

highway asset management strategy for Slough, 2020-2025

June 2020



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1 Purpose of this strategy

The purpose of the Highway Asset Management Strategy is to set out, at a high-level, how highway infrastructure asset management will be delivered in Slough to meet the long-term corporate goals and objectives of the Council.

The strategy will enable Slough to:

- Demonstrate the commitment to adopting the principles of highway infrastructure asset management by senior decision makers
- Document the principles, concepts and approach adopted in delivering highway infrastructure asset management at a high level
- Link with the Council's policies and strategic objectives and demonstrate the contribution of the highway service in meeting these
- Set out the desired levels of service from implementing asset management
- Facilitate communication with stakeholders of the approach adopted to managing highway infrastructure assets



2 Foreword

I have great pleasure in introducing Slough's new Highways Asset Management Strategy, which sets out our plans for the maintenance and operation of the Slough road network over the next five years, recognising its vital role ensuring the vitality of our communities and the success of our local and regional economy.



Our highways asset management strategy will enable us to demonstrate responsible custodianship of the council's most valuable asset and will provide us with the tools to make the best possible use of our available funding through the adoption of a planned, preventative approach to maintenance that will save money over time. Our strategy follows national and international best practice and will help us to secure funding for highway maintenance from the Department for Transport and elsewhere.

Slough is a forward looking authority that is leading the way in adopting new technologies to improve our services. Our new highways asset management strategy will help us to provide the necessary infrastructure to ensure that we make the best use of the opportunities that these technologies present.

This strategic approach to highways asset management will, as it develops, enable us to move away from a position where we are forced to react to potholes and other problems with short-term repairs, allowing us to carry out the right maintenance at the right time. The network will be in better condition and performing more effectively to provide safe, comfortable travel for all types of road user and providing streets that are more attractive for residents, to the benefit of us all.

Councillor Robert Anderson, Cabinet Member for Sustainable Transport & Environmental Services



3 Introduction

3.1 Introduction to asset management

The road network in Slough is the most valuable asset the council owns, valued at around £2.13 billion, and plays a vital role in supporting the community and economy of the Borough.

Our road network is made up of many different types of asset including roads, footways, cycle routes, streetlights, bridges and underpasses, signs and signals, trees and landscaping. Each of these has different needs for management and maintenance to ensure that they deliver the quality of service that our residents and businesses expect.

Each of these assets has different needs for management and maintenance to ensure that it delivers the quality of service that our residents and businesses expect.

In common with other local authorities, Slough has adopted an asset management approach to ensure good value through achieving the best balance of spending, quality of service and risk to road users and the council, both now and over the long term.

Asset Management helps us to predict when each asset will deteriorate, and to identify when to intervene with lower-cost, preventative maintenance that will reduce lifetime costs, or alternatively when to replace the asset.

This document sets out our highway asset management strategy over the next five years and reinforces the commitment to good asset management we make in our Asset Management Policy. It defines our objectives for the management of our highway network and identifies how this will promote the council's aims for Slough.

3.2 Asset management principles and objectives

3.2.1 Asset management principles

Our overall policy for highway asset management in Slough is founded on the following principles that form the basis for our asset management strategy:

1. The Council will develop and operate a formalised, information-driven asset management approach to ensure the optimal use of the Council's resources in maintaining the highway infrastructure and assets for the benefit of current and future users.
2. The Council will adopt a whole life cost approach to maintaining the highway infrastructure that, as far as practicable within available budgets, reflects both the structural need of the assets, the strategic importance of the route and local priorities.
3. The Council will prioritise available resources for maintenance interventions and treatment choices using a risk-based approach taking account of the safety and needs of different groups of user, network hierarchy and levels of use, network condition, customer expectations, environmental impact, and the implications of approved and anticipated developments.

3.2.2 Asset management objectives

Slough Borough Council, as the Highway Authority, is ultimately responsible for the maintenance of all carriageway, footway, verges, trees, structures (with the exception of structures/embankments maintained by third parties e.g. network rail), electrical, drainage, signs and lines within Slough, excluding motorways and trunk roads.

Slough is committed to making the best use of our budgets and we have adopted an asset management approach for the maintenance of the highway network, in order to help deliver the best long-term outcomes for local communities.

A well-maintained highway network is key to the future economic prosperity and the quality of life of its residents, as stated in our Corporate Vision that there will be "*move forward with our place-shaping agenda*".

These Asset Management Objectives support our Corporate Objectives as set out in the *Five-Year Plan* which sets out more detail around our priorities and how Slough will:

- Move forward with our 'place-shaping' agenda. This means joining up services, not just within the council but with our partners too, bringing them closer to people's localities and delivering major regeneration of

Slough Councils Asset Management Objectives are to:

1. Ensure our asset management activities are aligned with and support the values and priority outcomes set out in the Council's, including the Council's *Climate Change Strategy and Action Plan*
2. Optimise the use of resources over the whole life of the asset, and take a risk-based and intelligence-led approach to decision-making
3. Encourage and adopt innovation to enable better asset management
4. Maintain effective communication with residents, businesses and other stakeholders and consider the needs and priorities of all stakeholders when making decisions

our neighbourhoods. In addition, we are reshaping our town centre to renew it for another generation.

- Maximise commercial opportunities afforded to us by the strength of our local economy - both to protect frontline services and to ensure the council is dynamic, ambitious and entrepreneurial (like our residents) but also to drive service transformation and improvement including IT and new contact channels for the digital age.
- Deliver an improving public realm and a world-class leisure offer with new state of the art buildings, outdoor gyms and safe public spaces.

Furthermore, this asset management strategy supports the Council’s ambitious *transformation programme* which aims to ensure that we will:

- Be a modern and efficient council that optimises customer service.
- Adopt a new culture which embraces change and is fast-paced and dynamic.
- Use technology to drive improvements to services and our ways of working.
- Work as One Council and with our partners as One Slough to deliver better outcomes.
- Pursue commercial and other funding opportunities to maximise benefits for Slough

3.3 Statutory obligations and national good practice

Slough Borough Council has a number of legal obligations and powers that govern the way that it manages the road network.

The *Highways Act 1980* sets out the main statutory duties for the council, which include a duty to maintain roads in safe condition. The *Traffic Management Act 2004* also gives the council the duty to keep the traffic moving on the road network, while the *Flood and Water Management Act 2010* covers the management of flood risk associated with extreme weather.

In addition to legal duties, there are a number of sources of national good practice guidance including the UK Roads Liaison Group’s *Highway Infrastructure Asset Management Guidance Document* and its *Well-Managed Highway Infrastructure Code of Practice*. Although Slough is not obliged to follow this guidance, doing so helps us to make sure that the services we provide are consistent with those provided by other authorities and enables us to demonstrate that we are following national good practice when bidding for central government funding.

3.4 What is asset management?

Highways asset management is a well-established approach to the maintenance and operation of the road network that considers the whole life of the asset to enable better informed decisions on how, where and when to carry out work in order that makes best use of the funding available, to the benefit of the community. The main features of highways asset management are described below:

Strategic approach	Asset management promotes a more business-like way of managing maintenance and operation of the highway network. It aims to minimise costs and risks while, at the same time, providing the best possible condition and performance of the network in order to make the best possible use of the available funding.
Lifecycle planning	Asset management planning move away from a short-term, reactive approach, which is inefficient, does not provide a permanent cure and is more costly in the long term. By considering the whole lifecycle of an asset, maintenance can be planned in advance at the most appropriate time to prevent more costly future repairs.

Risk management	An important part of our approach to highways asset management is the management of risk; this does not only mean safety risk, although this is an important aspect, but also financial risks and risks to satisfaction of the users of our network. The asset management plan provides the evidence to allow us to assess risk and to prioritise spending to reduce risk.
Asset information	A vital element of good asset management planning is good quality information about what assets make up the road network, how old they are, how long they are designed to last, what condition they are in and how they are performing. By using this information, we are able to make better decisions on where, when and how to carry out works on the network. This enables us to provide evidence to justify investment in the road network and to assess the benefits of that investment as well as the future risks if we do not carry out works
Service targets	Good asset management is founded on an evidence-based understanding of the quality of service that we can afford to provide. We will determine service objectives, which we will measure through a number of performance measures, and will set targets for our performance, that are both affordable and ensure that we do not expose ourselves, and the users of the network, to an unacceptable level of risk. Ultimately, the aim of our asset management plan is to improve the quality of the services we provide to our users.

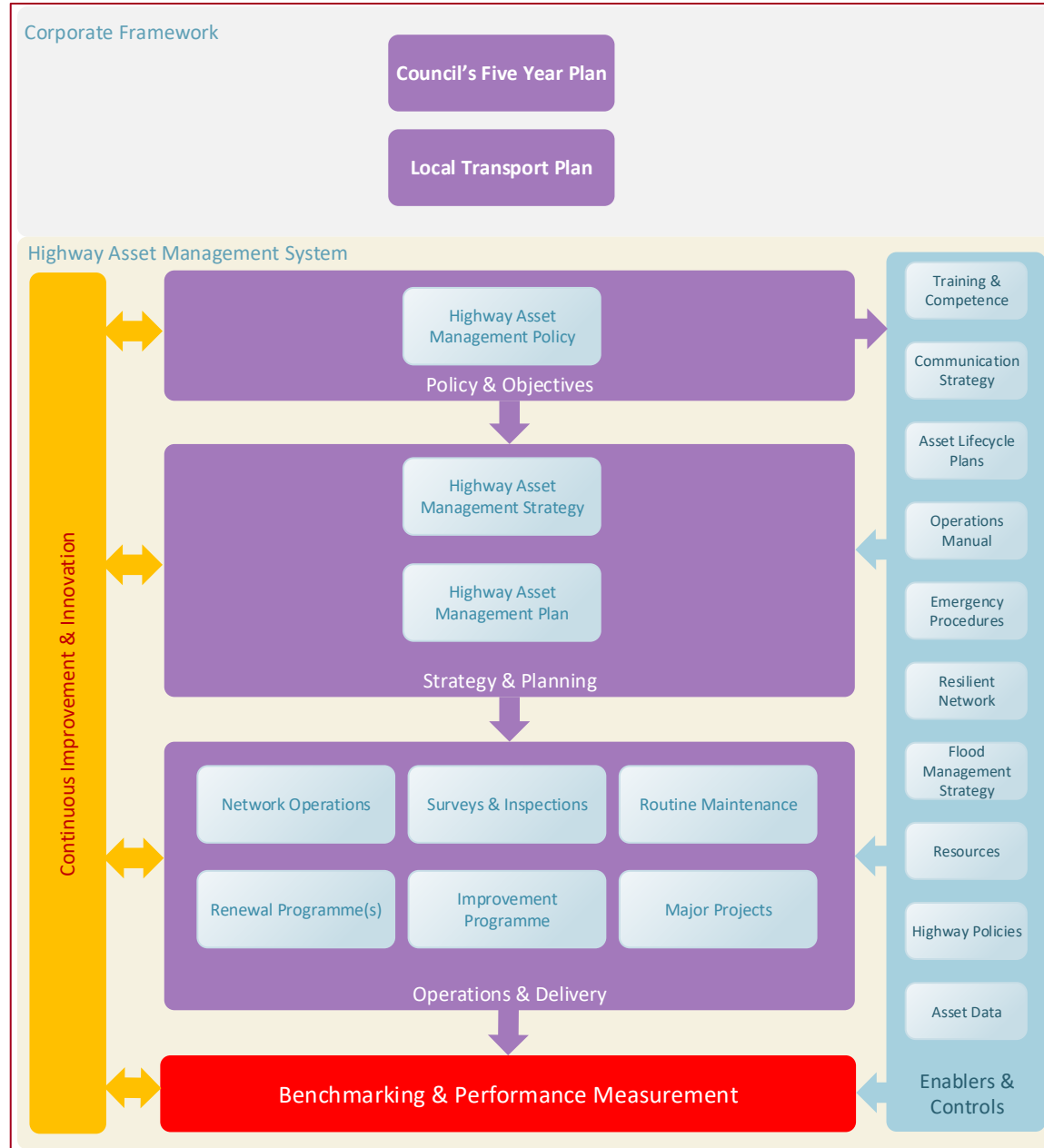
3.4.1 Benefits of asset management planning

Asset management planning is a well-established technique, both in the UK roads sector and internationally, producing clear benefits to councils and communities, including:

- Cost savings, with expected savings of at least 5% through long-term lifecycle management of assets
- Making the best use of limited funds
- Improved risk management
- Ensuring resources and investment are targeted to have greatest impact
- Providing the evidence to justify investment in highway maintenance
- Better roads and service to road users leading to increased customer satisfaction
- Improved transparency and communication with communities and businesses leading to a better understanding and alignment between desired service levels and maintenance priorities
- Improved performance leading to economic benefits for local businesses and residents
- Improved ability to plan for increased traffic demand and the effects of climate change
- Increased resilience to incidents and unplanned events that disrupt the network

3.5 Our asset management framework

Our overall framework for asset management is illustrated in the diagram overleaf.





4 Context

4.1 About Slough

Located in the South East of England with a population of 150,000 people, Slough is an important commercial centre and includes Slough Trading Estate which contains 500 business employing 20,000 people. Its location and access to fast communication links are a key factor in the town's commercial success.

Slough is integrated into the heart of the UK transport and communications network. It is located between the M4, M40 and the M25. Slough is within a 10 minute drive of Heathrow Airport and will be connected to central London by Crossrail.

The 307km road network is made up of:

- A Roads – 29km
- B Roads – 6km
- C Roads – 2km
- Unclassified Roads (Residential) – 270km

The highway asset also includes:

- 647km of footway and cycleways
- 318,000 m² of green space including highway verge, planting, trees and the Town Centre public realm including high quality paving, lighting and street furniture
- 56 structures which include footbridges, culverts, railway bridges and retaining walls
- 11,369 lighting columns, 1850 illuminated signs & bollards and 130 traffic signals

As an authority, we are proud of the progress we have made in the ten years since Slough's first Local Transport Plan was published.

For example:

- Investment in new footways and other rights of way, better maintenance, cleaning and security means that 95% of residents now think that our rights of way are easy to use compared to only 62% previously.
- Council Investment in new bus stops, priority measures and information, as well as investment in new buses by operators, has resulted in one million more bus journeys in Slough, bucking the national trend of falling patronage.
- Construction of the new bus station in the Heart of Slough has delivered a step change in the quality of many bus journeys in Slough.
- 41 out of the 46 state funded schools and colleges in the borough now have school travel plans, aimed at reducing motorised travel to school, compared to only 8 schools and colleges previously.
- Much-enhanced Slough-Heathrow bus services promoted by Slough Borough Council, First and BAA have greatly improved the accessibility of the airport and have improved access to jobs and training. Over three-quarters of Slough's residents can now reach Heathrow Airport by public transport in under 45 minutes in the morning peak.
- The number of people killed or seriously injured on Slough's roads has fallen.

In recognition of our work, Slough Borough Council won the APSE Award for 'Best Performer' in the category of roads, highways and winter maintenance in 2015 and were finalists in 2018. However, we are not complacent, and realise that there are still areas where we are not delivering the level of improvement we would like. In particular, we are concerned over trends in:

- Bus punctuality

- Growth in traffic levels which, across Slough as a whole, continue to rise despite efforts to improve alternatives
- Slow growth in walking and cycling

Generally, the condition of the road network in Slough is good compared to our neighbouring authorities and has relatively low number of potholes, as the strategy of reactive maintenance strategy is working well. Due to this there is a low number of claims of the safety of the roads.

4.2 Future opportunities and demands

Slough has a very ambitious vision for the future development of the Town and its infrastructure. Many new projects such as the planned Heathrow Airport expansion, town centre redevelopment and development of north side of Slough will reshape the town.

4.2.1 Heathrow Airport expansion

The planned Heathrow Airport expansion will lead to significant investment in the surrounding highway infrastructure, including in and around Slough. The airport expansion will likely lead to an increase in jobs and visitors to Slough which will have an economic benefit to the Town but, at the same time, will increase demands for housing and transport infrastructure as well as increasing the number of assets that we are responsible for managing going forward.

4.2.2 Town centre regeneration

Slough is expecting to see a significant regeneration of town centre as Abu Dhabi Investment Authority (ADIA) seeks to invest and regenerate the town centre, with the Queensmere and Observatory shopping centres being the hub of the scheme. The scale of the regeneration is substantial and may include the diversion of the A4 through the town.

The regeneration will lead to significant renewal of the highway assets in the town centre and may also provide increased revenue through business

rates or commuted sums to allow for the ongoing maintenance of the publicly-owned assets to a suitably high standard.

The regeneration of the town centre will impact on travel demand in Slough and will lead to an improvement in public transport, including the use of green and electric buses, in and around the town which will help Slough reduce its CO₂ emissions and improve the air quality in the town centre.

4.2.3 Development of the north side of Slough

Slough is looking to collaborate with neighbouring South Buckinghamshire to encourage growth to the north of the town. The development would provide additional housing and improved services but would also change travel demand in the Town as well as creating new assets - including roads, footways, cycle routes, street lights and trees - that would need to be managed going forward.

4.2.4 Infrastructure developments within Slough

There are also a number of infrastructure developments planned within the Town:

1. City Fibre is installing super-fast broadband throughout Slough. As well as providing super-fast internet connections to residents and business, this network will also prepare Slough for 5G network. The new fibre infrastructure will give additional capacity and enable to meet Slough's ambition to become a Smart City.
2. Slough Heat and Power combined heat and power (CHP) plant in Berkshire was acquired by SSE in January 2008. It is the UK's largest dedicated biomass plant which burns wood chips, biomass and waste paper. SSE are planning to install a network of ducting to supply steam and hot water to the local community local businesses. This green innovative will reduce the carbon emissions and support Slough in becoming a more sustainable Town.

3. Slough is working with Thames Water to upgrade and develop the sewage network to meet the needs for the future. This will increase the capacity of the network and help prepare Slough for the impact of Climate Change.
4. As part of our policy of supporting innovation, Slough will be encouraging the development and use of electric vehicles (EV) by installing the infrastructure needed to support EV charging points. The drive towards the electric vehicles will reduce the overall emissions in the city, making the air cleaner.

4.2.5 Innovation

With all the investment of new infrastructure, there's a clear appetite for innovation as Slough leans towards becoming a Smart City.

1. Slough is currently testing a number of new noise and air-quality sensors on the network to provide better asset information to allow us to make better, timelier decisions about asset maintenance.
2. We are also exploring the use of electric buses that would be cheaper to run, improve air quality and produce less CO₂ emissions. The electric buses would also comply with the UN Sustainable Development Goals (SDG) but may impact on the condition of the road surface due to their weight and amount of torque they produce.
3. Currently the road infrastructure condition inspection is carried out by a surveyor physically recording any defects, however Slough is considering ways of making this more efficient through the use of drones or AI-based video surveys carried out by cameras mounted on refuse lorries.
4. As part of its commitment to addressing Climate Change, Slough is planning to plant hundreds of new trees throughout the town. As part of this, Slough is looking to install sensors from Delta-T

Services within the trees, to help provide data on the health of the trees to enable more accurate life cycle assessments to be made.

5. Slough is also planning to introduce new Apps to allow customers to submit complaints, track the response and provide feedback on the outcome.

4.2.6 Challenges and opportunities

The future of Slough is looking great with many new projects expected to start. However, these new developments will present challenges that will need to be managed as well as opportunities.

The wide range of planned developments within Slough will impact on travel demand within the town and will result in the creation or renewal of new and existing types of assets that will need to be maintained at a high-standard going forward in order to protect the original investment.

However, it is expected that these challenges will be offset by additional revenue funding generated through business rates or through 'commuted sums' which are financial contributions made by third parties to Highway Authorities as compensation for taking on the future maintenance responsibility for newly created highways or highway improvements.

The regeneration will also encourage innovation in data, technology and asset management practices that will provide an opportunity for Slough's highway infrastructure to become amongst the best in the country. However, such innovation will also require new skills and resources if they are to deliver value.

A further challenge will be in the co-ordination of the various programmes of work on the network to minimise traffic disruption and avoid repeat visits.

4.3 Highway funding

The highway service in Slough is funded from two sources:

Revenue – expenditure that relates to the day-to-day maintenance or repair of our existing assets (e.g. defect repairs, signs maintenance, verge maintenance, gully emptying, grass cutting and winter maintenance).

Capital – funding used to replace or extend the life of our existing assets (e.g. structural maintenance) or funding to create new or improved assets (i.e. road safety or new highway schemes).

The capital and revenue budgets that fund service delivery is drawn from a number of sources:

Revenue	<ul style="list-style-type: none"> ▪ Annual 'running cost' funding from central government ▪ Ad hoc central government grants (e.g. pothole and severe weather grants to address specific issues) ▪ Income (funding generated from activities such as New Roads and Street Works Act, permits, civil enforcement and developer funding)
Capital	<ul style="list-style-type: none"> ▪ Government grants to support the annual structural maintenance programmes ▪ Government grants for improvement schemes (e.g. pinch point funding and city deal funding to support national and local agendas) ▪ Developer contributions ▪ Other third-party funding

4.3.1 Central government funding

Like other local highway authorities, the majority of our highway maintenance funding comes from the Department for Transport (DfT). There are a number of elements to this funding; some are based on the length of highway network within an authority, others may be bid for to fund major maintenance projects or network improvements. The Local

Highways Maintenance Incentive Fund is based on self-assessment and encourages local highway authorities to follow an asset management approach and adopt efficiency and best practice principles for local highway maintenance.

Once the central government funding has been allocated, the council determines the final highway maintenance budgets based on priorities across the full range of council services.

4.3.2 Internal revenue funding

Revenue funding comes from council tax and business rates, from various grants to the council and from income generation. The revenue budgets were originally built up based on an assessment of the costs to provide a service and opportunities to raise income. Each year, an assessment is made to ensure that this position is realistic. Where costs are increasing, either due to policy changes or factors outside our control, budgets are increased. Where service or policy changes are made to reduce costs, reductions are made to the budgets accordingly. The end result aims to be a financial envelope for each service that is affordable to the council overall and one which allows the service to meet its statutory and policy objectives.

4.3.3 Historic funding levels

As with many services across the council, revenue budgets have reduced significantly over the last few years with further savings required to be made in coming years with the future still very uncertain.

Capital budgets have generally decreased less than revenue budgets over the same period but still reflect a reduction from that of a decade ago. It should also be noted that, from an asset management point of view, reductions in capital maintenance are likely to result in increases in revenue maintenance; for example if a worn out road is not renewed

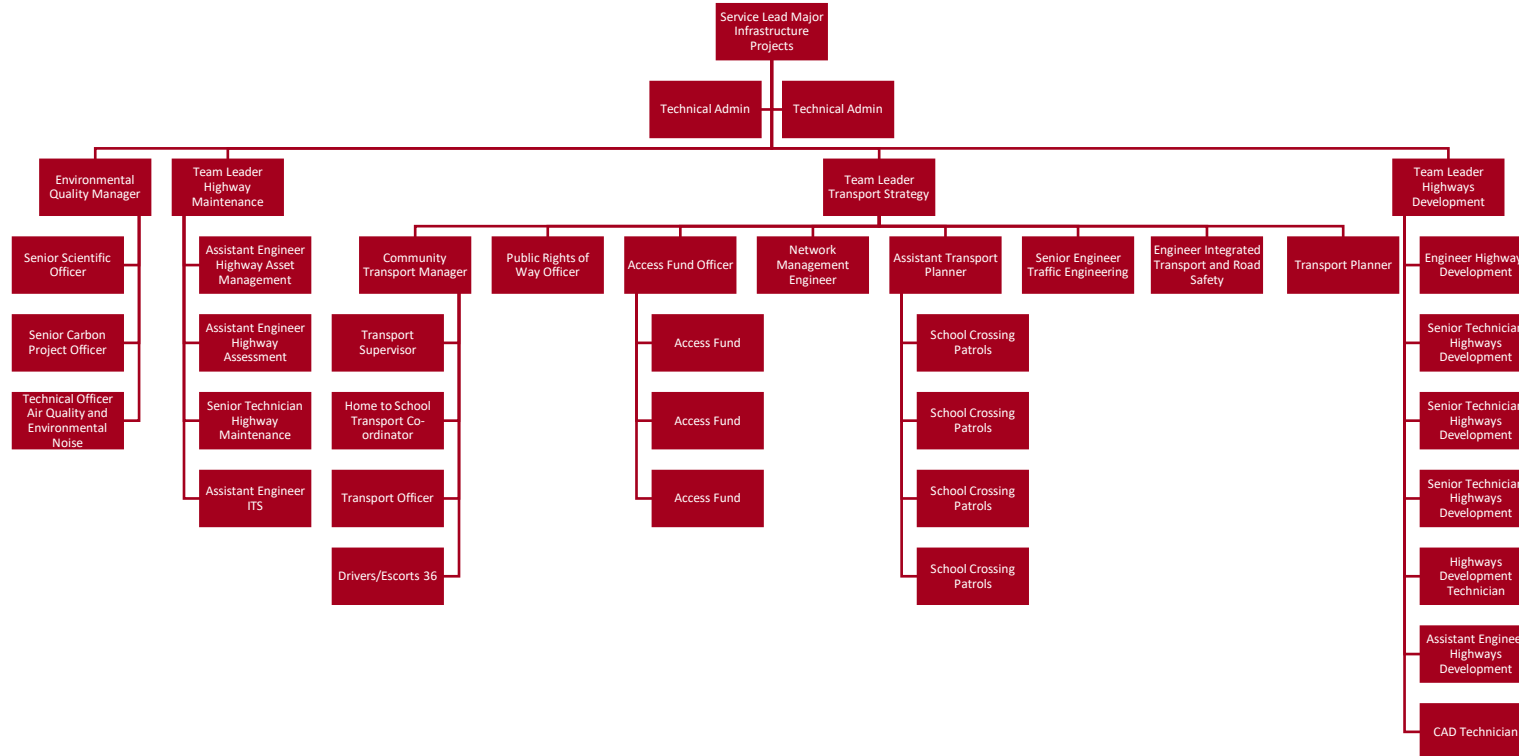
(capital maintenance) there will be an increase in the number of potholes and other defects that require repair (revenue maintenance).

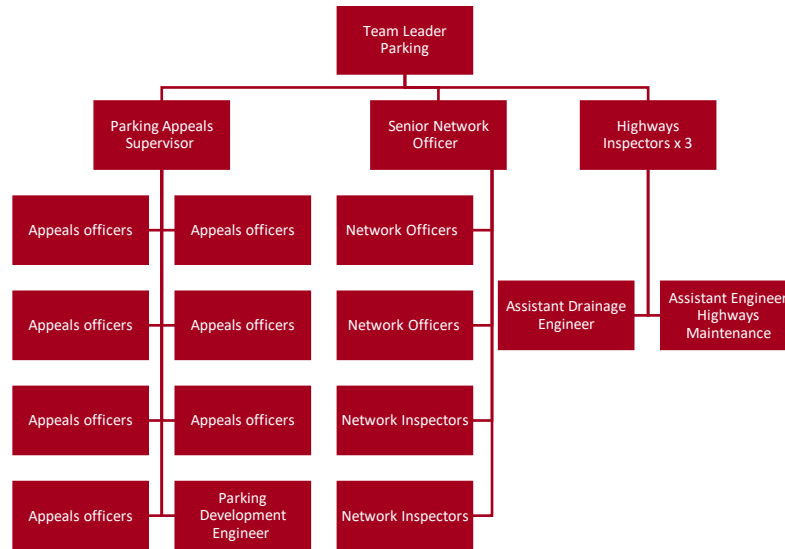
The capital budget we receive annually from DfT is based on the last Local Transport Plan (LTP) and is split between carriageway resurfacing and footway reconfiguration; everything else is revenue funded

Where possible, we bid for additional capital money (e.g. major bridge works) through DfT Challenge Funding. For example, in recent years, we have invested in LED technology for street lights to reduce energy costs (funded from our revenue budget) and will continue to innovate to become more efficient

4.4 Our organisation

Our organisational structure as of December 2019 is shown in the two figures below:





4.5 Skills & training

Slough will increase the training and skills of our workforce by implementing the *UKRLG Competencies Framework*. Complying with UKRLG competencies framework will allow Slough to identify where our skill gaps are and identify the training needed to fill those gaps.

We recognise that skills and resources represent a challenge for the delivery of asset management going forward and we are committed to seek to develop our staff through initiatives such as the South Thames College apprenticeship programme which makes use of the Government’s apprenticeship levy.

Slough Council would also like to recruit new staff with the skills needed to meet the future asset management challenges and we are therefore engaging with local universities to recruit suitable graduates.

4.6 Service delivery

In 2019/20 Slough re-introduced an internal Direct Service Organisation (DSO) to delivery highway maintenance through the use of sub-suppliers.

As this new organisation matures, we will seek to introduce appropriate service levels and performance measures.

We are in the process of procurement an external professional services contract to help manage the current shortfall in resources within the Council.

4.7 Engaging with stakeholders

We will implement our *Highways Communication Strategy* to ensure that our stakeholders are informed about our asset management activities and performance and that we consider the views of residents, business and other stakeholders when we set service levels and prioritise maintenance works.

We are keen to employ new technology to change the way we interact with the public. As mentioned earlier, we are planning to introduce a new App to allow customers to submit complaints or report defects as well as track the response and receive feedback on the resolution.

We will undertake regular customer surveys to make sure we understand the priorities of our customers and consider these in our maintenance planning process.

4.8 Managing risk

One of our asset management objectives is to take a risk-based approach to managing our assets and we are in the process of implementing the recommendations in *Well Managed Highway Infrastructure: A Code of Practice*. This will include a number of specific actions:

We have developed a resilient network which includes the most important parts of the road network that we will keep open in a range of circumstances and that the resilient network is considered as part of any prioritisation. We will ensure that the resilient network is updated on a regular basis.

In addition to the resilient network, we are reviewing our wider maintenance hierarchies to ensure that they reflect current functional use and need, and will use these to establish appropriate risk-based inspection and maintenance regimes. These are published in our new *Operations Manual*.

We plan to create a much wider understanding of the long-term risk to our infrastructure assets. We will analysis the risk of future maintenance need of our infrastructure. We aim to have a better understanding of asset failures, and the funding required to maintain our assets. By having this understanding of risk we will aim to make a more coordinated works programme and utilise our future funding in a more strategic way to reduce the risk on the network.

More generally, we will continue to work to ensure that a risk-based approach is embedded within our culture and our overall approach to asset management and will make sure that lessons learned from our successes and failures are incorporated within our risk management process.

4.9 Considering the environment

4.9.1 Environmental impact

We take our responsibility to the environment very seriously. In line with our *Environment Strategy* As a matter of course, we will continue to take account of the environmental and biodiversity impact of our maintenance treatments and services and, wherever feasible, either reduce or mitigate these impacts. Works will be undertaken to ensure that, where reasonably practicable, all highway materials are recycled, or innovative materials will be utilised to assist with the authority's wider recycling targets.

We will also, wherever possible, take into account the character of local areas and any heritage issues in carrying out our maintenance and management of highway assets.

4.9.2 Climate change and flood risk management

As an authority we acknowledge the 'Climate Emergency' and are committed to achieve zero CO₂ emissions by 2050. To achieve this, we will continue to work with partners across the region to deliver this goal through all relevant strategies, including our highway asset management strategy.

Moreover, as a consequence of the increasing impact of climate change, we are expecting to experience a greater frequency of severe weather events, particularly flooding, which causes major disruption and damage to the highway network. In order to minimise this effect, it is a priority for our drainage systems to operate effectively. We have therefore developed a *Flood Management Strategy* and our annual capital drainage programme is developed, on a risk-basis, utilising the recommendations of the 2012 HMEP guidance on the *Management of Highway Drainage Assets*.

4.9.3 Environmental monitoring

We have also established a dedicated Environmental Monitoring Team which carries out air quality and noise monitoring at a number of key locations in the borough, manages our increasing numbers of electric vehicle charging points as well as monitoring the council's carbon footprint.



5 Our asset management process

5.1 Asset management process

The overall objectives and priorities for asset management are determined from the Council's overall priorities and from the results of our stakeholder engagement. We will undertake a range of asset management planning activities in support of these including:

- Planning for investment
- Inspecting and monitoring the condition and performance of assets
- Planning maintenance interventions over the whole life of assets
- Managing risks
- Asset value accounting
- Developing forward work programmes

5.2 Investment planning

Our overall aim is to extend the operational life of highway infrastructure through the use of appropriately timed preventative and restorative treatments to maintain safety and serviceability whilst minimising reactive repairs, environmental impact and delays to highway users. We will develop longer-term investment plans to determine the funding profile needed to achieve the required outcomes and to help make a case for investment.

In planning for investment and in allocating funds to investment programmes, our long-term aim is to reach a steady state where we are meeting our service objectives and performance targets, and the deterioration on an annual basis is matched by annual funding.

5.2.1 Asset information and data

Up to date and consistent information about the assets we own, their age and condition is vital to enable effective decision making and allow us to decide which type of maintenance is required, and where and when it is needed. This will include:

- Regular inspections to determine the condition and performance of our assets, including specialist surveys, for example testing the strength of structures and machine-based surveys of roads to determine surface condition;
- Reports of defects and requests for service from members of the public, as well as information from our own inspections who look for urgent defects, such as potholes; and
- General asset information about the age of an asset that allows us to determine when an asset is reaching the end of useful life.

Wherever we can, we will make use of the latest developments in data collection technology and decision-support tools, including automatic reporting from ‘intelligent’ assets and sensors, as well as ‘crowd sourced’ information from users and vehicles.

5.2.2 Lifecycle modelling

To assist us in the planning process, we will continue to develop lifecycle models for all key assets to forecast the consequences of maintenance strategies on budget, network condition (both short and long-term) and environmental impact. We will use these models to inform our decisions about treatment strategy, budget requirements and priorities.

5.3 Planning maintenance

In order to make sure that our road network is safe and providing a good quality of service, we carry out different types of maintenance:

Reactive maintenance	Small scale works in response to reports from the public or from our own inspectors, to keep the network in a safe condition and to minimise risk to road users. Examples include filling in potholes, repairing streetlights that are not working or replacing signs that have been knocked down.
Routine maintenance	Work carried out on a regular basis to keep the network tidy and in good condition, such as cutting grass, emptying gullies, sweeping streets, and cleaning signs.
Planned maintenance	Larger-scale maintenance to ensure the network is in good condition, or to extend the life of an asset. Examples of this would be replacing the surface of the road or footway, replacing the lighting columns in a street where they have reached the end of their useful life and major repairs to a bridge.

Because we have limited funding for maintenance, we are not usually able to carry out all of the works that we would like to, except where safety is a factor. We will therefore determine which works are most urgent, or which will save the most money in the longer term by reducing the need for more costly future maintenance.

5.3.1 Network hierarchy

As well as the Resilient Network described earlier, we categorise our network and assets based on their importance to users and will use this ‘maintenance hierarchy’ to decide where to carry out maintenance works.

The maintenance hierarchy will be reviewed on the basis of risk to make sure it continues to reflect current functional use and need, for example including whether or not they include bus routes, cycleways and commuter routes.

5.3.2 Whole life costs

In line with our asset management principles, we will consider the costs over the whole life of an asset from when it is built or installed through to when it is replaced when deciding priorities for works or choosing solution. As an example, we might resurface a road in preference to works on other roads that are in worse condition, because this would prevent the need for more costly works in future.

5.3.3 Cross-asset prioritisation

Another feature of our approach to highways asset management is that when deciding priorities for spending we will consider all of the different assets that make up our road network. For example, we might redirect funding from carriageways to footways, if the priority is greater or if there is greater benefit in terms of reducing whole life cost. In addition to we seek to undertake collaborative planning where possible to ensure that when working on one asset we will ascertain what other works can potentially be delivered on adjacent assets at the same time.

5.4 Developing work programmes

We will develop forward programmes of planned work, on a short (2-year) and medium (5-year) basis. In order to assess whether works are required, when they are required, and what works are required we will consider:

- Condition of the asset, measured by surveys and inspections
- Risk to safety, serviceability and sustainability of the asset
- Age of the asset
- Public reports of defects or numbers of third party claims
- The relative importance of the location, including factors such as contribution to air quality and encouraging active and healthy travel
- How much funding is available

- Whether the works save money by preventing the need for more costly work in future
- Opportunities of joint working across different asset groups, across different funding streams
- Alignment with planned development works

The factors that are used will vary between different asset types; for example whereas the decisions on works to structures and carriageways are more likely to be based on condition, for street lights the age of the column is more likely to be a factor.

We consider a number of different options when deciding the best maintenance treatment with the aim of achieving the best balance of cost, improvement and risk over the whole life of the asset.

The longer-term work programme will allow suppliers to also plan for a longer term. This will encourage the suppliers and contractors to get into longer programmes which possibly involves less costs. This is due to the fact there will be more certainty of work for the suppliers, which will encourage them to invest in better technology to increase productivity, quality and reduce the costs for the long term.

5.5 Asset improvement

As well as maintenance works to repair and restore condition of assets, there will be occasions where we need to carry out works to improve and enhance assets (e.g. improving the capacity of a bridge, widening a road, changing the type of surface material or improving the street lighting). In addition, there will be new assets such as new signs and lighting columns and new asset types that may need to be installed (e.g. electric charging points). In carrying out these types of works, we will always consider the need for asset management through the whole life of these assets, including any addition funding and maintenance requirements.

5.6 Performance management

5.6.1 Service priorities and performance targets

We will develop a performance framework that will allow us to link level of funding with asset condition and performance, and monitor performance against those standards. We will establish service priorities based on consultation with our elected members, road users and other stakeholders and will define performance measures and targets that set out the standard of service that we aim to provide.

We will assess the performance requirements for our network based on an understanding of current and future demands on the network by road users and the local economy and will use this to determine funding requirements and to assess the impact of various levels of funding on the quality of serviced that we are able to provide. These performance measures and targets will help us to measure progress and will drive continuous improvement.

5.6.2 Benchmarking and efficiency

In common with other Local Highway Authorities, we must provide information to the Department for Transport each year on the condition of the road network in Slough which will enable us to compare our performance with other local authorities on an objective national basis.

Moreover, so that we can demonstrate that we are providing good value in managing our network and to identify how we might do things better, we will continue to benchmark our performance with that of comparable local authorities and to track improvements over time.

5.6.3 Collaboration with other local authorities

We possible, Slough will continue to collaborate with other local authorities in order to:

- Benchmark performance and sharing good practice
- Jointly deliver services (e.g. LED Street Lighting Project)
- Procure asset surveys and other specialist services (e.g. Berkshire Survey Contract)

5.7 Continuous improvement

We are committed to continuous improvement in the way we deliver the highways asset management service, in the quality of service provided by the road network, and in our efficiency gains. Regular performance reports will submitted to senior managers to enable the service to be monitored and improved.

5.7.1 Management reviews

We will carry out regular management reviews of our asset management processes to make sure it is effective and being followed. The reviews will identify lessons learned and instigate corrective actions where necessary as well as identifying opportunities for improvement.

We will identify an action plan that identifies short, medium and long-term priorities as part of a programme of improvements to our asset management approach. We will seek out opportunities to improve the way that we deliver services and works on our network, through co-operation with other authorities and through collaboration with our service providers.

5.7.2 Service process reviews

Service Process Reviews will be undertaken at regular intervals to help identify efficiencies and improvements in our asset management processes. Our Business Improvement Team will provide focus to our improvement activities using Lean Methodology.

