

County Road Highway Maintenance Capital Budget and Progress on 2022/23 Schemes and Proposals for the 2023/24 Programmes and the On-street Parking Account 2023/24

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

- (a) progress on 2022/23 capital funded highway maintenance programme detailed in Appendices B and C to this report is noted;
- (b) the capital funded highway maintenance programme for 2023/24 as set out in Appendices D and E is approved;
- (c) the Climate Change, Environment and Transport 2023/24 capital programme is increased by £9,390,800, funded by external grants;
- (d) 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;
- (e) the programme funded from the On-street Parking Account for 2023/24 as set out in Appendix F is approved.

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 2022/23 for the capital programme and details the proposed programmes for capital funding and OSP for 2023/24.

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 2023/24 indicative funding awarded to Devon County Council (DCC) from central government included in this report, was approved by Full Council in February 2023.

The Chancellor's March budget included additional capital Potholes funding, of which Devon's allocation is £9,390,800. Recommendation (c) above, is requesting that this be added to the 2023/24 capital programme. This report seeks approval from Cabinet to allocate the capital funding across the programmes and schemes proposed in 2023/24 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 2022/23 of £0.621 million subject to approval of the revenue and capital outturn report, to be submitted to Cabinet in June 2023.

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

The Service is performing well and can evidence this through compliance with national guidance and development of a risk-based approach as identified in the code of practice Well Managed Highway Infrastructure. The service is operating efficiently, and this has been demonstrated through benchmark data provided to 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 £6 million in the 2021/22 financial year by adopting more efficient practices.

The review of the Highway infrastructure Asset Management Plan (HIAMP) has consolidated learning in recent years and identified future direction and action for further development. For example, with the approach to generating schemes in the Local Asset Capital Programmes (LACP), there is a greater understanding amongst locally based officers of the overall need, and justification of priorities is becoming more transparent.

Innovation is a central theme in delivering excellent highway services. Devon is one of only a few highway authorities to retain an in-house Materials Laboratory. This continues to provide a huge advantage in effectiveness and efficiency. The Laboratory is involved in all aspects of asset management including consultancy on treatment types, specification of materials and analysis of workmanship.

As part of a cross-asset prioritisation strategy, teams or individuals within the service have been putting forward project ideas to help generate proposals for how scarce funding should be allocated. The proposed Cross Asset Innovation Programme includes successful bids such as a project to trial a hybrid construction approach in West Devon and some further development of the countywide approach to minor repairs developed with Dragon Patchers. There are also some in-situ road recycling schemes being promoted during the forthcoming programme.

Throughout this report there is also further description of the innovative approach we are adopting to tackle the climate emergency and to protect the environment. Carbon management is an area where, with the support of Exeter University, we are taking a national lead with other highway authorities.

4) Capital Programme

Financial Considerations and Sources of Funding for 2023/24

In 2023/24 Highway Maintenance Block (HMB) indicative 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 2021/22 and 2022/23
- 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 2023/24 Potholes Fund indicative allocation of £23.477 million, plus the extra allocation of £9.391 million, which totals £32.868 million.

The Department for Transport indicative total of £52.823 million, was included in the capital programme, approved by full Council 16 February 2023 and the additional £9.391million is included in recommendation (c).

Further funding support for the 2023/24 capital budget is expected as follows.

- £190,000 associated with ecological mitigation works for the Slapton Line scheme, is expected to be brought forward, subject to approval of the revenue and capital outturn report submitted to this Cabinet in June 2023.
- In support of the Authority's Carbon Reduction Plan and to save revenue funding on energy, £8.7 million was allocated to convert the remaining 45,000 Street Lighting assets, which are principally in residential areas, to LED over a three-year period. During the 2022/23 year 9,400 lights have been converted. The 2023/24 capital programme includes £1,663 million and a projected under of £523,000 is expected in 2022/23 which will be part of a carry forward request.
- The capital programme also included a new budget funded by capital receipts, for street lighting Central Management System. £2.18 million is profiled in 2023/24.

Table 1 summarises the funding sources for 2023/24 as:

	£ million
LTP Needs Formula Allocation 2023/24	£23.477
Incentive Funding (Band 3) 2023/24	£5.869
Potholes Fund 2023/24	£32.868
Overprogramming brought forward from 2022/23 (subject to approval)	-£0.621
Highways lighting LED £1,663 million per the approved capital programme, plus projected 2022/23 underspend of £0.523 million	£2.186
Central Management System Street lighting	£2.180
A379 Slapton Line projected brought forward grant from 2022/23	£0.190
Total	£66.149

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.

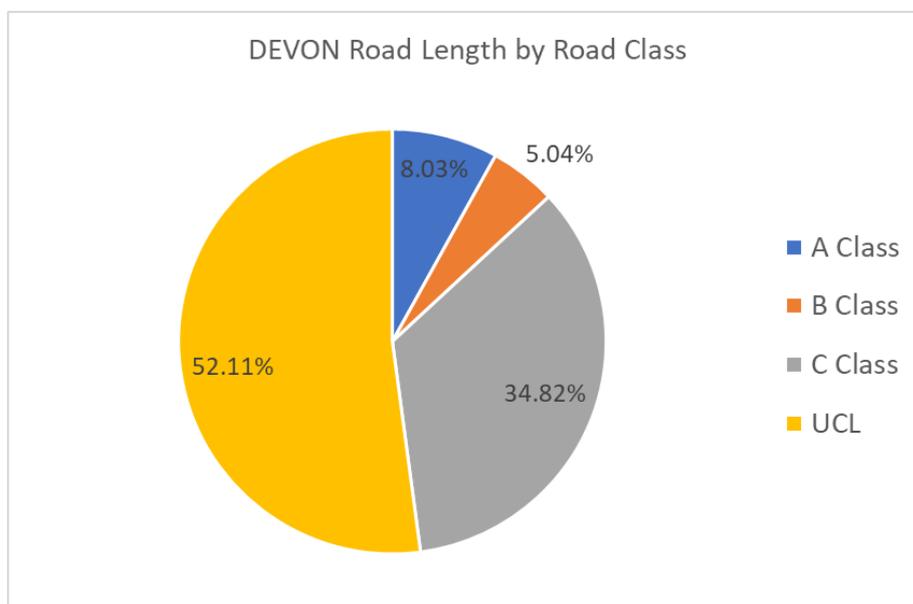


Fig 1 - Devon's Road Length by Road Class

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 2022 survey data for Devon, the percentage of roads categorised in red condition was:

- 'A' road's 2%
- 'B' road's 3%

- 'C' road's 17%
- Unclassified road's 20%

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.

Although the condition of the A and B road network remains on target for the 11th successive year, and the condition of C road network remains steady, there is a decline in unclassified roads. The graph in Fig.2 below indicates how the effect of inflation together with a reduction of funding in the last 2 years has impacted on the unclassified road network and demonstrates the erosion of what has been achieved with the former higher level of annual investment.

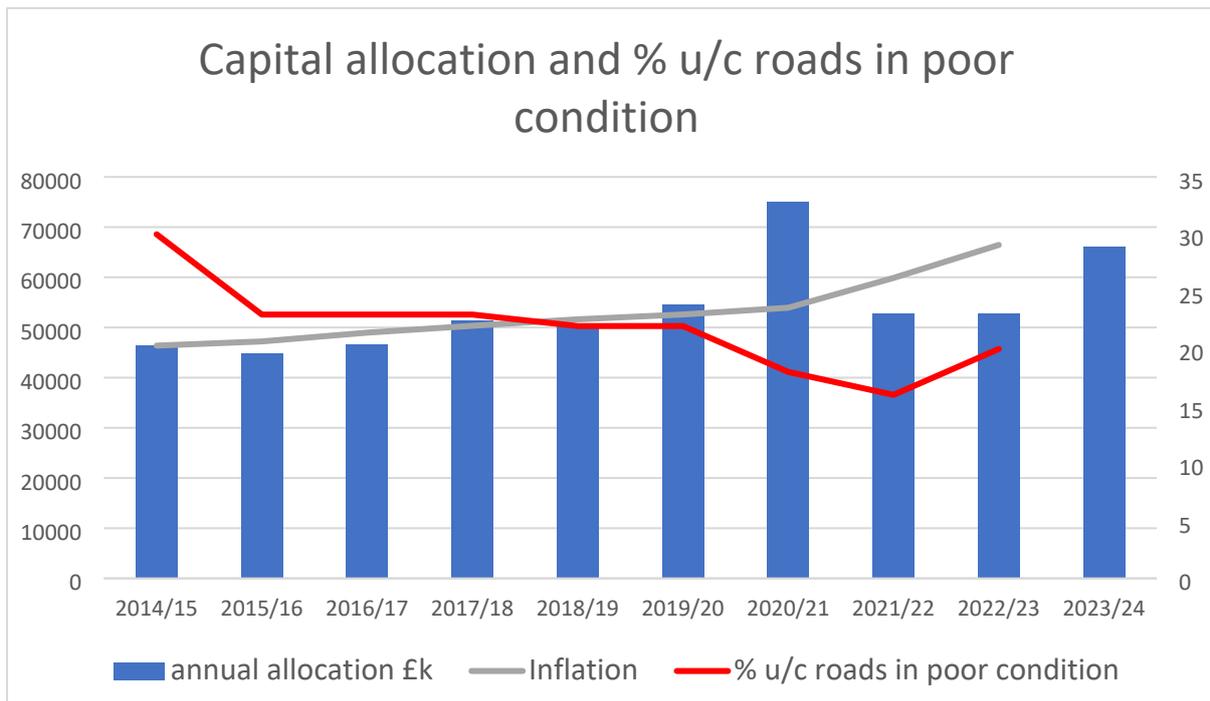


Fig 2. Impact of inflation and funding on unclassified road condition

When additional funding has been available, the condition of roads has improved. If the 2014/15 allocation had increased in line with inflation this would have enabled year-on-year improvement and there would have been an additional £13.6 million available in 2022/23. The additional £9.391 million allocation in 2023/24 is helpful in reducing the shortfall in the forthcoming year.

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.

Although Devon's overall bridge stock remains classed as "good" and continues to be placed as one of the best Local Authorities in the UK for bridge condition, the large size of Devon's bridge asset still means there are over 329 bridges classed as either of 'poor to 'very poor' condition. With 'good' condition rating representing a low risk to public safety conversely a 'poor' condition rating indicates a significant risk to public safety and to mitigate this level of risk locations have to be managed by weight restriction signs, physical measures, monitoring or strengthening.

It should be noted the condition scores do not accurately reflect a safety related defect. The County Surveyors' Society suite of documents issued in 2007 are currently being revised as nationally it has been agreed the scores do not provide a true reflection of what fair and poor means. The Council's bridge engineers have undertaken a review (which is ongoing) of the bridges with poor to very poor condition scores and no issues relating to safety have been discovered thus far. 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.

Recent programmes of work are showing the condition of the retaining wall stock requires a large proportion of the Bridge Assessment and Strengthening (BAS) budget being allocated to the maintenance of this asset type. Inspections continue to focus on retaining walls 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: 2022/23

Progress on the 2022/23 Highway Structural Maintenance Programme is shown in Appendix B of this report and the 2022/23 Bridges Assessment and Strengthening Programme can be found in Appendix C, further area specific scheme programmes can be provided.

Throughout the last year there have been additional challenges due to the impact of 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 2022/23 a total of 231 bridge and structures projects were included in the annual programme for design, inspection or works. The number of landslides and retaining wall failures has increased in recent years and the Bridge Assessment budget has been under increasing pressures year on year to cover this unplanned engineering work. In instances where embankment failures and slippages occur affecting highway stability issues the funding for this work will be provided through the Highway Structural Maintenance (HSM) budget.

Over 1,000 ageing street lighting columns have been replaced during 2022/23 and in parallel, inspecting and testing some of our ageing and some younger columns has been undertaken to identify the risk.

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 replaced/repared where required to ensure these sites can be maintained more easily in the future.

In total, we have delivered improvements to 5 Traffic Signal Junctions whilst 8 Toucan crossing sites will have been replaced.

8) Capital Highways Maintenance Programme: 2023/24

The 2023/24 total allocation is £66.149 million (subject to the carry forward requests, being approved as part of the revenue and capital outturn report being considered by Cabinet in June 2023) with a breakdown of the respective programme elements included in Appendix D and E. It is proposed to allocate the funding as follows:

	£ million
Highway Structural Maintenance	£58.333
Bridge and Structures Programme	£6.816
Total	£66.149

Table 2 – Programme Allocation

A cross-asset prioritisation exercise has been conducted as recommended in the code of practice. This has resulted in allocations being adjusted to deliver identified maintenance standards and ensuring that best use is made of resources such as Dragon Patcher vehicles.

Table 3 indicates how these programmes are being enhanced by the additional Pothole Fund Allocation

Additional Pothole Fund Allocations	£ million
A Roads (SCRIM and Minor patching)	£1.25
Preventative Programme	£1.5
Local Asset Capital Programme	£5.511
Cross Asset innovation	£1.13
Total	£9.391

Table 3 – Additional Pothole Fund Allocation

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 is due to commence shortly.

Key elements of the proposed programme include:

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

Overall condition on principal roads has improved slightly in the last year. In appendix A, Fig.1 the most recent data shows an increase in roads in good condition and this is an indicator that the approach is effective in continuing to keep this important and heavily used part of the network from deteriorating. To ensure principal roads are retained at less than 4% 'red' condition, this budget line has been retained at £6.668 million for carriageway resurfacing and patching. It 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 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 current standard 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 (greater than or equal to 0.15) and collisions on dry surfaces.

The allocation for SCRIM deficient sites is £2.105 million.

8.3 All Roads

Key elements include:

8.3.1 Local Asset Programme

As part of the service approach to learning and innovation, works are being developed and delivered in a different way with greater emphasis placed on local involvement into scheme selection. A large element of available budget continues to be devolved out to the locality areas. A countywide provision of £17.200 million has

been allocated based on asset management principles. The factors determining allocation include road length and condition, traffic volume, pothole damage and footway length and condition. Local priorities are determined by a review of physical condition, the knowledge within the Neighbourhood Team, and in discussion with the local community, typically through the Parish or Town Council. An integrated approach to repairs is being encouraged combining patching, drainage and other repair needs, to reduce the number of roadworks and the degree of disruption to the traveling public.

8.3.2 Preventative Programme

Surface dressing and microasphalt are low carbon and low-cost surface treatments that restore texture and extend the life of roads and prevent the formation of potholes. £6.52 million is being targeted to treat over 150 sites this summer. However, the average cost per square metre has doubled in the last 5 years, reducing spending power considerably.

8.3.3 Minor Road Strategy

A substantial portion of the allocation is being directed to minor repair across the network.

- £4.0 million is allocated for Highway Improvements Hand Patching for localised issues, identified as serviceability issues from staff and the public.
- £2.2 million has been allocated to operate four 'Dragon Patchers' located strategically around the county which provide an effective and efficient additional option for the repair of small to medium size patches on selected parts of the network.

8.3.4 Road Restraint Systems

£0.867 million has been allocated to continue with the upgrading and replacement of road restraint systems. The programme is developed based on high-risk sites including: potential for railway incursion, accident severity, commercial traffic data and speed limit.

8.3.5 Road Weather Stations

An ongoing programme valued at £0.15 million per annum is being undertaken to upgrade road weather stations that are used to inform winter decision makers on the appropriate response to deal with various winter service scenarios. Replacing these stations and upgrading their communication will provide greater resilience to managing winter service and severe weather events over the next decade.

8.3.6 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 2023/24 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.

The on-going street lighting programme to upgrade all lights to LED continues into 2023/24, with a budget of £2.186 million (£1.663 million plus projected under delivery 2022/23 carry forward of £0.523 million), all remaining lanterns are planned to be upgraded over the next 12 months.

Although the ongoing programme has had some delays outside the control of the Service, over 9,400 conversions were carried out during 2022/23. The continuation of this programme into 2023/24, with a budget of £2.186 million, will see all remaining lanterns upgraded over the next 12 months. In 2022/23, projected spend is £1.55 million, therefore £0.523 million will be requested as a carry forward to add to the budget above.

A further £2.18 million was approved by full 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. 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.

8.3.7 Traffic Signal Replacements

The traffic signal upgrade programme continues over the coming year with £0.677 million being invested in a programme to refurbish 4 pedestrian crossing and 2 traffic junctions during 2023/24. This work will improve the safety of the asset and by the use of modern controllers, detection equipment, extra-low voltage (ELV) and LED signal heads reduce the energy consumption.

8.3.8 Bridges and Structures

The Bridge and Structures maintenance allocation for 2023/24 is £7.816 million (£8.5 million 2023/24 allocation less projected 2022/23 overprogramming of £0.684 million).

The programme for 2023/24 will continue with further strengthening 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 fencing on high bridges was completed in 2021/22 and further works on other identified bridges will continue in 2023/24.

8.3.9 Storm Damage (resilience contingency)

In line with DfT requirements for highway authorities to make provision within their funding allocation, a resilience contingency reserve of £2.2 million has been incorporated within the programme should unforeseen damage be experienced during the year. This is larger than previously to assist with responding to uncertainty regarding the decline in network condition following the 22/23 winter weather.

8.3.10 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 pleasure journeys on our 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. A new programme for Renewal of Access Trails has been allocated £1.0 million whilst a further £0.9 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.

9) Options and 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 2023/24 Highways Maintenance budget includes £1.7 million 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 £3.3 million subsidy is provided to our bus services from the account. This represents almost 60% of all subsidy provided by the Authority. There are over 200 bus routes in Devon of which 85% (approximately 187) rely upon subsidy to continue to run. Some communities are wholly reliant on subsidised routes with no services that are operating at a sustainable commercial level.

An additional £250,000 has been allocated for the delivery of pay & display schemes in key communities as agreed (along with associated Policy) at Cabinet on 9 November 2022. The introduction of pay & display is not designed to create a surplus but to influence travel and parking choices. Any income will fund the running, management and enforcement of the scheme. The Policy will ensure that the service continues to self-fund without additional contributions from other budgets.

Full details of the proposed OSP non-operating expenditure for 2023/24, totalling £6.116 million, are shown in Appendix F.

The estimated balance of the account is now expected to reduce from £1.3 million at 31 March 2023 to £455,000 by 31 March 2024.

Expenditure charged to the OSP is regularly reviewed in order 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 with consideration to reducing subsidy provided to highway maintenance work and bus services.

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 £25,000 Traffic Management Plans budget in the OSP.

The current level of demand means that the 2023/24 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 on the basis of 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 our policy on new residents parking schemes.

11) Consultations

The results of the 2022 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 improved slightly and matches the national average. Furthermore, in comparison to similar county councils in a comparator group, Devon remains slightly above the average. The summary of the survey undertaken in June 2022 shows no significant change to the previous year's survey. However, these results clearly show an overall dissatisfaction both locally and nationally.

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.

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 Infrastructure service.

The condition of our highway assets and public rights of way network directly impacts the safety and resilience of our 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 our 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 the Devon County Council's drive to become carbon neutral by 2030 we are continuing to investigate, consider, and embed new ways of working that help reduce the carbon output when designing and commissioning highway maintenance operations. This involves developing carbon emissions calculations, taking a 'cradle to grave' approach from sourcing primary materials through to their disposal at the end of the project life. The Council is taking a lead role working with Exeter University and nationally with other authorities and the Future Highway Research Group to measure the carbon emissions for various key work activities using a Carbon Profile Builder Application Tool. This information will then be used to establish how the Council utilises different treatments or to drive through procedures and processes that will reduce our carbon usage.

There has been substantial progress in developing a baseline to measure the emissions generated from maintenance works across the Highways and Traffic Management Service. There are a few work activities still in development so whilst acknowledging some under-reporting, in the 2021/2022 year, there were at least 77,590t CO₂ equivalent generated through highway maintenance works. Most of this, (97%), is associated with road surface treatments. Using the UK emission trading system rates (Dec 2022), this would have a carbon offset value of just under £6,000,000.

On carriageways and footways, surface treatment and reconstruction works are tightly controlled to achieve long term durability. Devon continues to use a proportion of recycled materials within their 'warm mix' materials and trials are planned to further improve asphalt durability through the use of an asphalt preservation process. Whenever possible designers are encouraged to use recycled materials and secondary aggregates. All local quarries are supplying carbon efficient warm asphalts, and this is the default material in our contract specifications.

Prior to installation, highway construction materials are subjected to rigorous testing to ensure their suitability within the construction and how its use impacts on the environment. All construction contracts also include for recycling options to ensure that the use of natural resources is reduced where recycled alternatives exist.

Biodiversity net gain is an important consideration and where appropriate wildflower planting is encouraged on highway verges and roundabouts.

It is now estimated that the authority has saved over £2 million on energy over the past year since it embarked on the switch to energy efficient LED from 2014 within the street lighting asset. The remaining lanterns are planned to be upgraded to LED over the next 12 months with a continuing programme of column replacements. The contractor has also committed to and is progressing towards being carbon neutral by 2030.

Once the street lighting programme to upgrade all lights to LED is complete, the figure will increase but Devon County Council has already reduced the annual carbon emissions generated by its street lighting by 77%.

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

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.

In progressing this particular scheme / proposal, an Impact Assessment has been prepared which has been circulated separately to Cabinet Members and also is available on the Council's website at: [Budget setting 2023/2024 - Impact Assessment \(devon.gov.uk\)](https://www.devon.gov.uk/budget-setting-2023-2024-impact-assessment)

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. 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

The cumulative reduction in budgets could have an impact on public health with reduced maintenance effecting sustainable travel alternatives, and potentially more injuries resulting from crashes, trips and falls, however the recommended approach limits this risk, by targeting investment.

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 2023/24 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. Approval of schemes and programmes of highway maintenance will enable the delivery of the 2023/24 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.

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

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County Road Highway Maintenance Capital Budget Programme 2023 24 - Final

Appendix A to CET/23/29

Road Condition Indicator (RCI) by Year

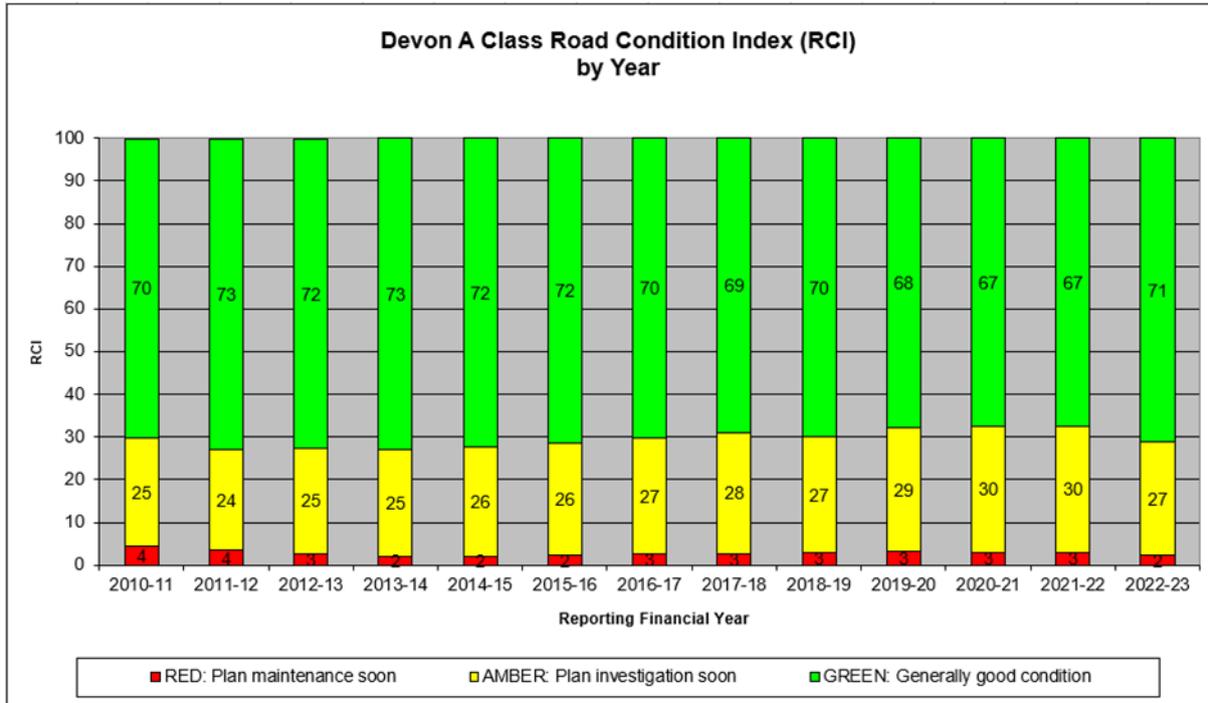


Figure 1

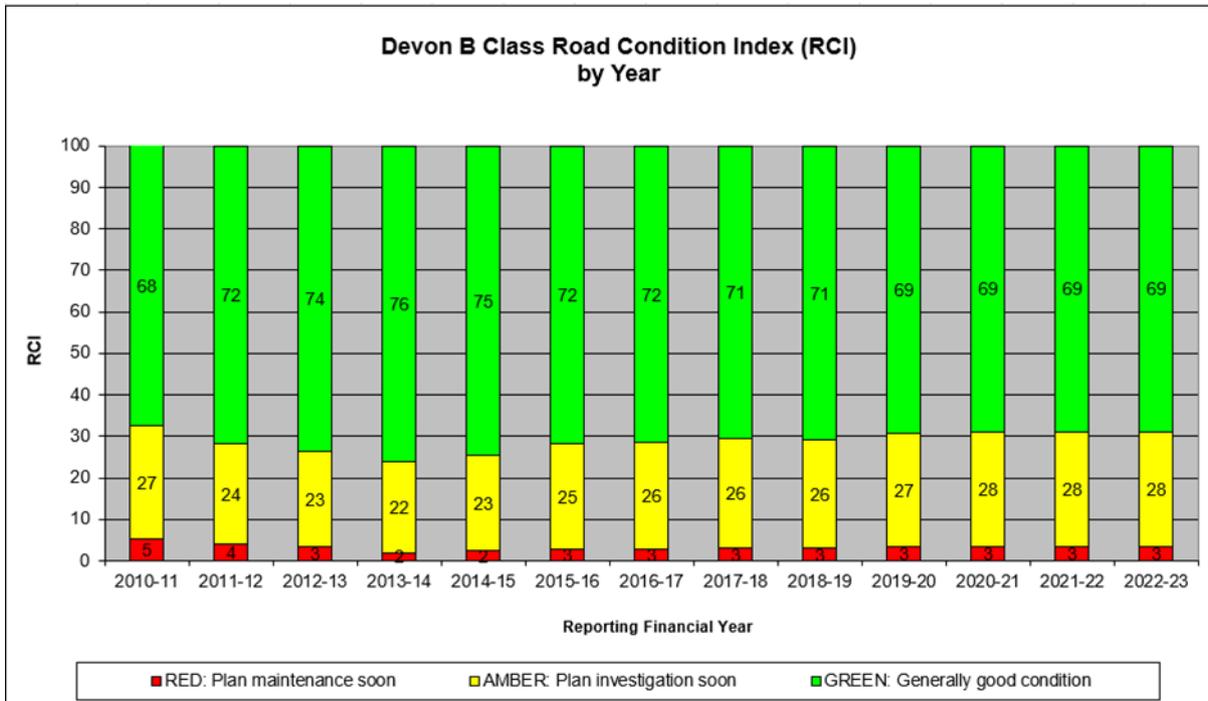


Figure 2

Appendix A to CET/23/29 continued

Road Condition Indicator (RCI) by Year (continued)

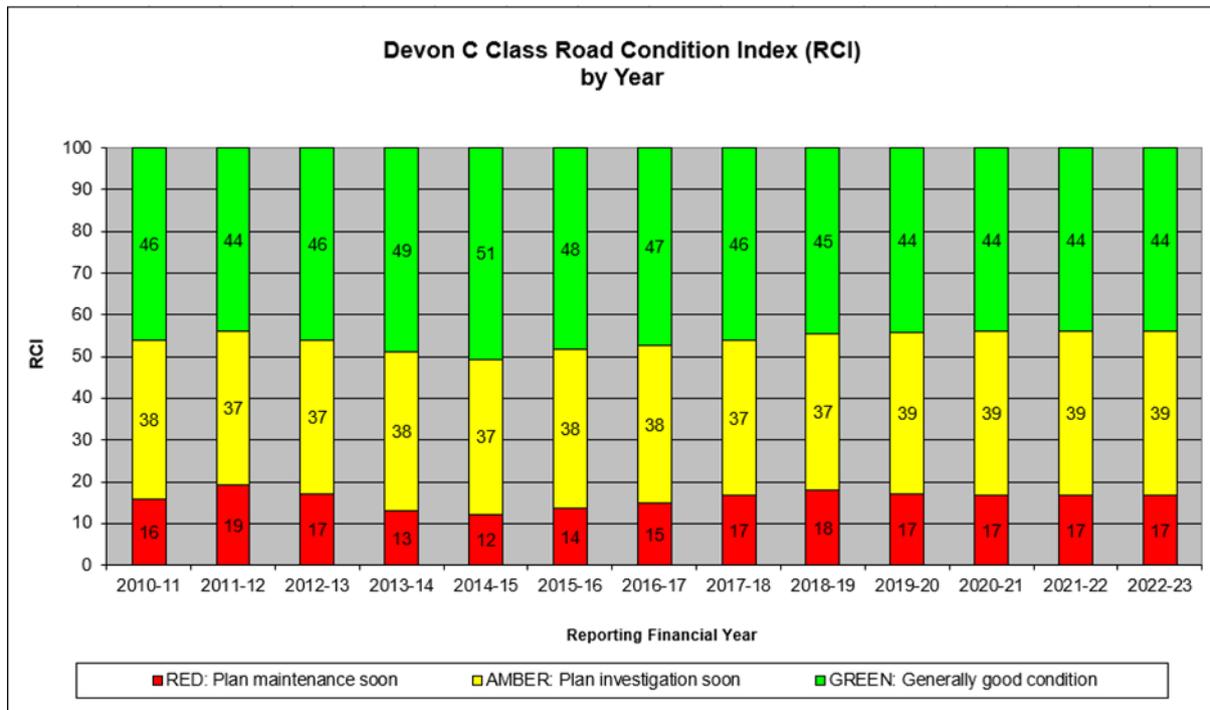


Figure 3

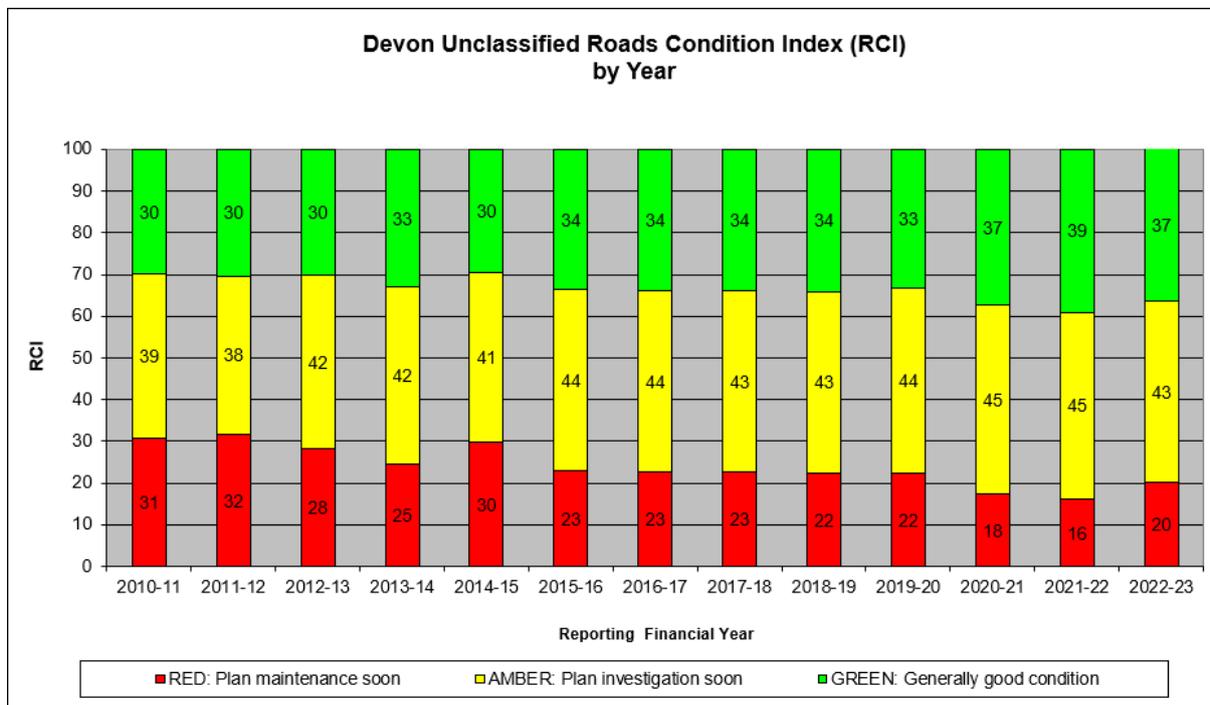


Figure 4

Appendix B to CET/23/29

Highway Structural Maintenance Programme 2022/23

Function	Projected £'000
Principal Roads	
A Roads	7,505
A379 Slapton Line	17
SCRIM Remedial Works	2,142
Non-Principal Roads	
Preventative Programme (surface dressing & microasphalt)	5,345
All Roads	
Local Asset Programme	13,621
Highway Improvements Hand Patching	4,354
Dragon Patcher	1,600
Wet/Dry Collision Sites	86
High Skid Resistance Surfacing Programme	360
Carriageway Condition Surveys	350
Material Testing	228
Scheme Delivery Group	1,060
Cycleway, PROW & Unsurfaced Roads	1,500
Road Restraint Systems Upgrade Strategy	233
Gully cover replacement	150
Extreme Weather Resilience Contingency	1,057
Surface dressing scheme design	277
Road Weather Station Renewal Programme	100
Highway Lighting Column Upgrades	1,500
Highway Lighting LED replacement	1,550
Traffic Signal Replacements	1,235
Traffic signal maintenance specific grant	241
NOCC Improvements CCTV Upgrade	12
Depots	600
Minor Traffic Management Improvements	570
HSM Projected Spend Total	45,693
Allocation 2022/23	46,469
Projected variance (overprogramming)	-776

Projected carry forward request to 2023/24 explained as follows: -

	£'000
LTP/Potholes Fund overprogramming (including bridges projected over in appendix C)	621
A379 Slapton Line	-190
Street Lighting LED	-523
Total projected variance as at month 11	-92

Appendix C to CET/23/29

Bridge Assessment and Strengthening Programme 2022/23

Function	Projected £'000
Bridge Strengthening	5,123
Retaining Wall Strengthening	1,230
Major Refurbishment	1,027
Minor Refurbishment	571
Joints and Bearings	148
Sub-Standard Parapets	107
Bridge Safeguarding	46
Bridge Assessments	363
Principal Inspections	819
Scour Assessments / Protection	102
Post Tensioned Special Inspections	98
Low Head Room Signage	39
Management of Sub-standard Structures	12
Rockface Management	70
Total BAS projected spend	9,755
BAS Allocation 2022/23	9,071
LTP projected over (included in the table above)	684

Appendix D to CET/23/29

Highway Structural Maintenance Programme 2023/24

Function	Budget £'000
Principal Roads	
A Roads	
A3052 Trow Hill Sidford - Sidmouth	120
A3072 Bow to North Tawton - Bow	50
A361 St Brannocks Road - Ilfracombe	300
A361 Sticklepath Roundabout - Barnstaple	370
A379 Dawlish Road Starcross	560
A379 Rydon Lane Exeter	50
A381 Main Road - Harbertonford	500
A381 Totnes Road - Ipplepen	640
A381 Torquay Rd Newton Abbot	70
A381 Totnes to Littlehempston	683
A385 Venton Cross to Tigley Cross	290
A386 Beam Quarry - Monkleigh	300
A386 between Tavistock and Grenofen - Whitchurch	30
A386 Little Torrington - Little Torrington	220
A396 Duvale Wood - Bampton	250
A396 Exebridge - Bampton	210
A396 Exebridge - Snapbox Cross - Morebath	120
A396 Stoke Woods (Retaining Wall)	820
A399 Newtown (Lions Rump) - North Molton	310
A388 Frithelstock	25
Minor Patching Sites	750
	6,668
SCRIM Remedial works	2,105
A379 Slapton Line	190

Function	Budget £'000
All Roads	
Local Asset Programme	17,200
Preventative Programme 2023/24	6,520
Gully cover renewal	200
HFS	500
Road Restraint Systems	867
Wet/Dry Collision Sites	150
Carriageway Condition Surveys	350
Depots	400
Resilience Contingency	2,200
Scheme Delivery Group	1,000
ICT Enhancement	60
Scheme Design	500
Investigation and Testing (Materials Laboratory)	300
Dragon Patcher	2,200
Highway Improvements Hand Patching	4,000
Asset renewals on trails	1,000
Cycleway, PROW & Unsurfaced Roads	900
CCTV Road Weather Station Renewal Programme	150
Highways Lighting Column Upgrades	1,500
Highways Lighting LED	2,186
Traffic Signal Replacements	677
Cross Asset Innovation Programme	3,630
Minor Traffic Management Improvements	700
HSM Programme Total	58,333

Appendix E to CET/23/29

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

Function	Estimate £'000
Bridge Strengthening	1,350
Retaining Wall Strengthening	3,200
Major Refurbishments	1,200
Minor Refurbishments EDG	700
Minor Refurbishments NHT	100
Joints, Bearings & Waterproofing	50
Sub-Standard Parapets	300
Bridge Safeguarding	50
Bridge Assessments	400
Principal Inspections - Bridges	400
Principal Inspections - Retaining Walls	100
Scour Assessments / Protection	100
Post Tensioned Special Inspections	300
Low Head Room Signage	110
Management of Sub Standard Structures	40
Rockface Management	100
Overprogramming	-684
Total BAS 2023/24	7,816
BAS Allocation 2023/24	8,500
Overprogramming brought forward from 2022/23	-684
Total 2023/24	7,816

Appendix F to CET/23/29

On-street Parking Account (OSP) 2023/24

Function Narrative	2022/23 Budget Allocation £
Transport Co-ordination Service: Bus, Rail, and Community Transport Support	3,368,000
Replacement bus services	50,000
Civil Parking Enforcement road signs & road markings	202,000
Rollout of pay and display setup costs	250,000
Traffic Management Plans	25,000
Cyclical Maintenance for the purposes of Environmental Improvement	1,700,000
Traffic and Parking IT Systems	40,000
Moving Traffic Offences Set Up Costs	50,000
Real Time passenger information	60,000
Variable Message Signs	10,000
Road Safety Improvements - Reactive	50,000
Park & Ride business rates / minor site maintenance	92,000
Country Parks	219,000
Total Other Expenditure	6,116,000