

East Sussex County Council

Highway Asset Management Strategy

2022 – 2028

Table of Amendments

Version:	Details:	Reviewed by:	Approved by:	Date:
V1	<p>2015 New plan</p> <p>This Strategy sets out how the highway service will deliver against the Council's key priorities, taking into consideration customer needs, asset condition and best use of available resources</p>	-	LMTE	15/10/2015
V2	<p>2018 Strategy is converted to accessible format.</p>	Mat Jasper	LMTE	19/11/2018
V3	<p>2022 Review</p> <p>Amendments reflect current best practice guidance.</p>	Rosslyn Mills		

Foreword

Our highway network is used every day by residents, businesses, and visitors, it provides a vital contribution to the economic, social, and environmental wellbeing of the County.

This Strategy sets out in parallel to the Councils Highway Asset Management Policy our long-term strategic approach from which we develop our Asset Management Plans for each Highway asset group supporting the Council's key priorities.

Our vision:

To make East Sussex a prosperous county, with an effective well managed transport infrastructure, where improved travel choices help businesses to thrive and deliver, with better access to jobs and services in safer, healthier, sustainable, and inclusive communities with a high quality of life.

The County Council is committed to the development of good practice and continuous improvement through asset management in line with National best practice and Government guidelines. Comprehensive reviews of the Highway Asset Management Strategy will be undertaken every 2 years, and Asset Management Policy annually to ensure it is still aligned with Council objectives and all relevant policies.

Our evolving asset management approach will ensure the Council continues to maximise the value achieved from highway maintenance activities, improve network resilience, and reduce the burden on revenue budgets through the delivery of effective programmes of preventative maintenance.

Cllr Dowling

Lead Member for Transport and Environment

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Director of Communities, Economy and Transport

Introduction to Asset Management

Highway Asset Management is defined in 2004 County Surveyors' Society Framework for Highway Asset Management as:

'A strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers.'

This strategic, data-led approach ensures efficient and effective use of resources.

We aim to maximise the value of our highway assets over their lifespan. This is achieved by monitoring closely their performance, the risk associated with those assets and the cost required to maintain them to a desired service level.

East Sussex County Council recognises that by taking an asset management approach to its highway maintenance, investment can be targeted on long-term planned activities, preventing expensive short-term repairs. Maximising value for money, while maintaining a highway environment that is safe and accessible for our customers.

Links to Guidance, Policy & Plans

The ESCC Highway Asset Management Policy is a stand-alone document which establishes the council's commitment to Highway Asset Management and demonstrates how infrastructure investment through an asset management approach aligns with the authority's corporate vision. This strategy describes how we deliver the policy.

Both documents form part of our Highway Asset Management Framework (section 3), which sets out the policies, plans, activities, and processes that are necessary to develop, document, implement and continually improve highway asset management within East Sussex.

This authority recognises that an asset management approach to the maintenance of the highway network will aid the achievement of the vision of the current Council Plan 2022/23:

'Driving sustainable economic growth; keeping vulnerable people safe; helping people help themselves; and making best use of resources now and for the future.'

And the Local Transport Plan 2011-2026:

'Make East Sussex a prosperous county where effective, well managed transport infrastructure and improved travel choices help businesses to thrive and deliver better access to jobs and services, safer, healthier, sustainable and inclusive communities and a high-quality environment'

This strategy is aligned to the Council's priority outcomes (set out in Relationship Between Council Outcomes and Asset Management Outcomes) and reflects the guidance provided by Highways Maintenance Efficiency Programme (HMEP) document 'Highway Infrastructure Asset Management' and Code of Practice 'Well Managed Highway Infrastructure'.

The strategy takes into consideration the requirements of the Department for Transport Incentive Fund, to have a document that provides a clear 'line of sight' for highway asset owners and has the full support and commitment of our senior decision makers.

Relationship Between Council Outcomes and Asset Management Outcomes

ESCC Priority Outcomes:

Council Priority Outcome 1. Driving sustainable economic growth.

- East Sussex businesses are supported to recover and grow through the delivery of the Economy Recovery Plan.
- The county's employment and productivity rates are maximised.
- Individuals, communities, and businesses thrive in East Sussex with the environmental, and social infrastructure to meet their needs.
- The workforce has and maintains the skills needed for good quality employment to meet the needs of the future East Sussex economy.
- The value of our role as both a significant employer and a buyer of local goods and services is maximised.
- All children progress well from early years to school leaver and into education, training, and employment.

Council Priority Outcome 2. Keeping vulnerable people safe.

- All vulnerable people in East Sussex are known to relevant local agencies and services are delivered together to meet their needs.
- People feel safe at home.
- People feel safe with services.
- We work with the wider health and care system to support people affected by COVID-19 to achieve the best health outcomes possible.

Council Priority Outcome 3. Helping people help themselves.

- Commissioners and providers from all sectors put people first when providing services and information to help them meet their needs.
- The most vulnerable get the support they need to maintain their independence, and this is provided at or as close to home as possible.
- Through our work with others, individuals and communities are encouraged to maintain and develop local mutual support systems

Council Priority Outcome 4. Making best use of resources now and for the future.

- Working as One Council, both through the processes we use and how we work across services.
- Delivery through strong and sustained partnership working across the public, voluntary community, and private sectors to ensure that all available resources are used to deliver maximum benefits to local people.
- Ensuring we achieve value for money in the services we commission and provide.
- Maximising the funding available through bidding for funding and lobbying for the best deal for East Sussex.
- To help tackle Climate Change East Sussex County Council activities are carbon neutral as soon as possible and in any event by 2050.

ESCC Asset Management Outcomes

Link to Council Priority Outcome 1. Driving sustainable economic growth.

- Get the maximum value for council taxpayers through the new highways contract.
- Balance competing needs across the highway.
- Ensure that the East Sussex highway network is in the best condition for the investment available.

Link to Council Priority Outcome 2. Keeping vulnerable people safe.

- Maintain a safe and secure highway environment.
- Comply with all statutory obligations, meeting users' needs for safety.
- Always consider road safety when developing programmes of work.

Link to Council Priority Outcome 3. Helping people help themselves.

- Gain feedback to manage and improve our service.
- Focus on local engagement whilst communicating messages clearly.
- Support and encourage local engagement and collaboration

Link to Council Priority Outcome 4. Making best use of resources now and for the future.

- Making best use of our resources
- Adopt a lifecycle approach to planning asset investment and management decisions.
- Adopt a continuous improvement approach to asset management practices.
- Define desired levels of service for highway assets in consultation with elected representatives

Highway Asset Management Framework

ESCC Highway Asset Management Framework summarises all activities and processes that are necessary to develop, document, implement and continually improve our approach to asset management. The framework is summarised below.

Context

The context for highway asset management in East Sussex incorporates and is informed by a variety of factors including national and local transport policy, council vision, expectations of stakeholders as well as legal and financial constraints.

Planning

This sets out the key activities that are undertaken by East Sussex as part of the asset management planning process. The activities include:

- Policy – East Sussex’s published commitment to highway asset management.
- Strategy – East Sussex’s published statement on how the policy will be implemented, the implementation of an asset management framework, the strategy for each asset group, and the commitment to continuous improvement.
- Performance – The levels of service to be provided by East Sussex’s highway service and how performance will be measured and reported.
- Data – East Sussex’s strategy for data collection and management, without which informed decisions cannot be taken.
- Lifecycle planning – East Sussex’s lifecycle plans for each asset group which when combined with funding levels and desired levels of service enable informed decisions to be taken.
- Works programmes – East Sussex’s rolling programme of works for each asset group

Enablers

Enablers are a series of supporting activities that support the implementation of the Asset Management Framework. They provide a means of:

- Developing organisational leadership and the adoption of an asset management culture
- Effectively communicating and collaborating with all stakeholders
- Development of the competencies and skills of all highways staff
- Effective means of managing risk
- Strategy for the use of asset management systems
- Measuring the performance of the asset management framework
- Benchmarking progress and collaborating with other highway authorities
- Fostering a culture of continuous improvement and innovation

Governance and Delivery

The highway service is delivered through a highway maintenance and infrastructure contract for which a series of service delivery and contract outcomes have been established respectively. A Contract Management Group was established in May 2016 to oversee the delivery of this providing specialist contract, commercial, performance and service development functions.

The Importance of Highway Infrastructure to East Sussex

East Sussex highway infrastructure provides a vital contribution not only to the economic growth and sustainability of the county, but in keeping local communities safe and connected.

The local highway network is the most valuable publicly owned asset managed by the Council, with an estimated replacement value of £4.69 billion (Transport Infrastructure Asset Valuation 2019/20 Metis Consultants report – see Table 1).

Network Value

Based on the 2020 asset valuation the network has a current value of £4.17 billion. This shows a current depreciated value of £515 million which is an estimated calculation of cost to return 100% of the Network to an as new condition.

Table 1. Highway Asset Valuation from Transport Infrastructure Asset Valuation 2019/20

Asset Group	Gross Replacement Cost (GRC) 2019/20	Depreciated Replacement Cost (DRC) 2019/20	Depreciation Value	%
Carriageways	£3,545,711,000	£3,341,309,000	£204,402,000	5.8%
Footways & Cycleways	£453,465,000	£368,465,000	£85,000,000	18.7%
Highway Structures	£576,767,000	£415,277,000	£161,490,000	28.0%
Street Lighting	£73,018,000	£27,318,000	£45,700,000	62.6%
Traffic Management	£15,242,000	£8,649,000	£6,593,000	43.3%
Street Furniture	£23,699,000	£11,862,000	£11,837,000	49.9%
Total	£4,687,902,000	£4,172,880,000	£515,022,000	

Major Highway Assets

The major highway assets managed by East Sussex County Council are listed in Table 2. Each asset type has a separate Highway Asset Plan which sets out how

we will achieve the objectives set out in this strategy. These plans are reviewed annually and updated accordingly.

Each plan provides:

- Further detail on each asset, including any specific issues
- How the condition is assessed
- What we hope to achieve and how we will measure success
- Direction to all involved in the management of the asset to ensure alignment with strategic goals
- Plans for works to achieve these goals
- The costs and the projected outcomes from these works

Table 2. Highway assets managed by the authority:

Asset Type	Quantity	Data confidence	Comments
Carriageways	3,375 km	Medium-high (inventory) High (condition)	Annual survey provides accurate condition data. Some work required to align data with highway extent.
Footways & Cycleways	2,481 km	Medium-high (inventory) High (condition)	Primary walking routes inspected monthly, secondary routes quarterly, link footways every six months and local access footways annually. Cycleways inspected with the road where contiguous. Separate cycle tracks inspected quarterly and cycle trails annually.
Structures	483 bridges 239 retaining walls 2 tunnels	High (inventory) Medium-high (condition)	Inspected every two years plus detailed surveys for major structures every six years
Drainage	98,000 gullies 505 km ditches	High (inventory & condition of gullies) Medium (inventory & condition of ditches) Low (inventory & condition of draining runs, pipes etc.)	Gullies are inspected every 3, 6, 12 or 24 months depending on need.

Street Lighting	37,500 column and wall mounted streetlights 1,000 other inventory items 3,000 streetlights belonging to Parish, District and Borough Councils	High (inventory) Medium (condition)	Illumination checked carried out monthly and electrical testing six monthly
Traffic Signals	66 signal-controlled junctions 140 signal-controlled crossings	High (inventory) High (condition)	Inspected once a year
Road markings, signs, and street furniture	900 grit bins 24.7km of guard rail 40,000 safety bollards 43,695 road signs 2,500km of road markings 28.5km of safety fences/ barriers	High (inventory) Medium-high (condition)	Barriers inspected every two years
Soft Estate	4,468km of vegetated verge 75km of verge designated as Wildlife Verges 55,000 individual trees 36km of hedges 50 ornamental shrub sites	Medium (inventory) Medium (condition)	Inspection schedules carried out based on risk

Asset Assessment & Condition Projection Modelling

East Sussex County Council undertakes a risk-based approach to asset management through its knowledge of the various elements of the highway. Assets are considered in the types listed in Table 2 and where appropriate the asset is further sub-divided into components. The state of the asset is maintained by:

- Surveying the asset - collecting data on the condition of each asset and/or component and at what stage in its lifecycle it is
- Holding and updating all appropriate records in our asset management system
- Validating the records

With this knowledge we can model condition scenarios and by applying engineering expertise we create expected lifecycles for our asset types. We are then able to project the finances required to manage the asset. This modelling can show the:

- Estimated condition results over a specified period at current budget levels
- Estimated cost to maintain assets in appropriate condition aligned with targets
- Potential effect that reductions and increases to funding will have on asset condition.

These lifecycle models predict the condition of an asset over a specified period through deterioration models and maintenance impacts. Some assets are managed by replacement when their life has expired, others can have lifecycles prolonged through preventative maintenance.

Without intervention assets will deteriorate from new (green) to mid-life (amber) and expired (red) over time. Deterioration will always occur, but the aim of effective asset management is to target investment to slow the rate of deterioration or keep it in check. The optimal time to invest is immediately before an asset falls from one stage into the next. Each stage of life becomes more expensive to manage than the last.

Data Management

The data gathered in these surveys, including details on inventory, asset location and performance, is recorded and stored in asset information databases. These provide a central repository for asset information which can be easily interrogated to obtain information necessary for the day-to-day management of the asset and to inform short and long-term maintenance needs. As part of asset management, we will review current data collection techniques and continue to update our data management strategy.

Risk Management

Managing risk is integral to the effective and efficient management of the highway asset. The identification of current and future risks associated with all aspects of Highway management is embedded in the asset management approach.

Risk types include:

- Health and Safety
- Strategic
- Financial
- Regulatory
- Reputational
- Operational

Risk information is recorded within the Highways risk register. The Highway risk targets the identification of strategic and operational risks encountered within our works and operations.

Risk based decision making is used to inform and define the management approach to our assets, including, inspection regimes, setting levels of service, responses, resilience, priorities, and programmes. By adopting a risk-based approach highways maintenance can be carried out in accordance with local needs, safety, priorities, and affordability.

Guidance and training of the risk-based approach and its implementation is provided to all those roles with responsibility for taking the risk-based decisions.

Competencies and training for those staff have been identified and are regularly updated providing a programme of continuing professional development.

Highway Asset Hierarchy & Resilient Network

In response to the 2016 Code of Practice 'Well Managed Highway Infrastructure', each street on our highway network has been assigned a hierarchy level, the level allocated reflects the current and expected use and local economic and social factors such as industry, schools, hospitals and similar, as well as the desirability of continuity and of a consistent approach for walking and cycling.

A review of the current network hierarchies in East Sussex was undertaken in September 2022 to ensure that appropriate management is targeted towards roads of greatest need, to reflect our risk-based approach to the highway network.

The code of practice also recommends that within the highway network hierarchy, a 'Resilient Network' should be identified to which priority is given through maintenance and other measures to maintain economic activity and access to key services during extreme weather. The Highway Network Resilience Plan for East Sussex County Council was produced in 2022.

The hierarchy and the resilient network will be reviewed annually as a formal exercise.

Table 3. sets out the carriageway maintenance hierarchies that East Sussex County Council have adopted as of the 2022 review.

Category	Type of Road	Description
1 – Motorway	Limited access - motorway regulations apply	Routes for fast-moving long-distance traffic. Fully grade separated and restrictions on use.
2 – Strategic Route	Trunk and some Principal 'A' class roads between Primary Destinations	Routes for fast-moving long-distance traffic with little frontage access or pedestrian traffic. Speed limits are usually more than 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
3a – Main Distributor	Major Urban Network and Inter-Primary Links. Short – medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.

3b – Secondary Distributor	B and C class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions.	In residential and other built-up areas these roads have 20 or 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons. In rural areas these roads link the larger villages, bus routes and HGV generators to the Strategic and Main Distributor Network.
4a – Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions.	In urban areas these are residential or industrial interconnecting roads with 20 or 30 mph speed limits, random pedestrian movements and uncontrolled parking. In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic.
4b – Local Access Road	Roads serving limited numbers of properties carrying only access traffic	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.
5 – Minor Road	Little used roads serving very limited numbers of properties.	Locally defined roads.

Competency

Those involved in managing and implementing asset management activities must be competent in their duties. A programme of Continuing Professional Development and training for staff at all levels will be provided. Appropriate training and knowledge sharing with other authorities and national organisations will be maintained to ensure continual good practices are utilised.

Our Highway Asset Management Team provide an essential service and are responsible for:

- Monitoring the condition of the network and modelling how this will change over time
- Advising members and senior decision makers when setting policy and strategy
- Advising members and senior decision makers when making budget decisions
- Developing asset management plans to deliver the strategy within a defined budget
- Ensuring delivery of asset management plans as appropriate
- Making other asset management decisions as necessary in line with the strategy

Use of Innovation

Central government encourage local authorities to embrace innovative thinking and practices, including making better use of data to improve the planning and maintenance of our highway assets. East Sussex County Council will continue to explore, trial, and implement tools and resources which assist us in informing data gaps, identify defects and deliver cost effective repairs.

Glossary

The following terms are used in this strategy:

Asset management

A strategic approach which identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure, to meet the needs of current and future customers.

Asset valuation

The calculation of the current monetary value of an authority's assets. It excludes therefore any consideration of the value to the community in terms of the economic and social benefits of providing a means for people to travel in order to work, socialise and live.

Critical asset

An asset without which you cannot deliver a statutory service.

Deterioration

The change in physical condition of an asset resulting from use or ageing.

Gross Replacement Cost

The total admissible cost of replacing the existing highway asset to a modern equivalent standard, considering up-to-date technology and materials.

Levels of service

Levels of service typically cover condition, availability, capacity, amenity, safety, environmental impact, and social equity.

Lifecycle Planning

Making the right investment at the right time to ensure that the asset delivers the requisite level of service over its full expected life, at the minimum cost.

Whole Life Cost

The total costs incurred in the creation, maintenance, and disposal of an asset.

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