Central Management System. The project will accelerate the installation of the Central Management System to achieve 80% coverage across the county, therefore 65,000 lanterns. Remote fault monitoring of the asset will be possible, helping to reduce site visits. A policy review with appropriate sign-off will enable extended dimming profiles to be implemented to reduce energy costs and carbon in addition to facilitating requests from communities for street lights to be turned off.

8.3.6 Traffic Signal Replacements

The traffic signal upgrade programme continues over the coming year with £680,000 being invested in a program to refurbish 4 pedestrian crossing and 2 traffic junctions during 2024/25. This work will improve the safety of the asset and by the use of modern controllers, detection equipment and extra-low voltage (ELV). Additionally the Government has awarded £139,551 from the Traffic Signal Obsolescence Grant for further refurbishment, and £500,000 from the Green Light Fund to tune up traffic signals to better reflect current traffic conditions and get traffic flowing. This is estimated to be split £455,000 in 2024/25 and £184,551 in 2025/26.

8.3.7 Bridges and Structures

The Bridge and Structures maintenance allocation for 2024/25 is £7.5 million. The 2023/24 projections estimate £20,000 overprogramming, which will be the first call on the 2024/25 budget.

The programme for 2024/25 will continue with further strengthening, refurbishment, and replacement projects to improve the resilience of the network. The ongoing programme of inspections and major examinations will continue to ensure the risk of failure of an asset is kept to an acceptable and manageable level. The first stage of safeguarding of the public by modifying parapets on high bridges was completed in 2021/22, with an ongoing programme of work being delivered over the past 3 years and further work on one other identified bridge to continue in 2024/25.

8.3.8 Storm Damage (resilience contingency)

In line with DfT requirements for highway authorities to make provision within their funding allocation, a resilience contingency reserve of £2.212 million has been incorporated within the programme should unforeseen damage be experienced

during the year.

8.3.9 Cycleways and Public Rights of Way Network

The refreshed Highway Infrastructure Asset Management Plan has a key objective of making active travel a realistic alternative for both business and leisure journeys on the network. This is good news in terms of public health and the wellbeing of society, but the impact of increased footfall and cycling means an increase in maintenance. Further to works carried out in 2023-24 to replace a boardwalk / bridging structure on the Exe Estuary Trail, the programme for Renewal of Access Trails infrastructure has been allocated £750,000. A further £1.2 million is being invested into other elements of the public rights of way and cycleway network to ensure these amenity transport assets continue to be maintained to a safe and usable condition and promote active travel.

8.3.10 Cross Asset Innovation Programme

Approximately £1.5 million has been allocated through a Cross Asset Innovation Programme. Innovation is vital, especially in allowing the service to best meet changing environmental, political and funding pressures.

The recently approved Highway Infrastructure Asset Management Plan (HIAMP) also highlights that in response to the many challenges the council faces, it needs to be agile and continually review its processes, looking for improvements and efficiencies through innovation and adopting new ways of working.

Following submissions from across the service, 11 innovations/campaigns were approved including a trial of alternative materials for use on off road multi use trails and relining of damaged drainage pipes to minimise network disruption.

8.3.11 Minor Traffic Management Improvements

A programme of renewal for road markings at mini-roundabouts and pedestrian crossings is being delivered through the Minor Traffic Management Improvements programme of £1.95m. This programme of work will be undertaking and progressing annual HATOC waiting restriction requests (this will see works completed on previous years commitments in East Devon and Exeter, along with design and advertising of new requests received county wide in October 2023). The programme also includes providing disabled parking facilities to assist residents with parking near their homes; it is typically expected that around 500 bays will be provided each year. There will also be work undertaken to review and introduce residents parking (and other restrictions) in key communities, review speed restrictions (providing vehicle activated signs where appropriate) and undertake signing route reviews.

9) Options/Alternatives

The current approach to scheme selection uses a preventative regime based upon need and sound asset management principles that optimises the use of available funding to reduce whole life maintenance costs. An alternative to this preventative regime would be to repair roads on a 'worst first' basis by focusing maintenance on the sections of road in the poorest condition.

Experience and learning gained from working differently during the last few years, has demonstrated that a combination of both traditional approaches combined with greater influence and input from a community perspective offers a more transparent service. Greater local involvement offers a more robust and pragmatic focus on scheme selection by ensuring those locally identified important roads are 'fit for purpose'.

It is important however to note that any departure from our asset management approach as defined in the HIAMP could adversely affect future financial settlements from the DfT who see the use of sound asset management principles as fundamental in delivering cost effective maintenance solutions. It is therefore essential that developments within the plan continue to incorporate and amalgamate these and other principles within the assessment of its works programmes as the DfT have clearly indicated they will take this into account in future submissions for funding.

10) On-Street Parking Account

The expenditure of on-street parking income is restricted by the Road Traffic Regulation Act 1984. The costs of operating the on-street parking service is the first call on the income held in the On-street Parking Account (OSP). Any remaining surplus must then be used in accordance with the eligibility criteria set out in Section 55 of the Act, with surpluses used for:

- The provision or operation of public transport services
- The provision of facilities for public transport services
- Highway or road improvement projects
- Environmental improvements

The 2024/25 Highways Maintenance budget includes |£900,000 for highways cyclic revenue maintenance works funded from the OSP. These works include maintenance of trees, drainage and all highway grass cutting undertaken by the Authority.

Additionally, a £3.368 million subsidy is provided to bus services from the account. This represents almost 60% of all subsidy provided by the Council. There are over 200 bus routes in Devon of which only around 30 operate commercially, i.e., with no financial support. Some communities are wholly reliant on subsidised routes with no services that are operating at a sustainable commercial level.

Full details of the proposed OSP non-operating expenditure for 2024/25, totalling £5.456 million, are shown in Appendix F.

The estimated balance of the account is now expected to reduce from £570,000 at 31 March 2024 to £217,000 by 31 March 2025.

Expenditure charged to the OSP is regularly reviewed to ensure the fund is used effectively. It is likely that a review of spending from the account will be required in the next 12 months.

Traffic Management Plans

There continues to be a high demand from communities for the review and implementation of parking restrictions. Larger schemes looking at community wide changes (including measures such as residents parking) are served via the £250,000 Traffic Management Plans budget in the OSP.

The current level of demand means that the 2024/25 programme is filled with existing commitments, and a full programme of works has been developed by the Traffic Management Team with regular updates shared with Members.

Due to continued high levels of demand, requests for new schemes are prioritised based on traffic management need, sustainability, and community support for inclusion in future programmes to ensure resource and monies are used to best effect. To ensure sustainability, schemes should be substantially self-financing, including components of residents parking and / or pay & display, in line with the policy on new residents parking schemes.

11) Consultations

The results of the 2023 National Highways and Transport (NHT) Public Satisfaction Survey reflect public perception of performance, importance, and the desire for various activities to be funded. The overall perception of highway maintenance in Devon has reduced and is slightly lower than the national average. However, in comparison to similar County Councils in a comparator group, Devon remains slightly above the average. The summary of the survey undertaken in June 2023 reflects the Council's road condition survey, with respondents feeling that road condition is worsening. This also is reflected in the national results which shows a downward trend.

Analysis shows that the authority has strengths in street lighting maintenance and footway repair. The results show that condition of the highway network and the speed and quality of repairs are important to the public. The public would also like to see more funding directed to improving the condition of roads.

Although not a consultation it is important to note that a petition has been received from Mid Devon District Council with 517 signatories asking for highway improvements. A Notice of Motion has also been received from Torridge District Council raising concerns about the conditions of the roads in Torridge.

12) Strategic Plan

The priorities laid out in the Council's Strategic Plan 2021 - 2025 have been used to shape the new Highways Infrastructure Asset Management Plan which in turn determines the priorities of the Highways and Traffic Management service.

The condition of highway assets and the public rights of way network directly impacts the safety and resilience of communities and helps them to connect with people and places that are important to them. This is important for wellbeing and improving health.

The highway network is often described as the arteries of the economy and a reliable and resilient network is important to support economic recovery and make Devon a fairer place for people and families struggling the most.

13) Environmental Impact Considerations (Including Climate Change)

The ability to efficiently transport people and goods around the County underpins Devon's economy and has a direct impact on the quality of the environment. When maintenance work is undertaken, it is managed to ensure that the effect on the surrounding environment is kept to a minimum.

As part of DCC's drive to become carbon neutral by 2030 a business model has been developed for carbon reduction in maintenance and construction works. In 2022, a new process went live with a carbon webform, a tool used by DCC contractors to supply carbon data associated with works being delivered for DCC. Further algorithms have been developed in conjunction with Exeter University to automatically turn the data into carbon emissions figures. These are displayed on data dashboards and enable various audiences to make informed decisions for change. The information on the dashboards is being used to establish how the Council utilises different treatments or to drive through procedures and processes that will reduce our carbon usage.

Using the carbon data, several positive changes have been introduced to reduce CO₂e levels. Examples include:

- The move to warm mix asphalt, which uses approximately 12% less carbon during the manufacturing stages.
- Utilisation of concrete mixes with lower levels of cement, a product with high embodied carbon.
- Cold applied road markings trials.
- Introduction of sustainably sourced hydrotreated vegetable oil (HVO) as an alternative fuel source.
- Electrification of cyclical works gang equipment.

The carbon negative Live Labs 2 scheme referred to in Section 3 above will also offer great learning opportunities. Whenever possible designers are encouraged to use recycled materials and secondary aggregates.

Prior to installation, highway construction materials are subjected to rigorous testing to ensure their suitability within the works and how their use impacts the

environment. All construction contracts managed by the Service include recycling options to ensure that the use of natural resources is reduced.

A service level Decarbonisation Strategy was developed in August 2023 and is available on the webpages: [Highways and Traffic Management, Engineer Development and Structures Service Decarbonisation Strategy - Roads and transport \(devon.gov.uk\)](#) This sets the approach to the reduction journey for the Service and includes several activity-based targets to help drive behavioural change.

The ability to accurately report total carbon emissions associated with maintenance and construction works has improved significantly but remains a work in progress. It is estimated that in the financial year 2022/23 that at least 30,800t CO₂e was generated through highway maintenance works. However, this figure underreports areas such as safety reaction, Dragon Patcher, capital schemes and grass cutting.

Further calculations have been undertaken on the emission from operating depots, which has identified a further emission volume of 164t CO₂e.

Based on the Department for Energy Security and Net Zero's (DESNZ) traded carbon values for modelling purposes the total emissions would have a carbon offset value of just under £2 million.

It is now estimated that the authority has saved over 18 million kWh of energy since it embarked on the switch to energy efficient LEDs in 2016. This equates to an annual financial saving of £6 million during this period at today's prices. The remaining lanterns are planned to be upgraded to LED where possible over the next 12 months, in conjunction with a continuing programme of column replacements. The contractor has also committed to and is progressing towards being carbon neutral by 2030.

The carbon savings made by the LED programme has resulted in a current annual saving of 10,900t Co₂e compared to usage in 2016. This is equivalent to an 80% saving.

Within the traffic signals asset, the use of extra-low voltage and LED signal heads has reduced the annual energy consumption by 33%.

The DCC fleet is also benefiting from the shared use of our Term Main Contractors HVO fuel supply where possible. As the current vehicle fleet comes up for replacement, electric vehicles are being used. The Highways and Traffic Management Service currently have 8 in operation in the fleet.

14) Equality Considerations

Where relevant, in coming to a decision the Equality Act 2010 Public Sector Equality Duty requires decision makers to give due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other prohibited conduct;

- advance equality by encouraging participation, removing disadvantage, taking account of disabilities and meeting people's needs; and
- foster good relations between people by tackling prejudice and promoting understanding

in relation to the protected characteristics (age, disability, gender reassignment, marriage and civil partnership (for employment), pregnancy and maternity, race/ethnicity, religion or belief, sex and sexual orientation).

A decision maker may also consider other relevant factors such as caring responsibilities, rural isolation or socio-economic disadvantage.

An Impact Assessment has been prepared which has been circulated separately to Cabinet Members and also is available on the Council's website at: [Corporate websites - Budget Impact Assessment 2024-25 09-01-2024 V1 Published.pdf - All Documents \(sharepoint.com\)](#)

15) Legal Considerations

The lawful consequences of the recommendations have been considered in the preparation of this report.

With the condition of parts of the network there is likely to be an increase in user dissatisfaction and complaints which could lead to an increase of challenges to the Authority.

16) Risk Management Considerations

The proposals contained in this report have been assessed and all reasonable actions are taken to safeguard the Council's position.

The Service has adopted a risk-based approach to the management of highway infrastructure maintenance, including setting policy and strategy, establishment of inspection and condition assessment regimes, determining priorities and programmes, procuring the service and the management of all associated data and information.

This is undertaken against a clear and comprehensive understanding and assessment of the risks and consequences and is in accordance with local needs (including safety), priorities and resources.

Inability to undertake sufficient planned and general preventative maintenance work at the optimum time will result in an increased depreciation to the highways asset. This will lead to increased deterioration and defects and consequently, increased repair costs with potential for claims, which will put pressure on revenue budgets.

Where risks have been identified which could disrupt the capital programme by causing higher than anticipated costs or delays, such as those associated with cost, inflation, or inclement weather, the implications have been accounted for in preparing

this report. This includes developing long term programmes and the provision for reasonable contingencies in the estimates for capital highway and bridge maintenance schemes.

17) Public Health Impact

There is considerable uncertainty in assessing the overall impact to public health as a specific result of underfunding. The approach to managing safety and risk across the network is closely monitored with many effective interventions, policies, and targeted investment in place to minimise any impact on public health. However, a deteriorating network challenges the Service's ability to continue to meet current expectations and invariably this will affect how it meets and delivers to those challenges. Clearly impacts will vary, from sustainable travel alternatives through to the health effects from increases in accidents or the impact of community severance as a result of road conditions and increased travel disruption.

18) Reasons for Recommendations and Conclusion

It is important to report to Cabinet on the performance of the highway network.

The DfT capital settlement for 2024/25 provides funding for capital maintenance of highway assets and this report sets out proposed programmes to optimise their availability and safe use for the travelling public. The settlement does not keep up with inflation and so a further investment of £10million is proposed from Devon County Council. Approval of schemes and programmes of highway maintenance will enable the delivery of the 2024/25 plan to proceed.

The report alerts Members to the fact that Government provides insufficient capital funding to meet all network maintenance needs. However, the proposed programme is designed to make best use of the available financial resources using the Cabinet endorsed Asset Management approach.

The Network North funding announcement signals a welcome step change in Government funding during the next 10 years. During the forthcoming year the service will be developing longer-term strategies and programmes of work to make best use of this.

Meg Booth

Director of Climate Change, Environment and Transport

Electoral Divisions: All

Cabinet Member for Highway Management: Councillor Stuart Hughes

Local Government Act 1972: List of background papers

Nil

Contact for enquiries:

Name: Joe Deasy

Telephone: 01392 383000
Address: County Hall, Exeter EX2 4QD

County Road Highway Maintenance Capital Budget and Progress on 2023/24
Schemes and Proposals for the 2024/25 Programmes and the On-street Parking
Account 2024/25

Appendix A to CET/24/28

Road Condition Indicator (RCI) by Year

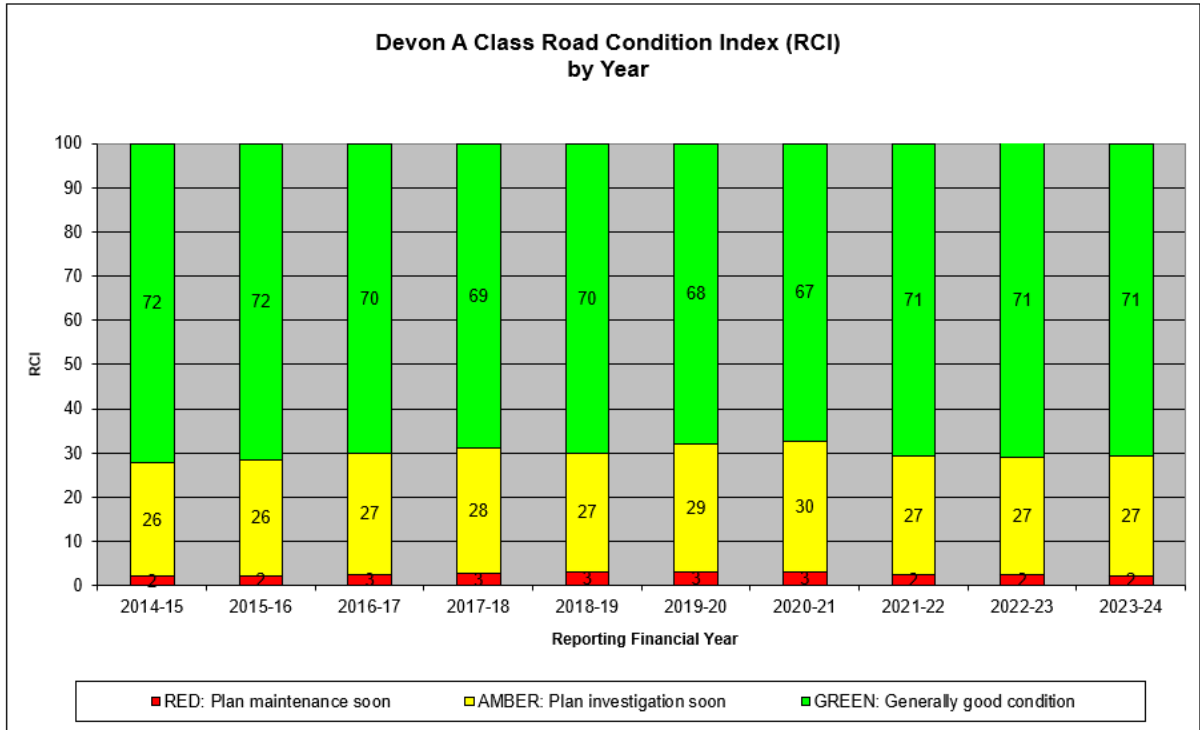


Figure 1

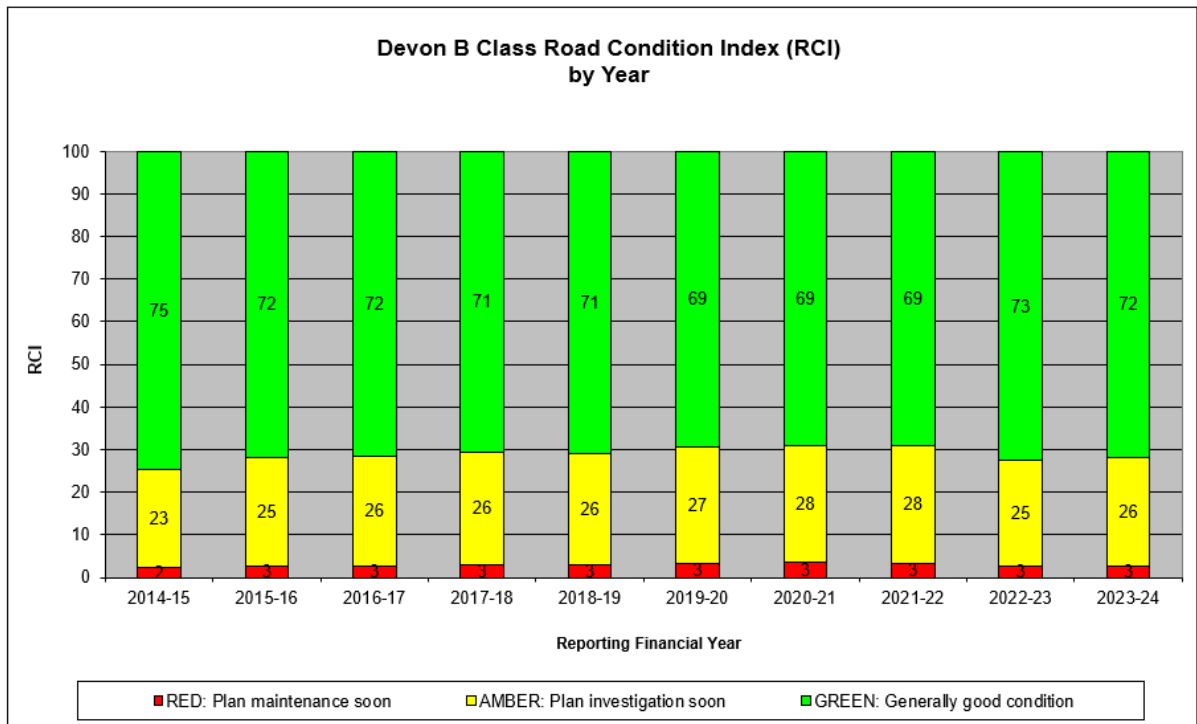


Figure 2

Appendix A to CET/24/28 continued

Road Condition Indicator (RCI) by Year (continued)

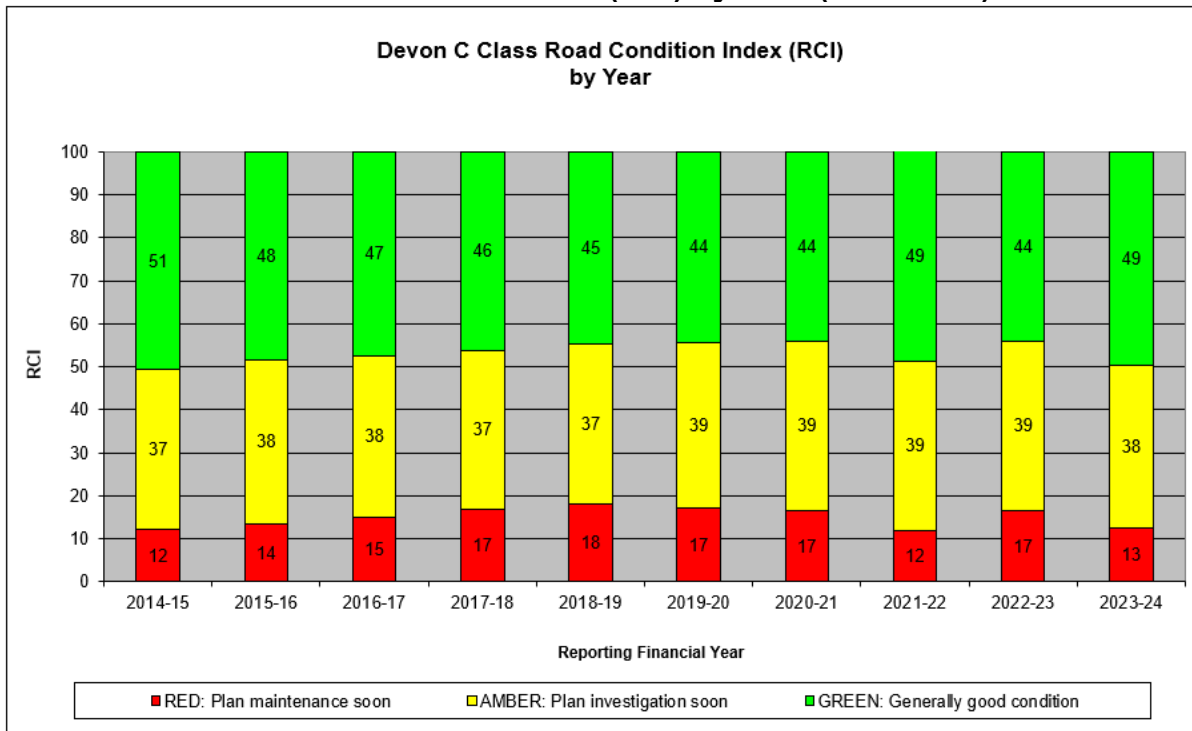
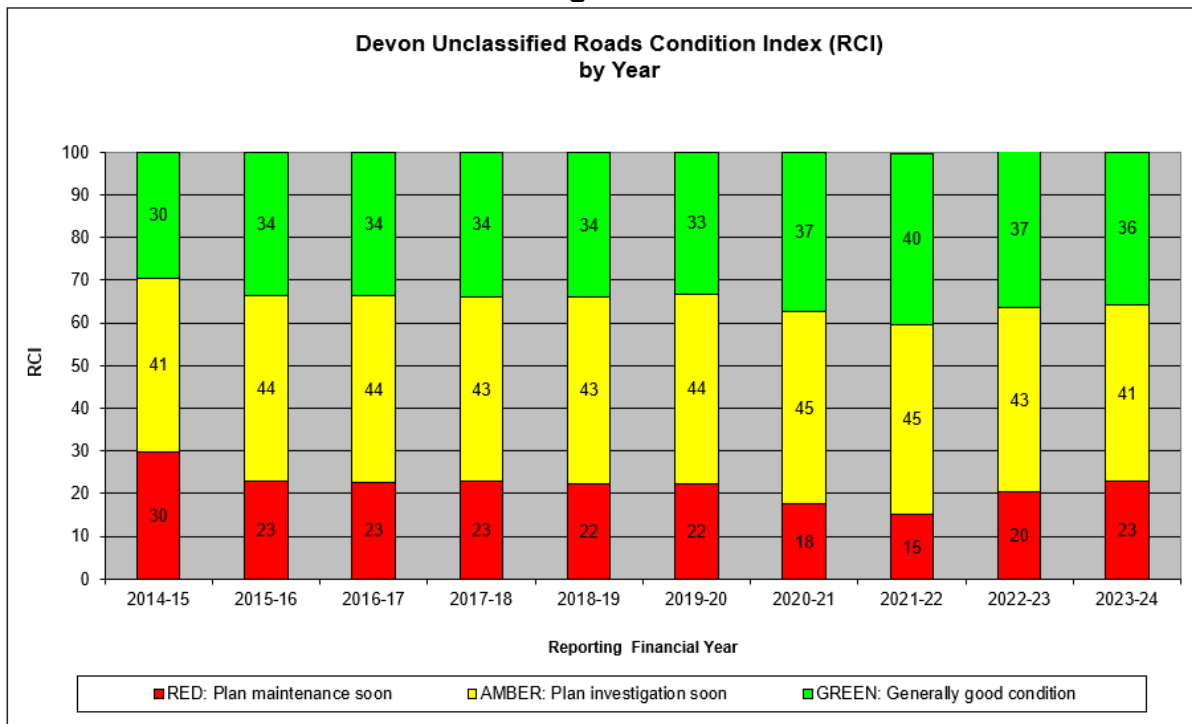


Figure 3



**condition aggregated as only one third of 23/24 survey currently completed*

Figure 4

Appendix B to CET/24/28

Highway Structural Maintenance Programme 2023/24

Function	Projected £'000
Principal Roads	
A Roads	6,247
SCRIM Remedial Works	1,963
Non-Principal Roads	
Preventative Programme (surface dressing & microasphalt)	6,362
All Roads	
Local Asset Programme	21,888
Highway Improvements Hand Patching	7,800
Dragon Patcher	1,500
ICT enhancement	60
High Skid Resistance Surfacing Programme	389
Carriageway Condition Surveys	350
Material Testing	300
Scheme Delivery Group	1,400
Cycleway, PROW & Unsurfaced Roads	906
Road Restraint Systems Upgrade Strategy	957
Gully cover replacement	161
Extreme Weather Resilience Contingency	1,602
Surface dressing scheme design	325
CCTV/Road Weather Station Renewal Programme	50
Highway Lighting Column Upgrades	1,450
Highway Lighting LED replacement	2,155
Traffic Signal Replacements	677
Cross asset innovation programme	3,016
Depots	400
Minor Traffic Management Improvements	703
CMS Street Lighting	2,180
HSM Projected Spend Total	62,841
Allocation 2023/24	62,865
Projected variance (overprogramming)	24

Projected carry forward request to 2024/25 explained as follows: -

	£'000
LTP/Potholes Fund overprogramming (excluding bridges projected over in appendix C)	165
A379 Slapton Line	-189
Total projected variance as at month 10	-24

Appendix C to CET/24/28

Bridge and Structures (BAS) Capital Maintenance Programme 2023/24

Function	Projected £'000
Bridge Strengthening	1,338
Retaining Wall Strengthening	1,783
Major Refurbishments	2,396
Minor Refurbishments (Bridges)	600
Minor Refurbishments (Culverts and Retaining Walls)	100
Joints, Bearings & Waterproofing	52
Sub-Standard Parapets	389
Bridge Safeguarding	158
Bridge Assessments	687
Principal Inspections - Bridges	454
Principal Inspections - Retaining Walls	76
Scour Assessments / Protection	152
Post Tensioned Special Inspections	278
Low Head Room Signage	62
Management of Sub-Standard Structures	21
Rockface Management	271
Total BAS 2023/24	8,817
BAS Allocation 2023/24	8,797
Projected LTP Overprogramming	20

Appendix D to CET/24/28

Highway Structural Maintenance Programme 2024/25

Function			Budget £'000
Principal Roads			
A Roads			
A39 - ALEXANDRA ROAD - Barnstaple	Barnstaple North ED	Resurfacing	75
A386 - NEW ROAD - Bideford	Bideford West & Hartland ED	Resurfacing	80
A3072 - Three Meadows to Highampton	Hatherleigh & Chagford ED	Resurfacing	145
A396 Iron Bridge Cross to Cove - Tiverton	Tiverton West ED	Resurfacing	80
A3072 - MARSH LANE - Crediton	Crediton ED	Resurfacing	155
A377 - Copplestone	Crediton ED	Resurfacing	150
A386 - Bassets Cross - Hatherleigh	Hatherleigh & Chagford ED	Resurfacing	180
A377 Ford Moor Cross to Eggesford Station	Creedy, Taw & Mid Exe ED	Resurfacing	125
A39 - WATERSMEET ROAD - Lynton and Lynmouth	Combe Martin Rural ED	Resurfacing	75
A396 - Exeter Road - Tiverton	Tiverton West ED	Resurfacing	250
A396 - BOLHAM ROAD - Tiverton	Tiverton West ED	Surface Dressing	120
A3052 Halfway Inn - Aylesbeare	Otter Valley ED	Resurfacing	130
A3123 - Narracott - Berrynarbor	Combe Martin Rural ED	Patching	30
A3052 Harepath Hill - Seaton	Seaton & Colyton ED	Resurfacing	180
A396 - The Walronds - Tiverton	Tiverton West ED	Resurfacing	100
A379 Main Road - Brixton	Bickleigh & Wembury ED	Resurfacing	300
A386 Place Cross - Fowley Cross	Okehampton Rural ED	Surface Dressing	19
A379 Waye Farm - Yealmpton	South Brent & Yealmpton ED	Surface Dressing	80
A379 - PLYMOUTH ROAD - Modbury	Salcombe ED	Resurfacing	170
A3052 - Rousdon - Combpyne Rousdon	Axminster ED	Surface Dressing	30
A39 - Lake to Roundswell - Tawstock	Chulmleigh & Landkey ED	Surface Dressing	110
A3072 - Sampford Chapple	Hatherleigh & Chagford ED	Surface Dressing	75
A379 - BRIXTON ROAD - Yealmpton	South Brent & Yealmpton ED	Surface Dressing	60
A375 - SIDBURY HILL - Sidmouth	Sidmouth ED	Surface Dressing	75
A361 - Rackenford Moor - South Molton	South Molton ED	Pre Patching	35

A379 - EMBANKMENT ROAD – Kingsbridge	Kingsbridge ED	Pre Patching	35
A3072 - Pulworthy Cross – Hatherleigh	Hatherleigh & Chagford ED	Patching	260
Priority Structural Patching and Pre Patching for 2025/2026 Surface Dressing Countywide Patching			290
Forward design/investigation for 2025/2026 and beyond Countywide			86
Total			3,500

Function	Budget £'000
<u>Principal Roads</u>	
A Roads	3,500
SCRIM Remedial Works	1,700
A379 Slapton Line	189
<u>All Roads</u>	
Locality Programme	18,013
Gully Cover Renewal	200
Preventative Programme 2022/23 (SD & MA)	7,500
HFS	500
Road Restraint Systems	600
Wet/Dry Collision Sites	150
Carriageway Condition Surveys	400
ICT enhancement	60
Depots	300
Resilience Contingency	2,335
Scheme Delivery Group	1,500
Scheme Design	400
Investigation and Testing (Materials Laboratory)	360
Dragon Patcher	2,200
Highway Improvements Hand Patching	14,550
Asset Renewals on Trails	750
Cycleway, PROW & Unsurfaced Roads	1,200
Highways Lighting Column Upgrades	1,500
Streetlighting Central Management System	2,057
Traffic Signal Replacements	1,320
Minor Traffic Management Improvements	1,950
Cross Asset Innovation Programme	1,473
Total	64,707

Appendix E to CET/24/28

Bridge and Structures (BAS) Capital Maintenance Programme 2024/25

Function	Budget
	£'000
Bridge Strengthening	2,200
Retaining Wall Strengthening	2,200
Major Refurbishments	1,500
Minor Refurbishments (Bridges)	300
Minor Refurbishments (Culverts and Retaining Walls)	50
Joints, Bearings & Waterproofing	50
Sub-Standard Parapets	130
Bridge Safeguarding	280
Bridge Assessments	100
Principal Inspections - Bridges	325
Principal Inspections - Retaining Walls	25
Scour Assessments / Protection	100
Post Tensioned Special Inspections	50
Low Head Room Signage	50
Management of Sub-Standard Structures	40
Rockface Management	100
Overprogramming	-20
Total BAS 2024/25	7,480
BAS Allocation 2024/25	7,500
Overprogramming brought forward from 2023/24	-20
Total 2024/25	7,480

Appendix F to CET/24/28

On-street Parking Account (OSP) 2024/25

	2024/25 Budget Allocation £'000
Function Narrative	
Transport Co-ordination Service: Bus, Rail, and Community	
Transport Support	3,368
Replacement bus services	50
Civil Parking Enforcement road signs & road markings	225
Traffic Management Plans	25
Cyclical Maintenance for the purposes of Environmental Improvement	900
Traffic and Parking IT Systems	40
Moving Traffic Offences Set Up Costs	100
Real Time passenger information	60
Variable Message Signs	10
Road Safety Improvements - Reactive	50
Park & Ride business rates / minor site maintenance	150
Country Parks	478
Total Other Expenditure	5,456