South Gloucestershire Council

Report

June 2025

Local highways maintenance transparency

Our highway network

Our highway assets are the diverse elements of infrastructure that support travelling throughout South Gloucestershire. This includes the carriageways, footways, cycleways and public rights of way of which the lengths we are responsible for can be found below in table 1.

Table 1: Lengths of highway, footways, cycleways and public rights of way

Type of highway	Length in kilometres (km)
A road	112.5 km
B and C roads	406.3 km
U roads	963.9 km
Total roads	1,482.7 km
Footways	1,396.7 km
Other public rights of way	1,274 km
Cycleways	121.4 km

Associated with this will be highway structures, drainage, traffic signals, verges and street lighting which can be found in table 2.

Table 2. Length, area, and number of associated highway assets

Asset type	Length in kilometres (km), area in square metres (m2), or number
Traffic signal junctions and crossing sites	232
Drainage gullies	49,800
Drainage pipes	440 km
Structures	
Bridges	308
Retaining walls	301
Culverts	118
Tunnels	4
Other	110

Street lights	30,869
Highway verges	2.9 million m2

All these assets need to be maintained to a fit-for-purpose standard for them to provide a safe and sustainable level of service to the public.

Associated with these main assets are ancillary items such as road signs, posts, road markings, benches, bollards to name a few. All of which are vital in ensuring the safe passage of pedestrians, vehicles and all other road users. Each has to be inspected, maintained and replaced when necessary.

The number of highway assets the authority is responsible for are constantly changing in both their number and condition.

New developments agree with the authority which assets the authority will take over and maintain (under a legal adoption agreement) and while we insist any assets transferred over are without defects, they still must be inspected from day 1. Similarly, any new schemes or improvements which are constructed on the network get added to this database and therefore similarly maintained.

Highways maintenance spending figures

Table 3: Highway maintenance spending figures

Year	Capital allocated by DfT (£,000s)	Capital spend (£,000s)	Revenue spend* (£,000s)	Estimate of % spent on preventative maintenance**	Estimate of % spent on reactive maintenance***
2025/26 (projected)	£ 10,400	£ 11,773	£ 4,234	84%	16%
2024/25	£ 8,696	£ 9,584	£ 4,067	79%	21%
2023/24	£ 10,099	£ 11,295	£ 3,698	86%	14%
2022/23	£ 8,172	£ 10,811	£ 3,460	86%	14%
2021/22	£ 6,538	£ 8,629	£ 3,129	84%	16%
2020/21	£ 8,346	£ 10,199	£ 3,501	84%	16%

**Revenue Spend includes routine maintenance in areas such as – potholes, drainage, area maintenance, structures, signals, street lighting and minor works.*

***Preventative spend will consist of all resurfacing, cyclical and routine maintenance. These will be planned programmes of work.*

****Reactive works will consist of unplanned ad hoc repairs such as pothole repairs and unforeseen damage to all highway assets.*

The capital spend shown in the table above will comprise of activities such as:

- Carriageway/footway/cycleway resurfacing or patching
- Highway bridges and structures maintenance
- Drainage repairs and gully cleansing
- Public rights of way maintenance
- Safety fence repairs
- Lining, signing and cats eye replacements
- Traffic signal repairs and replacements
- Street lighting repairs and replacements
- Verge/tree maintenance

The largest percentage of capital spend is on the resurfacing of carriageways, footways and cycleways. The council uses a robust priority scoring system that will rank each road /footway (or section of) into a priority order to ensure the budget is spent in the correct locations. The system will utilise factors such as survey data (condition), defects, complaints, pothole data, road hierarchy and also identifies the suitable treatment (early or late intervention surfacing scheme).

Early intervention processes are an important tool and in line with the Code of Practice 'Well managed Highway Infrastructure' guidance. They involve treating specific sites before significant deterioration occurs therefore reducing preparation costs, treatment time and prolonging the life at a relatively low cost with the added benefit of significant carbon savings. The authorities long standing surface dressing programmes are a good example of this, which effectively seal roads to stop water ingress, bring back road texture and prolong the life of the road. Other early intervention techniques used by the authority are micro asphalt programmes on the urban estate roads and this year we will be introducing carriageway rejuvenation on our main networks.

Late intervention treatments used include traditional resurfacing (where the top surface layers are taken off and replaced). Very poor roads may have severe structural problems so as well as removing the top surface layer, sometimes the lower layers may also have to be replaced at much higher cost and a greater disruption (but have a greater relative life expectancy).

Highway structures, street lighting and traffic signals will also be inspected on a regular basis to ensure the asset is safe. This will also help produce condition reports for future capital replacement programmes. Recent works on these assets include:

- Coniston Road, Patchway Subway filled in and decommissioned saving around 10,000kgCO2e if the parapets were replaced (alternative scheme).
- All street lights have been upgraded to LED resulting in an accumulative energy saving of approx. £25,000,000 and 43,000 tonnes of CO2 since 2009.
- 1,080 traffic signal heads have been retrofitted with LED lighting resulting in a 70% saving in energy.

The Authority compiles indicative 5-year programmes of work so that long term planning can be achieved. For efficiency we often join certain programmes together and straddle them across financial years to ensure larger programmes can be carried out at a better financial rate.

While the allocations from central government have been traditionally related to the network size, inflation and fluctuating market price rises are not always reflected in the allocation. In post covid years inflation spiked and therefore the budget has been stretched to try to sustain maintenance coverage.

When compiling our 5-year programme, there is an assumption that budgets will remain at similar levels and that inflation will not adversely affect the amount of work we can carry out. However, previous longer-term settlements have not included an inflationary adjustment. Therefore, any inflation effectively cuts the budget in real terms for that period of settlement and programmes have to be adjusted accordingly.

The ageing network and two very bad winters have led to a couple of years of challenging choices. This has meant reducing the amount of early intervention treatments to address a backlog of serious later intervention resurfacing sites. Pothole numbers and public satisfaction surveys have reflected the winters effects, and additional resources have been allocated accordingly.

Structures have similar routine maintenance requirements with inspections and ad hoc repairs, however when they show more serious signs of decay the expenditure is substantial. The A38 flyover for instance is starting major maintenance works and budgets and resources are being focused on this strategically important structure on one of the authorities major commuting routes.

Table 4: Estimated number of potholes filled

Year	Estimated number of potholes filled
2024/25	12,148
2023/24	12,242
2022/23	8,738
2021/22	5,223
2020/21	4,785

Condition of local roads

South Gloucestershire Council carry out carriageway condition surveys on an annual basis and get a full coverage of the network every two years. We survey 100% of our classified roads (A, B and C) one year and then 100% of our unclassified network the following year.

The council uses a technique called SCANNER (Surface Condition Assessment for the National Network of Roads) surveys on its classified roads. These use laser-based technology to record defects from the road surface. The unclassified network has been surveyed by a visual inspection over recent years, however we are moving towards a SCANNER type survey to get a more consistent approach on the UC roads.

We also utilise video surveys, (every 4 years) to give additional data to our traditional condition surveys. These surveys allow us to get condition information on more assets such as foot and cycleways, road lining, sign condition etc. which we then use to create maintenance programmes.

From 2026/27 a new methodology will be used based on the BSI PAS2161 standard. This new standard will categorise roads into 5 categories instead of 3 to help government gain a more detailed understanding of the road condition in England.

The results can be seen below and are separated into A roads, B and C roads and Unclassified roads. Condition categories are separated into a simple traffic light system - Red (maintenance should be considered), Amber (maintenance should be considered soon) and Green (No further investigation or treatment required).

The authority's strategy has been to improve the condition of the highway. In reality, however, maintaining a steady state of condition as much as possible across all different road categories is the most achievable strategy with the finances available. This gives rise to the financial dilemma whereby resources are focussed on the most deserving road category, causing other categories to suffer. This can be seen when comparing the A roads with that of the B and C roads where the A roads show a slight decline in condition over the last 5 years whereas the B and C roads (and UC roads) show a slight improvement. The most recent survey shows the opposite trend which will be to halt the decline of the A road network.

Our most recent backlog report has highlighted that there is a shortfall of **£12million** per annum to achieve our desired strategy of nominal improvement on the network. Without this funding our network is always likely to deteriorate year on year.

The lower category of roads will always show a worse condition rating due to the length of the UC network and the lower priority due to lower usage. Our rural network is a particular part of the UC network where the condition is problematic and often associated with poorer drainage infrastructure. This means it's not just the road surface that needs addressing but the drainage infrastructure as well. All of these factors plus the fact that the unclassified network makes up 2/3rds of the overall network means this is a challenging area to significantly improve.

Table 5: Percentage of A roads in each condition category

Year	Percentage of A roads in red category	Percentage of A roads in amber category	Percentage of A roads in green category
2020	2%	19%	79%
2021	3%	19%	78%
2022	3%	19%	78%
2023	3%	20%	77%
2024	3%	18%	79%

Table 6: Percentage of B and C roads in each condition category

Year	Percentage of B and C roads in red category	Percentage of B and C roads in amber category	Percentage of B and C roads in green category
2020	7%	31%	62%
2021	7%	30%	63%
2022	7%	30%	63%
2023	7%	27%	66%
2024	8%	30%	62%

Table 7: Percentage of U roads in the red category

Year	Percentage of U roads in the red category
2020	22%
2021	22%
2022	17%
2023	17%
2024	17%

Plans

Overall strategy

South Gloucestershire Council through the application of Asset Management, aims to create a safe, reliable and accessible transportation system that supports development of a strong low carbon economy, maximising the opportunities for sustainable transport and protecting our environment.

Asset management supports us in providing a fit-for-purpose service through the management and maintenance of highway infrastructure. Following the code of practice Well Maintained Highways guidance, our approach has been to balance user's needs, risk and available finance to provide a sustainable level of quality in our service delivery.

The highways infrastructure in South Gloucestershire supports our important rural communities and the increasingly expanding economy around Bristol. The demands placed on the main routes in and around the urban area require a different approach to those placed on the more rural lanes and estate roads. This means we need to manage our roads to different levels to better meet the differing demands.

To achieve a balance of cost, quality and risk we use a hierarchy-based approach where we split the road network into a number of levels of hierarchy that reflect how the roads are used. Levels of service are then defined that reflect the needs of the users. These levels of

service then inform and guide the maintenance frequencies and activities that are carried out on the assets.

South Gloucestershire council also manages the network in a way that supports a sustainable approach to provision for cyclists and bus transport, so that road users feel able to shift to sustainable transport modes. Keeping our cycleways and footways well maintained support healthier travel and further reduce dependence on the car.

Adapting to the unavoidable effects of climate change to provide a network that is resilient to weather events is a crucial aspect of good asset management. SGC identify resilient risk and build in resilience measures to the economically important routes for business and commuter travel which enable our economy to operate more effectively in adverse weather and reduce the impacts of major weather events. Working with Bart (Bristol and Avon River trust) we have ongoing initiatives to slow runoff/improve 3rd party catchment and reduce the effect of the climatic change of increased/severity rainfall events.

Following on with the climate theme the council are now using warm mix material which has lowered the embodied carbon by up to 15%. The principal behind this is that lower temperatures are used to manufacture the material, use less energy and therefore emit less carbon. We are also introducing carriageway rejuvenation on the main network this year, which is a process of a spray applied treatment which penetrates the asphalt and reverses detrimental effects caused by oxidation and weathering and prevents the formation of cracks and defects prolonging the life of the road.

The Authority is also now using rubber crumb on footway and cycle path resurfacing schemes to counter the climate emergency. This uses old rubber tyres that cannot be recycled and saves them being exported for waste.

Specific plans for 2025/26

This year’s surfacing programme will consist of surfacing 42 roads across the authority. In terms of road lengths this is broken down as follows:

A roads – 5.3km

B roads – 5.3km

C roads – 3.5km

Unclassified roads – 4.1km

In addition to this we will surface 35 footways. These will be made up of Cycleways and footways specifically close to schools and high use routes to try and treat the most important and heavily used areas of the network as well as promoting sustainable travel alternatives.

Major structures work this year and leading into 26/27 will be concentrated on the Fly Over at Filton. This is a multi-million pound scheme and will consist of the following works:

- Bearing replacement
- Concrete repairs to abutments and retaining wall
- Expansion joint replacement
- Drainage refurbishment
- Waterproofing replacement

The prolonged periods of very wet weather that we have experienced over the last few years has seen a dramatic increase in potholes and subsequent repairs. The start of this calendar year has been a lot drier which has seen around a third of potholes reported compared to that of 12 months ago. With this information we anticipate to fix around 10,000 potholes in this financial year.

Streetworks

The highway network in South Gloucestershire performs a wide range of functions, it is vital as an enabler of economic growth, it supports the wellbeing of the residents and visitors and perhaps most importantly, it is a key part of everyday life facilitating the movement of people around the authority.

As a result of this, we hold regular meetings with internal departments, neighbouring authorities and utility companies to see where future road works are being planned. This continued and early dialogue will help coordinate works across the authority to help reduce congestion. Due to the size and quantity of the larger disruptive works on the network, both internally (CRSTS) and externally (National Highways, Developer Schemes, Utility Works), the authority has program meetings with members to communicate where and how we are managing the traffic.

South Gloucestershire use a Road Work Permit Scheme to assist further with coordination and it helps control and communicate works on the road more effectively. Each permit submitted to the council will be evaluated to minimise the impact on the travelling public, pushing works to night time or in the school holidays where possible as the traffic flows will be lower. The objectives and benefits of South Gloucestershire Permit Scheme are:

- Reduced disruption on the road network
- Improvements to overall network management
- A reduction in delays to the travelling public
- A reduction in costs to businesses caused by delays
- Promotion of a safer environment
- Reduced carbon emissions

We expect works to be carried out in a timely fashion and stipulate 1st time reinstatements to minimise the impact on the motorist. We will also take sample cores from completed work to ensure they have been carried out correctly.

South Gloucestershire Council is proactive in sharing up and coming works with its residents and local businesses via social media, newsletters and local parish platforms in order to warn of potential works and possible congestion. All utility and council works that significantly disrupt the flow of traffic can be viewed on Causeway one.network and can be used by residents to plan their journeys and avoid significant road works.

Climate change, resilience and adaptation

South Gloucestershire Council is proactive in reducing carbon emissions on its maintenance works. It uses early intervention surfacing techniques such as carriageway rejuvenation that has no requirements for quarried aggregates and will reduce carbon. We use warm mix materials on our traditional surfacing schemes to also reduce carbon. We are currently measuring our carbon output on a year-by-year basis and committed to keep reducing carbon emissions annually.

We are also working with West Sussex County Council to explore innovation, in our approach to verge maintenance through the DfT Live Labs project. This involves carrying out fewer cuts and letting the grass grow a little longer. When the verges are then cut the arisings are collected for the utilisation of energy generation (anaerobic digestion).

Other verge management techniques the authority is trailing, is to plant Sedum to improve biodiversity, improve water retention, reduce highway closures for cutting purposes and reduce the risk of fire.

Flooding events have increased in recent years and the council uses Sustainable Drainage Systems (SuDS) and Natural Flood Management (NRM) to mitigate peaks in surface flows from highways. The council also ensures that SuDS are incorporated into new build proposals to avoid surface flows from entering the drainage network and the public foul sewer. The council is also exploring potential approaches to the development of strategic flood storage inventions to accommodate fluvial and pluvial flooding events which would otherwise cause parts of the highway to be closed and cause harm to physical infrastructure.

Additional information

To report a defect or issue please visit our Report it webpage.