

# **Highway Infrastructure Asset Management Strategy**

2021-2026



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## 1 INTRODUCTION

Rutland County Council is responsible for 330 miles of highways and 120 miles of footways as well as street lighting, bridges, traffic signals, drainage and other assets that together form the highway infrastructure for the County. Highway infrastructure is the Council's largest asset with an estimated gross replacement cost of approximately £680M for paved areas.

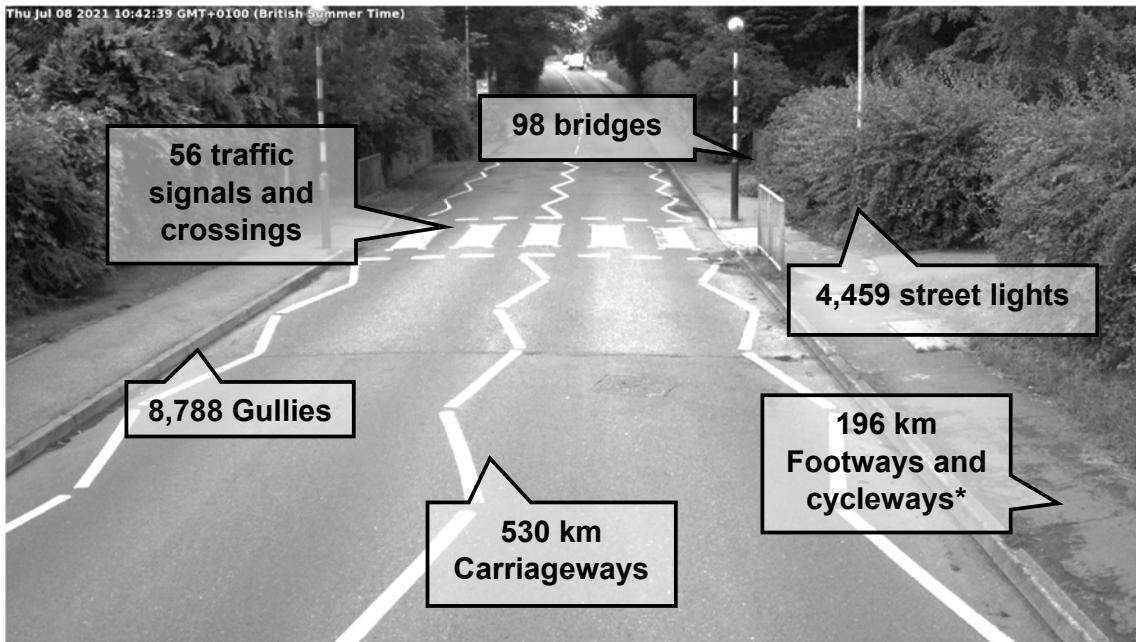
Highway infrastructure is vital to the social and economic well-being of Rutland. As the custodian of such a vital asset, the County Council is required to have a defined and structured approach to the management of this asset so that it clearly delivers good value for our stakeholders by the optimal allocation of resources; this approach is called Highway Infrastructure Asset Management.

This is an update of its Highway Infrastructure Asset Management Strategy with the first strategy published in 2016. The strategy has been developed in accordance with the recommendations set out in the Code of Practice 'Well-Managed Highway Infrastructure' and other UK Roads Liaison Group (UKRLG) guidance.

The strategy sets out the how the County Council will manage highway infrastructure to meet the aspirations of its stakeholders and the Council, within the context of legal duties, national objectives and funding. The strategy is a high-level document that confirms Rutland County Council's commitment to Highway Infrastructure Asset Management.

### 1.1 What are highway infrastructure assets?

Highway infrastructure assets include carriageways, footways, bridges and other highway structures, street lighting, traffic signals, highway drainage and street furniture that is the responsibility of the highway authority. Some features are installed in or adjacent to the highway but are the responsibility of third-party organisations, these features are not highway infrastructure.



\* Length is for network lengths containing footways

**Figure 1.1 Our infrastructure assets**

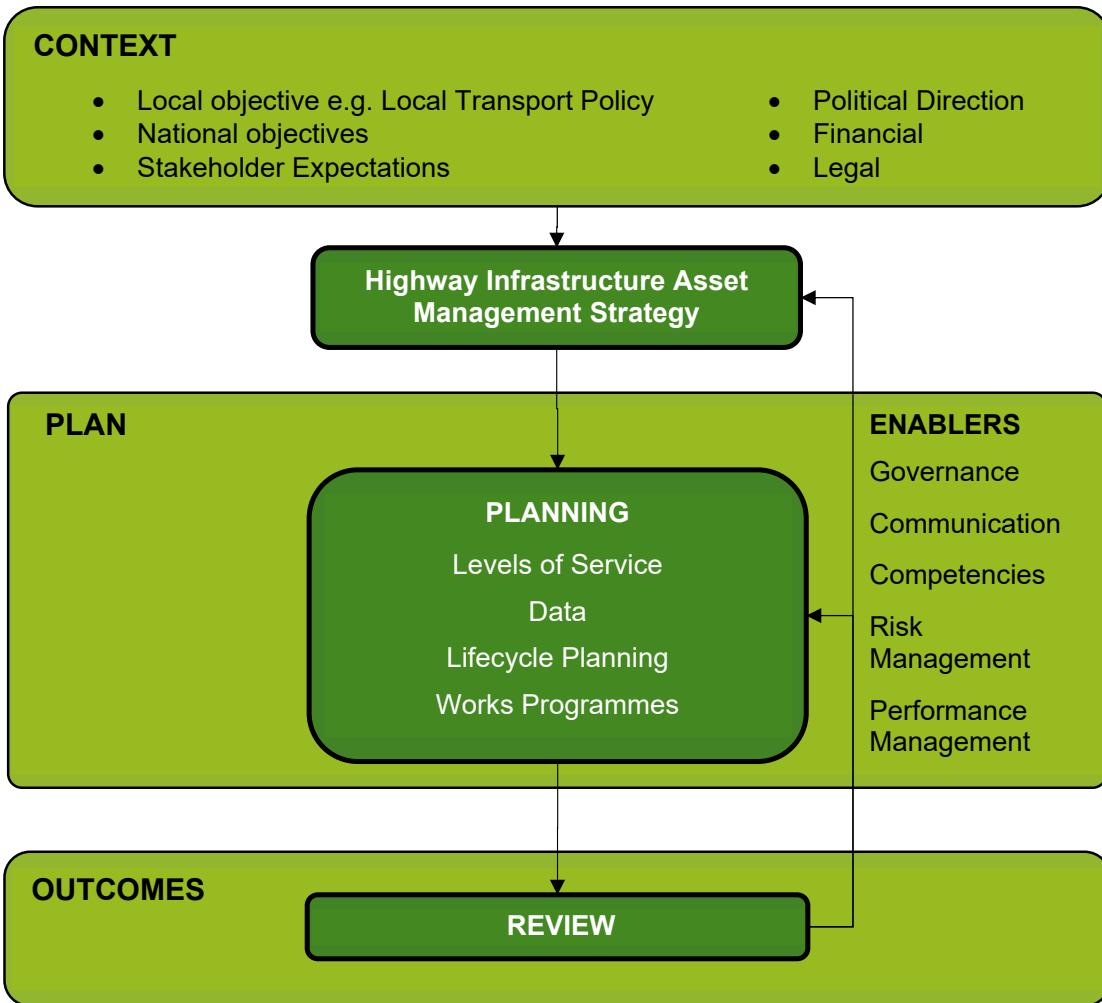
In this strategy, the key assets have been collected into the following asset groups:

- Carriageways;
- Footways and Cycleways;
- Drainage;
- Structures;
- Street Lighting;
- Traffic Management Systems including Traffic Signals.

## 1.2 Asset Management Framework

An Asset Management Framework has been adopted in line with the current best practice as shown in Figure 1.1.

The framework sets out how asset management planning operates at the County Council. Each area of the framework (Context, Planning, Enablers and Outcomes) is covered in this Strategy for all stakeholders. The review sets out the current state of the asset and is produced at regular intervals, in line with the Council's reporting requirements. More detailed, technical plans and documents support this strategy and provide a more focussed service-level description of the approach.



**Figure 1.1. Asset Management Framework**

## 2 ASSET MANAGEMENT POLICY

Rutland County Council is committed to implementing sound Asset Management principles in the management of its highway infrastructure. Our Highway Infrastructure Asset Management Strategy:

- supports the Council's Vision set out in the Corporate Plan for between 2019 and 2024 to be:

“High Quality of Life in Vibrant Communities - We will work for the residents of Rutland and use our resources wisely to protect and enhance our unique environment, create more homes and jobs for our residents, and ensure everyone can live well and safely together.”

- enables the vision for transport as set out in the Local Transport Plan (LTP4) to be addressed:

“A transport network and services that support: sustainable growth; vulnerable residents; and health and wellbeing.”

In order to achieve the optimal allocation of resources, asset management principles are embedded in our approach to the maintenance of highway infrastructure. We will:

- Produce and maintain an asset management strategy that is supported by detailed analysis of our investment needs;
- Track our progress against asset management objectives and benchmark our performance against the performance of other highway authorities;
- Focus on the needs of our stakeholders while meeting our legal duties and balancing wider risks to the environment, the performance of the asset and how the network works;
- Ensure that our information is fit-for-purpose and sufficiently, robust to make good decisions;
- Communicate our service levels and decisions with our stakeholders;
- Consider the future impact of decisions while dealing with current needs;
- Focus on routine and planned-preventative maintenance that protects the condition of the asset and reduces future maintenance impacts;
- Ensure that work is delivered efficiently by planning our work sufficiently far ahead;
- Develop our staff in line with a competency framework that supports the asset management strategy;
- Seek innovation and continual improvement.

## 3 CONTEXT

### 3.1 Links to other documents and plans

Figure 3.1 shows how the Highway Infrastructure Asset Management Strategy links the Corporate Plan, Local Plan and Local Transport Plan to the Highway Infrastructure Asset Management Plan (HIAMP). It sets out the overall Asset Management Strategy and Framework covering each of the key asset groups



**Figure 3.1 Links to other plans**

The strategy will be delivered through a range of operational plans with a regular state of the asset review; this set of documents will form the Highway Infrastructure Asset Management Plan (HIAMP). The HIAMP details how the activities in the Asset Management Framework will deliver this strategy.

Under the Local Transport Plan 4 “Moving Rutland Forward” which covers the period 2019 to 2036, the vision for Rutland’s transport network is a transport network that supports: Sustainable Growth; Vulnerable Residents; and Health and Wellbeing.

Sustainable growth is supported by:

- maintaining our highway network to a high standard through the efficient use of available resources – ensuring the safety and quality of our assets.
- following the County Council’s environmental policies to meet Rutland’s environmental needs and the challenge of climate change.

Vulnerable residents are supported by ensuring that the highway infrastructure supports the routes that passenger transport services require.

Health and wellbeing is supported by:

- protecting, maintaining, enhancing and conserving what makes Rutland great.
- investigating opportunities to develop cycleways, footways and public rights of way.
- striving to reduce the number of deaths and injuries on our county's roads.

The Corporate Plan (2019 to 2024) is supported by delivering a customer-focussed highways service by improving timeliness and quality of response, and by keeping residents informed on the progress of their issues by exploiting customer responsive systems such as FixMyStreet.

A Climate Crisis has been declared by the County Council. As part of its Climate Change Action Motion (2020), the County Council is committed to ensuring that all strategic decisions, budgets and approaches to planning decisions are in line with a shift to zero carbon by 2050. We will

- maintain our approach to highway infrastructure asset management in line with this motion.
- Seek to reduce carbon emissions resulting from the management of highway infrastructure.

The goals of the Corporate Plan, the Local Transport Plan "Moving Rutland Forward" and the Climate Change Action Motion have been used to defined objectives for this strategy which are set out in our Levels of Service in this strategy.

### **3.2 Legal duties**

In managing the highway asset, the County Council has to comply with many legal duties. Those duties that are specifically aimed at the authorities, such as the Highways Act (1980), are the responsibility of the elected members. The key duties from legislation are listed in Table 3.1.

**Table 3.1. Key duties around the management highway infrastructure**

<b>Legislation</b>	<b>Places a duty on the County Council to...</b>
Highways Act (1980)	Maintain highways and to take all reasonable care to ensure that highway is not dangerous to traffic
Traffic Management Act (2004)	Keep traffic moving
Road Safety Act (1988)	Promote road safety and to undertake studies to reduce the risk of accidents
Flood and Water Management Act (2010)	To investigate the causes of flooding and to undertake measures to reduce flood risk as the Lead Local Flood Authority.

There is other legislation that applies to the County Council in general; these can also be the responsibility of Council Officers and Service Providers. Such legislation covers Health and Safety, the Environment, Equality, Human Rights, Civil Contingencies and other local government legislation.

### 3.3 Financial constraints

Funding for highways comes from many sources and is split into two types of funding, capital or revenue.

For the creation of new highway infrastructure, capital funding is most commonly secured from developments but can also be secured for specific projects from the Local Enterprise Partnership or central government.

Maintenance of highway infrastructure is funded according to whether it improves the asset (capital) or simply ensures that it continues to function (revenue). Capital funding for structural maintenance (to replace or improve the strength of the asset) or preventative maintenance (to extend the life of the asset) is largely funded by central government. Revenue funding that supports routine maintenance (that keeps the asset functioning) is supported by locally raised revenues. The balance of funding sources is shown in Figure 3.2. It is clear that the majority of funding for the delivery of this strategy is determined by central government.



**Figure 3.2. Sources of funding - 2021**

### **3.4 National objectives**

Highways that are managed by the County Council are a component of the national highway network. Central government, is a key stakeholder in the local highway network in terms of investment and the wider role it has as part of the national highway network; it has its own political and strategic objectives. The County Council must acknowledge national objectives in addition to local needs to ensure that it continues to meet its duties and optimises the opportunities for funding from central government.

### **3.5 Stakeholders**

As the main element of infrastructure that enables transport and a large feature that is present near to where almost all people live and work, the highway can impact on all parts of life in the County. Those that are affected by, and who influence, our asset management activity are our stakeholders.

Our stakeholder's needs are a key element in shaping the aspirations in the Asset Management Strategy. In developing the strategy, we have consulted with stakeholders to confirm their needs and expectations which helped to inform all aspects of the strategy and in particular the levels of service. We will continue this consultation to ensure that our asset management approach remains aligned with their needs.

Our asset management activities impact on our stakeholder's lives and how well we meet their expectations. There is also the need for on-going engagement with stakeholders in order to keep them informed of things that will affect them and to manage their expectations so that overall, we positively impact on levels of satisfaction.

The County Council has undertaken regular customer satisfaction surveys. These surveys consulted residents on their view of the condition of assets and how important they are. The results of the most recent survey clearly indicate a desire from our residents to focus on the condition of roads, pavements and drainage.

The County Council intend to update and enhance the understanding of stakeholder needs through participation in the NHT Public Satisfaction survey. The results of this survey will be incorporated into our asset management planning.

## 4 ASSET MANAGEMENT PLANNING

### 4.1 Levels of Service

Levels of service are simple statements that describe the performance of highway infrastructure assets in terms that stakeholders can understand. Performance measures are used to demonstrate the levels of service and are defined in the Performance Management Framework.

Levels of service have been defined based on the key aspects of highway maintenance with an over-arching objective that links to the wider Council objectives as shown in Table 4.1.

**Table 4.1 Levels of Service**

Aspect	Objective	Level of Service
Safety	To ensure that highway assets are maintained in a safe condition and strive to reduce the number of casualties on our roads.	Complying with statutory obligations
		Meeting users' needs for safety
Serviceability	To maintain the current condition on carriageways, footways and drainage and seek to improve the connectivity of footways, cycleways and public rights of way	Ensuring availability
		Achieving integrity
		Maintaining reliability
		Resilience
		Managing condition
Sustainability	To consider the future impacts of decisions on cost, the environment and stakeholders expectations, and to address the challenge of climate change.	Minimising cost over time
		Maximising value to the community
		Maximising environmental contribution.
Customer Service	To understand our stakeholder needs and to keep them informed.	Satisfaction, communication, information

### 4.2 Data

Asset data is information on what physical highway infrastructure assets an authority has responsibility for and includes number, location, performance, financial value and public opinion.

We will actively manage asset data so that the authority can:

- define the type and number of highway infrastructure assets
- monitor performance;
- make effective and informed decisions;
- manage risk

- determine the required level of investment
- comply with statutory requirements.

We ensure that all data is created according to the requirements set out in an asset data management plan that:

- sets out detailed requirements for the creation of asset data.
- identifies how asset data is stored in asset data systems.
- identifies which stakeholders use the asset data and for what purpose it is used.
- explains how asset data is to be maintained, the currency and accuracy of data will be confirmed by regular data audits.
- sets out how redundant asset data is disposed; whether data be deleted or archived.

#### **4.3 Lifecycle Planning**

Asset management requires the long-term consideration of the impact of investment and maintenance strategy, this is called lifecycle planning. We will develop lifecycle plans for all key asset groups.

Lifecycle plans can vary in complexity. These plans will be developed that are appropriate to the size of the investment needed in the long-term, the likely impact on the asset management outcomes, and volatility of performance.

#### **4.4 Works Programmes**

A rolling medium term, i.e. 3 – 5 years, works programme for all asset types will be established and regularly updated in consultation with the elected members. The programme will be developed using a clear terminology to explain the stage of development and the nature of the work planned.

This programme will include both routine and planned maintenance works.

This programme will be made available to the public and other stakeholder on our public website and other forums, following Cabinet approval.

## **5 ASSET MANAGEMENT ENABLERS**

### **5.1 Governance**

The Portfolio Holder for Highways and Transportation is the sponsor for the asset management approach as set out in the asset management framework. They, along with the wider Council, are the senior decision makers.

Leadership of asset management approach operates through a Network Management board with responsibility for Asset Management. The Board is formed of the Sponsor, and the Asset Management leads.

An Operations board reports to the Network Management board and is responsible for day-to-day Asset Management operations.

### **5.2 Communication**

Our asset management strategy recognises that our stakeholders and their needs are diverse. What we communicate and the way that we do this is important. We will:

- Classify types of stakeholders into groups to focus on what is important to them.
- Engage with stakeholders, following the communication plan that focuses on the key interests of each stakeholder group, using the channels that they wish to communicate through and the style of language needed.
- Fulfil our legal and ethical duty to be open and transparent whilst safeguarding the reputation of the Council.
- Monitor the success of this engagement.

The Council is developing a highways communication plan to ensure all stakeholders are appropriately communicated with. The plan will describe the planned engagement with our stakeholders, the channels that we use to achieve this and the measures we will use to assess success.

We will actively use customer engagement surveys to gauge levels of satisfaction and to focus on what is important. We will provide feedback on our activity through our website including partner applications such as FixMyStreet, social media and face-to-face meetings as required.

### **5.3 Competencies**

Competencies and training are identified in a competency development plan. Competencies will be assessed using the UKRLG Asset Management Competency Framework at an authority level while the detailed development plans identify actions needed by the role or individual as required.

### **5.4 Risk Management**

#### **5.4.1 Risk Management approach**

Risk management is an intrinsic part of highway infrastructure asset management. It adds value to our activities and increases the probability of successfully delivering our asset management objectives. Risk management enables us to manage uncertainty and embeds a process where unexpected events are minimised.

Risk is present in all kinds of undertaking. Risk can be defined as the potential for events and impacts to produce opportunities for benefit or threats to success. Risks exist across the organisation at different levels and in different types of activity.

The County Council has incorporated the management of risk in all decisions it makes about highway infrastructure. This management occurs within a hierarchy of risk:

**Corporate** – High level risks that effect the whole authority. Such risks include corporate reputation, civil defence, emergencies; business continuity, health and safety, political and legal and financial risk.

**Strategic and Tactical** – Risks affecting the management of the highway infrastructure should be considered throughout at both strategic and tactical levels.

**Operational** – Risk should also be managed when undertaking operational activities.

The Council maintains risk registers which are aligned within the hierarchy as defined in the Risk Management Policy. The risk registers cover all types of risk: Safety, Reputation, Service reduction or failure, Environmental or Financial.

#### **5.4.2 Network Hierarchies**

A functional hierarchy is applied to the network that is aligned with the Code of Good Practice and is regularly reviewed. The connections of our network with neighbouring authorities are resolved through the Midlands Highways Alliance Plus (MHA+) network, ensuring consistency for the highway user. This allows decisions about risk to be made in a consistent fashion on the basis of how that part of the network is used. The functional hierarchy is defined for carriageways, footways and cycleways. A key use of this network hierarchy is to define the frequency of highway

safety inspections and response following the identification of defects in accordance with the duties set out in the Highways Act.

The County Council has also defined a Resilient Network that is part of the highway network. It gives priority to this network in order to maintain economic activity and access to key services during extreme weather. The Resilient Network informs decisions that mitigate the potential impact of disruption caused if the asset were to fail. Such decisions affect how the asset is managed including the frequency of inspection, the response to defects or the level of investment made.

## **5.5 Performance Management**

A Performance Management Framework has been defined which links the objectives of this strategy to the levels of service. The Framework is built on statutory condition indicators, local performance reporting and customer satisfaction measures.

Performance is monitored as part of the formal review of this strategy in order to assess progress in delivering the objectives and to recommend improvement.

All the indicators are reviewed at least once a year as well as on-going monitoring of monthly measures in line with the overall governance of asset management practice as set out in Section 5.1.

## 6 DELIVERING OUTCOMES

The County Council manages a diverse set of highway infrastructure assets that must work as an integrated system to fulfil the aspirations set out in this strategy. This section describes how this will be achieved is provided for each key asset group of assets and across all assets in general.

### Future challenges for highway infrastructure

The majority of funding for capital investment in highway infrastructure comes from central government. There is wide-spread recognition of a chronic under-funding of highways maintenance at a national level. Appropriate levels of funding are a critical aspect in the fulfilment of this strategy ensuring that the right investment is made at the right time. In setting out the long-term aims of the strategy, it is accepted that the County Council does not control the majority of funding required and there is an assumption that funding levels will be adequate.

Rutland County Council has declared a Climate Crisis and has released an action plan to address this. The contribution to carbon emissions from highway infrastructure is significant in the installation of the asset, maintenance as well as operation. Climate change will lead to more severe weather events which will increase the demand on highway infrastructure and require a different approach to maintenance and investment. In particular the role of the drainage systems to prevent or mitigate flooding will increase in importance. Other effects of severe weather are also expected.

A key challenge for Rutland is achieving sustainable growth. In addition to the Climate Crisis other sustainability impacts needs to be addressed including noise and air pollution which impact on health and wellbeing and enabling the wider transition to more active travel.

### General asset management approach

Across all types of highway infrastructure assets, we will:

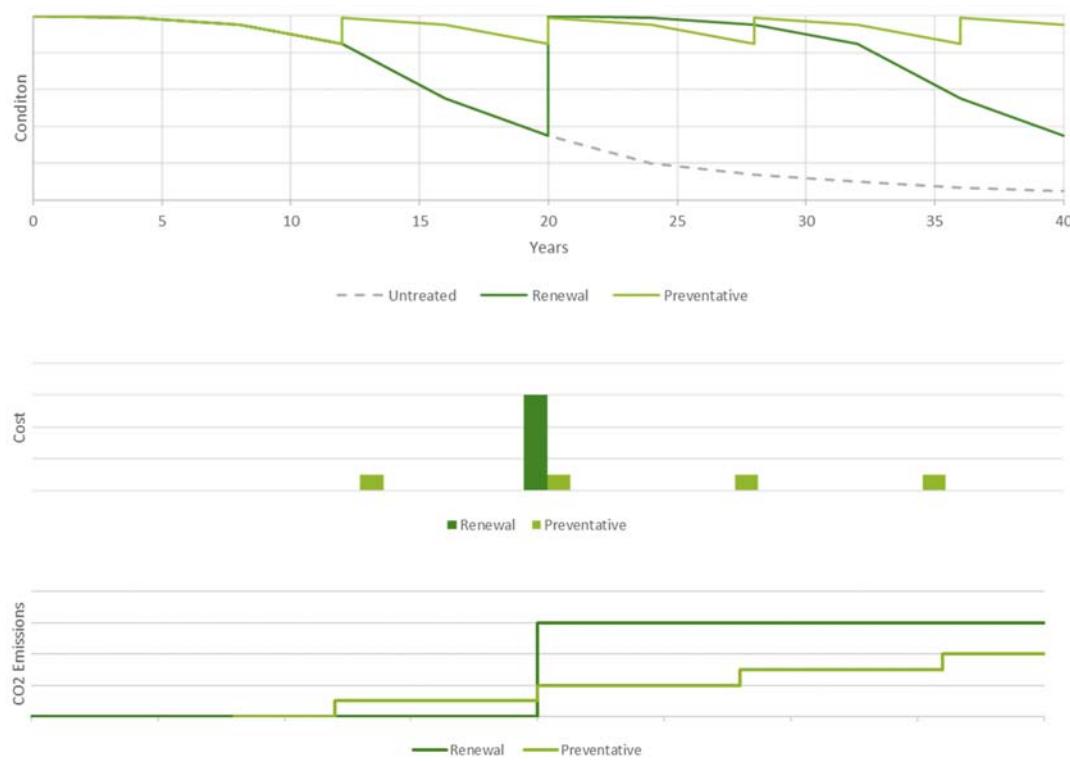
- ensure that investment decisions consider the whole life cost and environmental impacts. This may be through lifecycle planning, specific assessment on larger schemes or through on-going research, innovation and review that informs our maintenance approach;
- seek to extend the life of assets using a preventative maintenance approach to maintain the level of service over a longer period;
- prioritise resources using condition data and supplementary information to generate outcomes which have the greatest benefit. Benefit means contributing to the objectives this strategy.

The concept of a whole life approach to maintenance and an illustration of the benefits it can produce are shown in Figure 6.1. A preventative strategy means that interventions are done more regularly than for a renewal strategy and each intervention is much lower cost and emits less carbon. Over the whole life of the

asset, the preventative strategy maintains the condition (or function) of the asset at a higher level than the renewal strategy and can lead to a reduction in both the whole-life carbon emissions and whole-life cost of maintenance.

Some assets in the County will be beyond the point in the lifecycle where preventative maintenance is possible and a renewal treatment or replacement is the only option. For these assets, the best approach is to delay renewal until such a time that it is necessary.

To achieve the greatest benefit, the authority must take a proactive approach to preventative maintenance whilst undertaking some renewals. This will mean that it might not be investing in repairing the worst performing assets in order to maximise the benefit of available resources over the entire network.



**Figure 6.1 Illustration of a whole life approach to maintenance**

## **6.1 Carriageways**

Carriageways are the part of the highway available for all types of vehicles and users. There are 530 km of carriageways in Rutland. The majority of carriageways are surfaced with a bituminous surfacing with some higher risk areas using a specialist high-friction surfacing.

### **Condition**

Carriageways in the County are maintained in a very good condition. The proportion of roads that should be considered for maintenance is significantly lower across all road types than roads in the East Midlands region and England.

### **Strategy**

The Council will maintain carriageways so that they remain available and in a safe condition. Carriageways will be maintained to a standard appropriate to their function. The treatments used will maximise efficiency over the life of the asset in terms of cost, impact on the environment and stakeholder's needs.

### **Future challenges**

Carriageways deteriorate due to traffic loading and exposure to the environment.

The majority of the carriageways in the County are of evolved construction rather than designed. These assets are typically characterised by a relatively thin construction that is kept sufficiently sealed to prevent structural damage due to vehicle loading and water ingress. Unless maintenance is made in a timely fashion, that sealing can be compromised leading to an ingress of water and rapid deterioration of the structure. Increasing traffic loads and more severe weather due to climate change increase the risk of such damage.

More strategic carriageways, such as on A and B roads, typically have a thicker, structure but need to be similarly protected.

Appropriate funding is a key aspect of protecting the asset, allowing for preventative maintenance to be completed before the onset of structural deterioration and the remedy of compromised structures for the long-term.

### **Method**

All carriageways are classified within a functional hierarchy that describes its use and risk.

Safety inspections will be made at defined frequencies according to the functional hierarchy and defects captured will be prioritised for repair in accordance with risk.

Routine maintenance such as drainage cleansing and grass cutting will be undertaken to ensure that the carriageway continues to function at an appropriate level.

The condition of carriageways will be monitored at a frequency that is commensurate with the rate of deterioration to ensure that the Council know how well the asset is performing.

Investment will be prioritised using condition data to give maximum benefit in line with the aspirations of this strategy. The investment will be planned sufficiently ahead to maximise the opportunity, permit appropriate communication and coordination with our stakeholders, and be delivered through defined programmes of work. In developing the programmes of work, decisions on treatments and the timing of these treatments will be made considering whole-life value.

Lifecycle plans have been developed for carriageway assets and have been used to inform the maintenance strategy. These plans will be developed to account for the latest intelligence and will be extended to incorporate environmental as well as financial and operational aspects.

### **Short term outcomes**

Maintenance of the carriageway asset meets the Council's statutory obligations.

A rolling, three year forward works programme is communicated to our stakeholders.

### **Medium term outcomes**

The condition of carriageways is maximised with the investment available. Subject to appropriate funding, in 2026 the condition of the network of carriageways will be similar to the condition in 2021.

Investment plans are formed on the basis of environmental impact as well as financial impacts.

## **6.2 Footways and Cycleways**

Footway and Cycleways are the parts of the highway that are not intended for motor vehicles. There are 196 km of the network with footways in the County. The majority of footways and cycleways are surfaced with a bituminous surfacing or using concrete flags. Some premium areas are surfaced using modular paving or premium stone surfacing.

### **Condition**

Footways and cycleways in the County are considered to be in a good condition however, no formal method exists to benchmark the performance of these assets with other authorities.

### **Strategy**

The Council will maintain footways and cycleway so that remain available and in a safe condition. Footways and cycleways will be maintained to a standard appropriate to their function and location. The treatments used will maximise efficiency over the

life of the asset in terms of cost and impact on the environment and stakeholder's needs.

### **Future challenges**

Footways and cycleways deteriorate due to exposure to the environment, damage by trees and overrun by heavy vehicles.

Footways and cycleways by their nature, should not be subjected to heavy loading and can last a very long time provided that they remain sealed. There are locations where damage occurs from below due to disruption of the structure by trees and underground services or from above due to vehicle overrun. Damage to the asset can be minimised through timely maintenance to prevent an ingress of water and rapid deterioration of the structure. More severe weather due to climate change increases the risk of such damage.

Where footway surfaces are damaged, there is a risk of trips and falls that can lead to personal injuries. This risk will be primarily controlled by a regular safety inspection, the frequency of which can be adjusted to the level of risk present.

Appropriate funding is a key aspect of protecting the asset, allowing for preventative footway dressing to be completed before the onset of structural deterioration and the remedy of structural issues for the long term.

### **Method**

All footways are classified within a functional hierarchy that describes its use and risk.

Safety inspections will be made at defined frequencies according to the functional hierarchy and defects captured will be prioritised for repair in accordance with the risk. The frequency of inspection will be regularly monitored and if required, adjusted to the level of risk present.

Routine maintenance such as drainage cleansing and cutting back vegetation will be undertaken to ensure that the footway and cycleway continues to function at an appropriate level.

The condition of footways will be monitored to ensure that the Council know how well the asset is performing and can use this intelligence to prioritise investment.

Investment will be prioritised using network condition data to give maximum benefit in line with the aspirations of this strategy. The investment will be planned sufficiently ahead to maximise the opportunity, permit appropriate communication and coordination with our stakeholders, and be delivered through defined programmes of work. In developing the programmes of work, decisions on treatments and the timing of these treatments will be made considering the whole-life value.

Lifecycle plans will be developed for footway and cycleway assets to inform the maintenance strategy. These plans will take into account the latest intelligence and will be incorporate environmental as well as financial and operational aspects.

## **Short term outcome**

Maintenance of the footway and cycleway assets meet the Council's statutory obligations.

A rolling, three year forward works programme is communicated to our stakeholders.

## **Medium term outcomes**

The condition of footway is maximised with the investment available. Subject to appropriate funding, in 2026, the condition of network of footways will be similar to the condition in 2021.

Investment plans are formed on the basis of environmental impact as well as financial impacts.

## **6.3 Drainage**

The purpose of drainage is to preserve the function of other assets by facilitating the removal of water from the surface and preventing water from affecting the structure of carriageway, footways and cycleways. This is achieved by a system of surface drainage inlets such as gullies, and subterranean pipework which transports water away from the highway. There are nearly 9,000 gullies in the County.

### **Condition**

The condition of the drainage asset is largely unknown as it is largely subterranean and as a result, very expensive to monitor.

### **Strategy**

The Council will keep drainage systems cleaned and respond to known flooding issues using a risk-based approach.

### **Future challenges**

Drainage systems fail due to sufficient capacity caused by their intrinsic design or through reduced capacity due to damage or debris. Drainage systems can also be disrupted due to tree roots and work by statutory undertakers.

The demand on the drainage system is expected to increase due to climate change with wetter winters and more severe weather events. This increase in demand increases the risk that drainage systems will be overwhelmed or additional debris will be washed into these systems.

### **Method**

An inventory of surface drainage assets will be validated.

Surface drainage assets will be subject to a regular programme of routine cleansing. The frequency of cleansing will be defined according to a risk-based approach.

Flood events will be recorded and where available, funding allocated to a pro-active programme of work to remedy issues based on risk.

Drainage investigations can be made to determine the cause of flooding. Where statutory undertakers have caused damage, they will be pursued to remedy this damage.

#### **Short term outcome**

Confirmation that all drainage is cleansed according to agreed standards.

A risk-based priority list of flooding issues is available.

#### **Medium term outcome**

Through monitoring of flooding events and levels of investment, a long-term investment plan is formed to control the risk of flooding.

### **6.4 Structures**

The purpose of structures is to support the function of the main transportation surfaces of the highway: carriageway, footway and cycleways. The structures asset group is formed of bridges, culverts, retaining walls and earthworks.

The Council maintains 98 highway bridges as well as other structures on the rights of way network.

#### **Condition**

The condition of highway structures will be monitored in accordance with current best practice.

#### **Strategy**

The Council will ensure that structures are maintained in a safe condition with sufficient structural capacity to support the permitted traffic using that route.

#### **Future challenges**

Structures are indefinite life assets that can last a very long time if appropriately maintained and not overloaded.

Ensuring that the structure maximises its potential lifespan means maintenance is done in a timely fashion before costly structural maintenance is required or even catastrophic failure of the structure.

Appropriate funding is a key aspect of protecting the asset to ensure that the right maintenance is made at the right time.

Traffic loading is likely to increase with a higher proportion of very heavy vehicles using the strategic routes while the change in consumer behaviour will result in more light goods vehicles across the network leading to an increase of the loading for bridges on minor routes.

## **Method**

Under a Service Level Agreement, asset management of the highway structures is undertaken by Leicestershire County Council (LCC). This includes maintenance of records, condition inspections and the identification and prioritisation of planned works.

Highway bridges and structures will undergo a general inspection every two years and a more detailed principal inspection every six years.

The condition of highway structures will continue to be monitored and defects recorded and prioritised.

A risk-based programme of work will be defined for structures on the Rights of Way network.

## **Short term outcomes**

Highway structures remain 'safe to use and fit for purpose'.

All highway structures will be inspected in accordance with the agreed regime of general and principal inspections.

Work will be prioritised based on risk identified in the inspection

## **Medium term outcomes**

Appropriate investment is made to ensure that the whole life cost is minimised while the benefit to the environment is maximised.

## **6.5 Street Lighting**

Street lighting comprises lighting columns as well as other lanterns that light the highway and lamps that illuminate signs. There are approximately 4,500 street lights in the County.

### **Condition**

There is no formal method for assessment of the condition of street lighting. The Council is commencing a regime of structural testing which will identify those columns that are at risk of structural failure.

### **Strategy**

The Council will ensure that street lighting is maintained so that it provides sufficient lighting for highway users and remains in a safe condition. Opportunities to reduce energy consumption will continue to be sought.

### **Future challenges**

One of the key aspects of street lighting is energy consumption and therefore there is a clear link in this asset group to carbon emissions. The council has recently undertaken investment under an Invest-to-Save initiative to replace approximately

2,000 lanterns with modern LED units. This investment has been prioritised on the primary routes. As significant number of older-style SOX and SON lanterns remain on more minor roads which can have a significantly higher energy consumption than LED lanterns.

As part of the Council's Action on Climate Change, the replacement of the lanterns on minor roads will be necessary. Opportunities to enable this replacement remain to be identified.

### **Method**

Surveys of the visual condition of lighting assets and structural testing will be carried out using a risk-based approach. Electrical testing will be undertaken in line with statutory duties.

Non-LED lamps will be replaced on a three-year bulk-change cycle.

Where identified from the surveys, a prioritised programme of column replacement will be undertaken subject to funding. Older style lamps will be replaced with modern LED lamps, subject to resources being available.

Lifecycle plans will be developed that identify investment required to manage the condition of the lighting asset in the long term.

### **Short term outcomes**

The County's highways remain sufficiently lit for highway users.

Statutory obligations for electrical testing and safety are fulfilled.

Risks to highway users due to electrical faults and structural failures are adequately controlled.

### **Medium term outcomes**

Opportunities to reduce energy consumption have been harnessed.

A long-term investment plan is formed to control the risk of structural failure.

The risk of faults in 2026 will be similar to the risk in 2021.

## **6.6 Traffic Management Systems including Traffic Signals**

Traffic Management Systems manage the flow of traffic on the network ensuring both accessibility and safety for highway users. This asset group includes signals at highway junctions, formal crossings and other assets such as variable message signs and vehicle activated signs. There are 56 traffic signals and crossings in the County.

### **Condition**

An annual condition survey is made of these assets and these are considered to be in a sound condition overall.

## **Strategy**

The Council will ensure that traffic management systems are maintained so that they continue to operate in a safe condition. Opportunities to reduce energy consumption will continue to be sought.

## **Future challenges**

One of the key aspects of traffic management systems is energy consumption and therefore there is a clear link in this asset group to carbon emissions. It is often uneconomic to upgrade the asset to reduce the energy consumption, rather this is best achieved as the asset is replaced or renewed.

As part of the Council's Action on Climate Change, we will seek opportunities to reduce the energy consumption of assets.

## **Method**

Under a Service Level Agreement asset management of traffic management systems is undertaken by Leicester City Council (LC). This includes maintenance of records, condition inspections and the identification and prioritisation of planned works

A programme of traffic management system replacement has been identified and will be delivered when funding is available. This will be monitored and reviewed in the light of the annual condition survey by LC who will advise the Senior Highways Manager of any changes.

Lifecycle plans will be developed that identify investment required to manage the stock of traffic management system assets in the long term.

## **Short term outcomes**

Traffic management systems continue to operate efficiently allowing highway users to move around the network in safety with minimum disruption.

Statutory obligations for electrical testing and safety are fulfilled.

## **Medium term outcomes**

Opportunities to reduce energy consumption have been harnessed.

A long-term investment plan is formed to manage the risk of operational failure.

The risk of faults in 2026 will be similar to the risk in 2021.

## 7 REVIEW

A key part of the asset management framework as shown in Figure 1.1 is to regularly review progress in order to continuously improvement. The review takes the widest look at the state of the asset and includes current knowledge of:

- Strategic risks
- Asset condition
- Financial data
- Stakeholder feedback
- Investment needs

In addition to reviewing knowledge about asset, benchmarking is a valuable way of assessing the outcomes of our asset management practice in relation to the outcomes achieved by other authorities. It also allows the communication of best practice to achieve further improvement. We use benchmarking data from a variety of sources including national data from the Department for Transport, proprietary surveys and regional data from MHA+.

Using this knowledge, together with benchmarking data, it is possible to make an assessment of progress and likely future needs. Where necessary, the review can recommend improvements to any part of the asset management approach.