

**EAST SUSSEX COUNTY COUNCIL
LEAD MEMBER - TRANSPORT AND ENVIRONMENT
POLICY SUMMARY**

Highway Asset Management Policy

Purpose of Policy

East Sussex County Council (ESCC) the vital role played by the local highway network in supporting the Council Plan 2014-2018 and the Local Transport Plan 2011-2026.

ESCC considers an asset management approach to the maintenance of the highways network will support the achievement of the Council's visions, namely:

Council Priorities: 'To deliver our priorities at a time of reducing resources and increasing demand we must work as One Council with a clear focus on achieving the best outcomes we can for East Sussex.'

Local Transport Plan Vision: 'To make East Sussex a prosperous county where an 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.'

Policy Statement

East Sussex County Council is committed to adopting the principles of asset management to ensure it has a highway network that meets the needs of its community, supports the changing requirements of businesses and local economic growth. By taking an asset management based approach, the right investment decisions will be made with the investment available, to maximise value for money, targeting resources and managing risks to maintain a highway environment that is safe and secure for its users.

Specific Policies

Helping People Help Themselves

An asset management approach will enable a focus on customer engagement and satisfaction. Through the effective use of asset management principles, we will aim to:

- gain feedback to manage and improve our service;
- focus on local engagement whilst communicating messages clearly; and
- support and encourage local engagement.

Driving Economic Growth

The Council is responsible for looking after most of the roads in the county, which are a vital part of the infrastructure for economic growth. Most of the highways maintenance budget is spent through the highways contract, which is being re-let in 2016. Through the effective use of asset management principles, we will aim to:

- get the maximum value out of the new highways contract to enable us to focus on improving the condition of highways within the county to create the conditions for growth and improve enterprise;
- balance competing needs across the highway network and select options which best meet the desired outcomes; and
- ensure that the East Sussex highway network is in the best condition for the investment available.

Keeping Vulnerable People Safe

We have broad duties to keep people safe in the county, for example our work in partnership with others on road safety encompasses education and behaviour change as well as engineering solutions. Our aim is to reduce the number of road casualties within the county, whilst minimising the human cost and severity of injuries. Through the effective use of asset management principles, we will aim to:

- maintain a safe and secure highway environment;
- comply with all statutory obligations, meeting users' needs for safety; and
- consider road safety at all times when developing forward programmes of work.

Making Best Use of Our Resources

An asset management approach has been widely accepted by central and local government as a means of delivering a more efficient and effective approach to highway maintenance through longer term planning. Such an approach enables more efficient and effective use of resources, while fulfilling legal obligations, delivering stakeholder needs and safeguarding the engineering integrity of the network. Through the effective use of asset management principles, we will aim to demonstrate value for money by:

- adopting a lifecycle approach to planning asset investment and management decisions;
- adopting a continuous improvement approach to asset management policies and practices; and
- by defining desired levels of service for highway assets in consultation with elected representatives.

Supporting Information

The Highway Asset Management Strategy

The strategy sets out how an asset management approach is utilised to support the achievement of the priorities within the Council Plan, as summarised above. The strategy takes into account current and projected financial pressures and explains how available funds and resources will be utilised to maximise their benefit.

Further Information:

Lead Member for Transport and Environment- Agenda Item 8

Reviewed – October 2017

Date of Approval:

19 October 2015

**EAST SUSSEX COUNTY COUNCIL
LEAD MEMBER - TRANSPORT AND ENVIRONMENT
POLICY SUMMARY**

Highway Asset Management Policy

Purpose of Policy

East Sussex County Council considers that an asset management approach to the maintenance of the highway network will support the achievement of the Council Priorities and Local Transport Plan visions

Council Priorities: 'To deliver our priorities at a time of reducing resources and increasing demand we must work as One Council with a clear focus on achieving the best outcomes we can for East Sussex.'

Local Transport Plan Vision: 'To make East Sussex a prosperous county where an 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.'

Policy Statement

East Sussex County Council is committed to Asset management as a means to deliver a more efficient and effective approach to management of highway infrastructure assets through longer term planning and ensuring that levels of service are defined and achievable for available budgets. It supports making the case for funding, for better communication with stakeholders, and facilitates a greater understanding of the contribution highway infrastructure assets make to economic growth and social well-being of local communities.

ESCC will achieve this by:

Helping People Help Themselves

An asset management approach will enable a focus on customer engagement and satisfaction. Through the effective use of asset management principles, we will aim to:

- gain feedback to manage and improve our service;
- focus on local engagement whilst communicating messages clearly; and
- support and encourage local engagement.

Driving Economic Growth

The Council is responsible for looking after most of the roads in the county, which are a vital part of the infrastructure for economic growth. Most of the highways maintenance budget is spent through the highways contract. Through the effective use of asset management principles we aim to:

- get the maximum value out of the highways contract to enable us to focus on improving the condition of highways within the county to create the conditions for growth and improve enterprise;
- balance competing needs across the highway network and select options which best meet the desired outcomes;
- ensure that the East Sussex highway network is in the best condition for the investment available.

Keeping Vulnerable People Safe

We have broad duties to keep people safe in the county, for example our work in partnership with others on road safety encompasses education and behaviour change as well as engineering solutions. Our aim is to reduce the number of road casualties within the county, whilst minimising the human cost and severity of injuries. Through the effective use of asset management principles, we will aim to:

- maintain a safe and secure highway environment;
- comply with all statutory obligations, meeting users' needs for safety; and
- consider road safety at all times when developing forward programmes of work.

Making Best Use of Our Resources

An asset management approach has been widely accepted by central and local government as a means of delivering a more efficient and effective approach to highway maintenance through longer term planning. Such an approach enables more efficient and effective use of resources, while fulfilling legal obligations, delivering stakeholder needs and safeguarding the engineering integrity of the network. Through the effective use of asset management principles, we will aim to demonstrate value for money by:

- adopting a lifecycle approach to planning asset investment and management decisions;
- adopting a continuous improvement approach to asset management policies and practices; and
- defining desired levels of service for highway assets in consultation with elected representatives.

Supporting Information

The Highway Asset Management Strategy

The strategy sets out how an asset management approach is utilised to support the achievement of the priorities within the Council Plan, as summarised above. The strategy takes into account current and projected financial pressures and explains how available funds and resources will be utilised to maximise their benefit.

Well-managed Highway Infrastructure: A Code of Practice UK Roads Liaison Group 2016

Council Plan

Local Transport Plan

Further Information:

Date of Approval:

**EAST SUSSEX COUNTY COUNCIL
LEAD MEMBER - TRANSPORT AND ENVIRONMENT
POLICY SUMMARY**

Highway Drainage Maintenance Policy

Purpose of Policy

East Sussex County Council (ESCC) recognises the vital role played by the local highway network. ESCC considers maintenance of the highway drainage system, including but not limited to: drains, linear drainage systems, gullies, chambers, catchpits, soakaways, outfalls associated pipework, ditches and grips, as a means of ensuring the drainage asset continues to function as intended. In carrying out this maintenance, ESCC will meet its statutory obligations and will also support the Council's Priorities, Local Transport Plan and Highway Service Outcomes, namely:

- Council Priorities:**
- Driving economic growth
 - Keeping vulnerable people safe
 - Helping people help themselves; and
 - Making best use of resources

Local Transport Plan Vision: *'To make East Sussex a prosperous county where an 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.'*

- East Sussex Highway Service Outcomes:**
- Improved Network Condition (principal requirement);
 - Improve asset condition;
 - Promote economic growth;
 - Reduce the level of third party claims;
 - Provide value for money;
 - Promote local engagement; and
 - Improve customer satisfaction

Policy Statement

ESCC is committed to ensuring that it has the best highway network for the investment available. A targeted approach to the maintenance of drainage assets will ensure that surface water on the highway is captured and discharged appropriately. Drainage assets will be inspected and cleansed using a risk based and targeted approach as determined by recorded silt levels. This approach will be applied to whole sections of road, rather than individual assets, ensuring maximum operational efficiency and effectiveness.

Specific Policies

1. All highway drainage assets to be inspected no less than once every twenty-four months.
2. Where the gully or catchpit is silted and/or has a blocked outlet, it will be cleaned fully to the base of the gully / catchpit and the connection jetted up to 5 metres.
3. Drainage assets to be GPS mapped and condition noted including silt levels before and after inspection.
4. Provision of an emergency response to reports of blocked drainage assets or standing water.

Supporting Information

Highway Asset Management – Drainage Strategy 2015-2018

The drainage strategy identifies the need to define the highway drainage asset in East Sussex in order to deliver an efficient and effective service into the future.

Further Information:

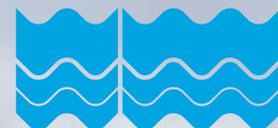
Approved by Lead Member for Transport & Environment

Date of Approval:

18 April 2016

**EAST SUSSEX COUNTY COUNCIL
LEAD MEMBER - TRANSPORT AND ENVIRONMENT
POLICY SUMMARY**

PS	Drainage Policy
Purpose of Policy <p>East Sussex County Council (ESCC) recognises the vital role played by the local highway network.</p> <p>ESCC is committed to ensuring that it has the best highway network for the investment available. A targeted approach to the maintenance of its drainage assets will ensure that surface water on the highway is captured and discharged appropriately.</p> <p>In carrying out this work, ESCC will meet its statutory obligations and will also support the Council's Priorities, Local Transport Plan and Highway Service Outcomes.</p>	
Policy Statement <ol style="list-style-type: none">1. Highway drainage assets will be maintained using a risk based approach and the maintenance regime will, at a minimum, be reviewed annually.2. All highway gullies and catchpits will be inspected and cleaned at frequencies determined according to records of silt levels and local intelligence about flood risk. These frequencies shall be presented in the highway drainage management plan. Where the inspection or cleaning has not been successful, the reasons for failure shall be recorded and remedial action shall be made according to a risk-based approach as described in the highway drainage maintenance plan.3. The performance of the highway drainage asset shall be monitored through drainage inspection records, safety inspection records and stakeholder contact to ensure that the asset is managed effectively. The highway drainage management plan will include measures to mitigate specific identified flood risks.4. All other drainage assets will be maintained as specified in the highway drainage management plan.5. Drainage assets are recorded in the drainage asset register and located using GPS coordinates. The register is linked to inspection records that provide the current condition of the asset, with the records required detailed in the current contract.6. Where appropriate, an emergency response to reports of blocked drainage assets or standing water will be provided.	
Supporting Information <p>Well-managed Highway Infrastructure, 2016, UK Roads Liaison Group</p> <p>Guidance on the Management of Highway Drainage Assets, 2012, Highways Maintenance Efficiency Programme Board</p>	
Version control <p>Approved by Lead Member for Transport & Environment April 2016</p>	Date of last review: <p>August 2018</p>



Highway Asset Management Strategy 2015-2022



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We are pleased to be able to introduce East Sussex County Council's Highway Asset Management Strategy for 2015 to 2022.

The local highway network is East Sussex's largest and most valuable publically owned asset with a replacement value of £7.8bn. It is used every day by residents, businesses and visitors and provides a vital contribution towards the economic, social and environmental well-being of the County.

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.

The timing of this strategy coincides with the commencement of our new Highway Maintenance Contract. Work will continue to build on our understanding of the condition of the County's highway network, and in particular our understanding of other 'key' asset types e.g. drainage, bridges and structures, and street lighting. The importance of asset management and continuous efficiency has also been reinforced by Central Government, where future funding streams will be linked to those authorities who can demonstrate value for money and efficient delivery of highway maintenance activities.

The County Council is committed to the development of good practice and continuous improvement. Formal reviews of both the Highway Asset Management Strategy and Asset Management Policy will be undertaken annually, and we shall continue to work in partnership with our customers, elected Members and staff.

By employing an asset management approach, East Sussex will continue to increase the value achieved in road maintenance, improving network resilience and reducing the burden on revenue budgets through the delivery of effective programmes of preventative maintenance over the next seven years and beyond.



Rupert Clubb
Director of Communities,
Economy and Transport



Cllr Carl Maynard
Lead Member for
Transport and Environment



The importance of Highway Infrastructure to East Sussex

East Sussex highway infrastructure provides a vital contribution to the economic growth of this county. In addition to meeting the needs of local communities and supporting the changing requirements of businesses and the Council's corporate priorities, the local highway network is without doubt the most valuable publically owned asset managed by East Sussex County Council. With a total replacement cost of £7 billion, the importance of its effective and efficient management cannot be understated.

Why Asset Management?

Asset management is a strategic approach that seeks to optimise the value of highway assets over their whole life (Whole Life Cost). East Sussex County Council recognises that by taking an asset management based approach to its local highway maintenance, investment can be targeted on long-term planned activities that prevent expensive short-term repairs. This approach not only maximises value for money, ensuring informed investment decisions can be made, but also manages risk and maintains a highway environment that is safe and secure and accessible for our customers.

Asset Management Policy

The East Sussex County Council Highway Asset Management Policy is a high level document which establishes the Council's commitment to Infrastructure Asset Management and demonstrates how this approach aligns with the Council Plan. The Policy is a stand-alone document and has been published alongside this strategy on the Council's website.

Asset Management Strategy

This Asset Management Strategy sets out how the Asset Management Policy will be delivered. It is informed by the adoption of a highway asset management framework which establishes the activities and processes that are necessary to develop, document, implement and continually improve highway asset management within East Sussex. It is aligned to the Council's corporate objectives and seeks to follow the latest advice, particularly that arising from the Highway Maintenance Efficiency (HMEP) Programme led by the Department for Transport.

In support of the Council Plan 2014-2018 and the Local Transport Plan 2011-2026, this Council recognises that an asset management approach to the maintenance of the highways network will aid in the achievement of the Council's vision, as set out below:

Council vision: 'To deliver our priorities at a time of reducing resources and increasing demand we must work as One Council with a clear focus on achieving the best outcomes we can for East Sussex.'

**Local transport:
plan vision:** 'To make East Sussex a prosperous county where an 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 of life.'

Service and Contract Delivery Objectives

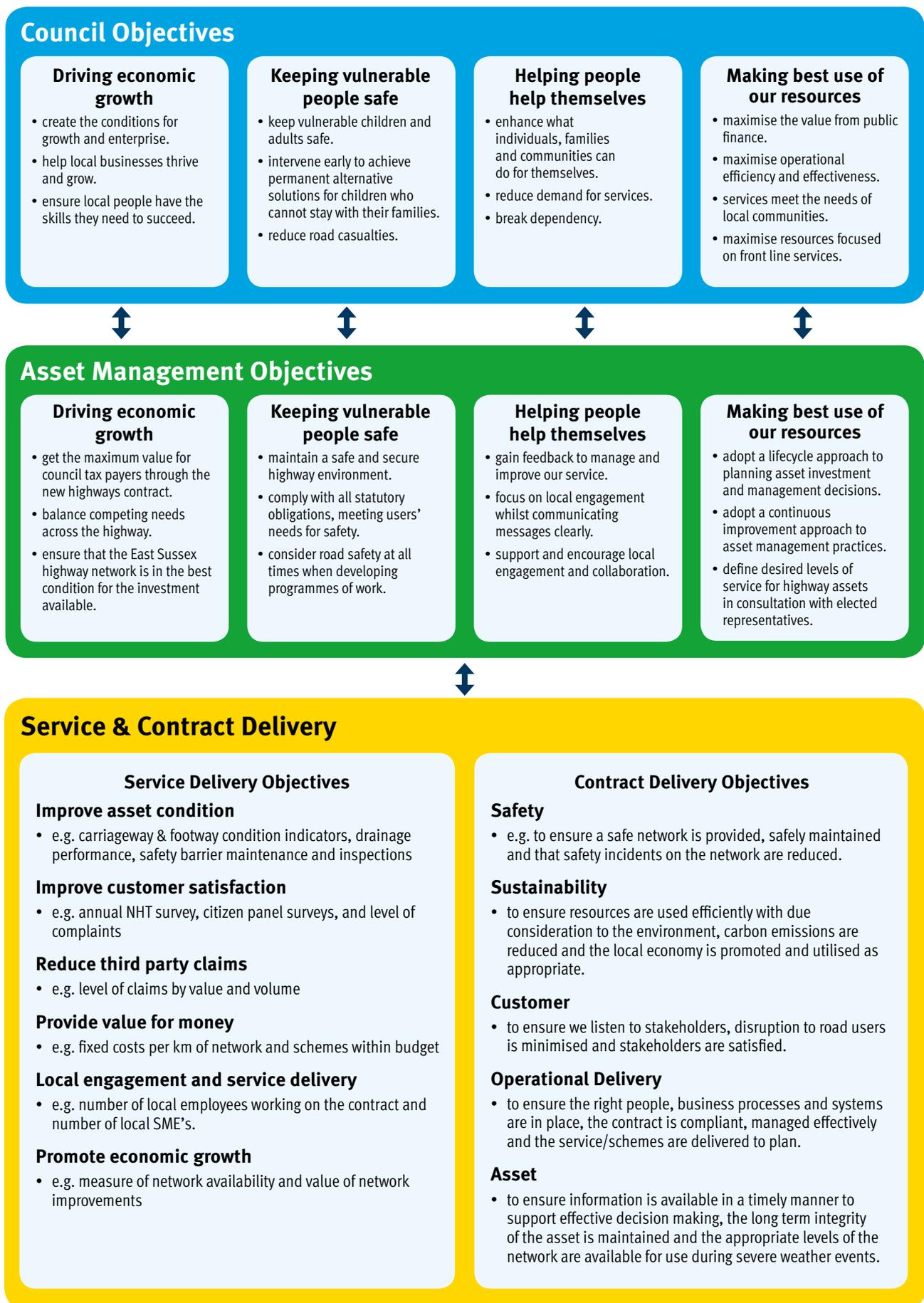
East Sussex County Council recognises that the delivery of an efficient highway service cannot be undertaken without effective maintenance of the existing highway network. It is therefore essential that new infrastructure that supports the Council's objectives can be maintained to the appropriate standard in the future and that existing highway infrastructure remains serviceable. The Council is committed to having the best network condition for the investment available, and supports an asset management based approach for the maintenance of the highway network

A newly procured highway maintenance contract is due to commence in 2016. An Executive Client organisation will be created providing specialist contract, commercial, performance and asset management functions. A series of asset management objectives linked to service outcomes have been created that are directly linked to the achievement of the Council Plan. These objectives will be achieved via the full implementation of the Council's highway asset management framework.

The highway service will be delivered via the new highway maintenance contract for which a series of service delivery and contract outcomes have been established respectively. The relationships between these objectives are shown as Figure 1. The highways programmes will be established on an asset management basis for delivery by the highways contract. This will ensure the works remain aligned to this asset management policy and strategy and the Council's strategic objectives. It will also support advance planning of key investment decisions for the Council.



Figure 1 – Relationship between council objectives and asset management objectives



East Sussex County Council has developed a Highway Asset Management Framework (see figure 2.) that is based on the recommendations made within the 2013 HMEP Highway Infrastructure Asset Management Guidance. The framework summarises all activities and processes that are necessary to develop, document, implement and continually improve our approach to asset management. An Asset Management Implementation Road Map and a supporting Implementation Plan are being used to ensure the full implementation of the framework. The framework is shown in figure 2 and is summarised below.

Context

This establishes the context for highway infrastructure asset management in East Sussex. The context includes a variety of factors that need to be taken into consideration when determining the Council's expectations for the highway service. The factors include: national transport policy, local vision and local transport policies, expectations of stakeholders and 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.

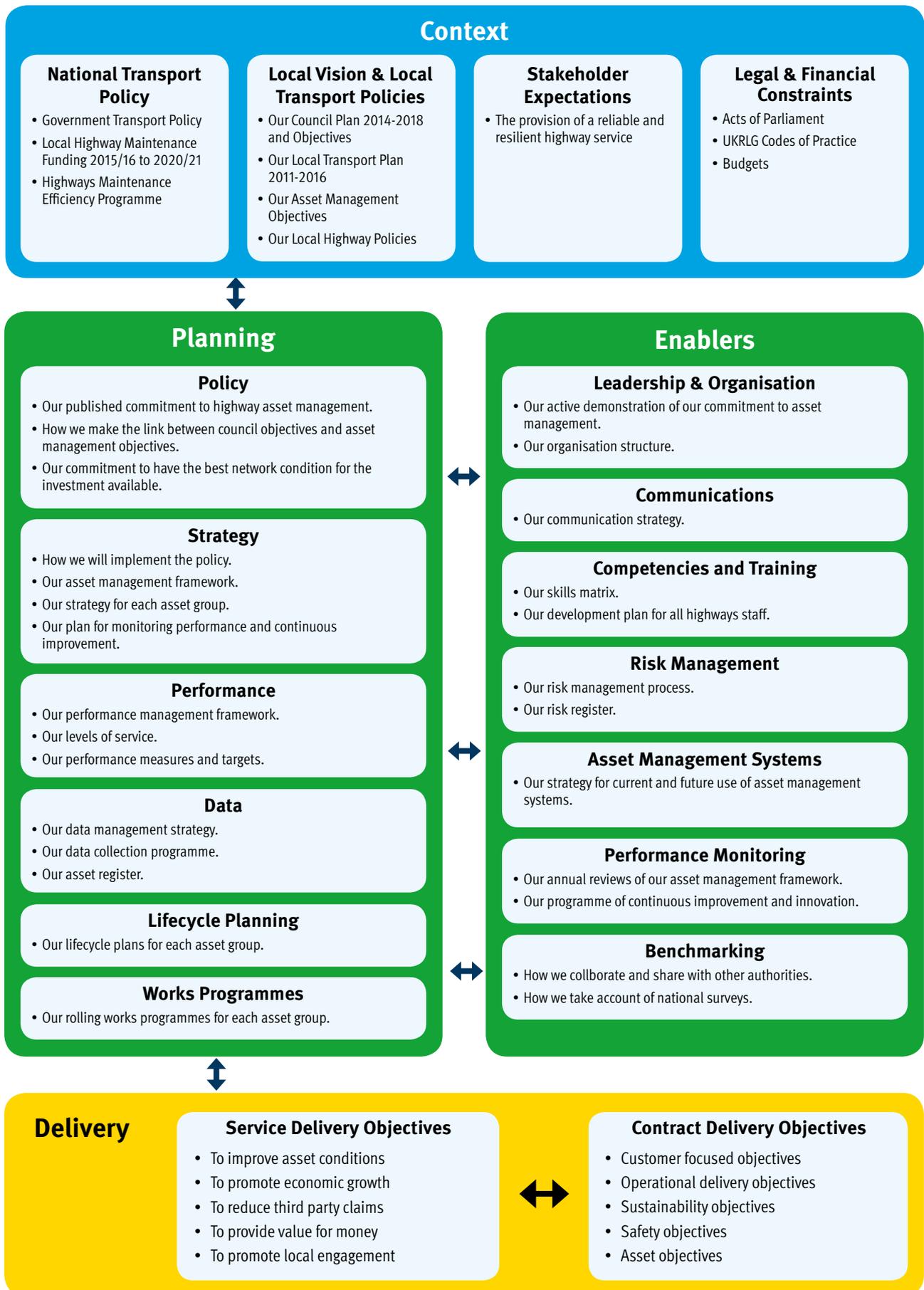
Enablers

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; a means of effectively communicating and collaborating with all stakeholders; the development of the competencies and skills of all highways staff, an effective means of managing risk; a strategy for the use of asset management systems; a means of measuring the performance of the asset management framework; a means of benchmarking progress and collaborating with other highway authorities, and above all, fostering a culture of continuous improvement and innovation.

Delivery

As set out in Section 1, the delivery component of the framework sets out how the highway service will be delivered via the new highway maintenance contract for which a series of service delivery and contract delivery objectives have been established respectively.

Figure 2 – Highway Asset Management Framework



Introduction

This section summarises the existing highway asset, its current condition, and a summary of the strategy to be employed for each asset type in the future. An understanding of, and agreement to, the levels of service required from each asset type is essential for the successful delivery of the strategy.

Highway Asset

The highway asset is shown below together with a summary of its current condition.

Table 1 – Summary of Highway Asset

Asset group	Quantity	Condition
Carriageways	3,210km	Approximately 15% of the carriageway network in East Sussex is identified as requiring maintenance.
Footways and cycleways	2,481km	East Sussex is currently 40% through a 5 year condition survey for footways. Approximately 67% of the network is identified as requiring maintenance.
Structures	974 bridges, 300 retaining walls and 5 tunnels.	At present the Bridge Condition Stock Indicator rates the average condition of East Sussex County Council bridge stock at 85.8. The BCSI (critical element) value is lower at 75.7. At present ESCC monitors 18 structures which are substandard.
Drainage	98,000 gullies and 525km ditches.	According to current defect reports, approximately 90% of our gullies are free and running.
Street lighting	37,000 column and wall mounted street lights, 10,000 other inventory items, 3000 street lights for parish, borough and district councils.	Street lighting asset is monitored in accordance with 'Institute of Lighting Professionals Technical Report 22' with a target to maintain the number of columns in excess of the action age at less than 50%.
Traffic signals	66 signal controlled junctions and 140 traffic signal crossings.	Target to maintain the number of columns in excess of the action age at less than 50%.
Road markings, signs and street furniture	1001 grit bins, 24.7km of guard rail, 39,875 safety bollards, 43,695 road signs and 2,500km road markings 664 safety barriers	A shift to maintain deteriorated road markings with a risk based preventative approach. Coordinate design and maintenance, moving towards an asset management approach and developing community engagement.

Highway Asset Hierarchy

The carriageway asset is currently managed according to a hierarchy based on road classification, and further divided by urban/rural road type as outlined in Table 2. The purpose of the hierarchy is to recognise that the failure of certain routes or items of infrastructure would have a greater impact on East Sussex’s economy and communities than others. The asset hierarchy is therefore used as a tool to help ensure that highway maintenance activities are effectively prioritised.

Table 2 – Asset Hierarchy

Category	Road maintenance hierarchy description	East Sussex road hierarchy general description
1	Motorways	Category 1 not applicable to East Sussex
2	Strategic Route	Primary Route
3a	Main Distributor	Inter Urban Route
3b	Secondary Distributors	Intra-Urban Routes
		Intra-Rural Routes
4a	Link Roads	Business or Industrial Roads
		Residential Roads
		Village Roads
4b	Local Access Roads	Country Lanes
		Minor Urban Roads
		Minor Rural Roads





Carriageways are the most valuable highway asset in East Sussex, having a Gross Replacement Cost of nearly £3.5 billion and receive the greatest levels of maintenance expenditure. They were the first asset, for which lifecycle plans have been developed, resulting in the creation of several investment scenarios which have modelled current condition, investment levels and desired performance outcomes. This has enabled a greater understanding of where to target investment to achieve the desired levels of service.

East Sussex County Council is responsible for the maintenance of 370km of principal (A) roads, providing transport links within or between large urban areas. The Council is also responsible for 1,110km of non-principal (B&C) roads connecting towns and villages and feeding traffic between principal and smaller roads. Unclassified, estate and rural roads serving local traffic account for 1,730km, the largest proportion of the East Sussex network. The condition of the carriageway asset is measured through annual surveys and inspections. In 2013, 25% of the unclassified network was identified as requiring

maintenance, compared to just 8% of principal roads and 10% of non-principal roads.

Planned maintenance is delivered by an annual programme. This programme is capital funded and since 2014, schemes of work have been identified using an asset management approach. This evidence approach to maintenance is endorsed by Council Members and has achieved a £70 million funding commitment for the period between 2014 and 2018. This funding is linked to defined performance outcomes that are measured and reported annually.

Management of potholes and other carriageway safety issues arising across the network is delivered using revenue funding which is anticipated to reduce over coming years. By employing an asset management based approach and improving the coordination of road maintenance and improvement activity, East Sussex will continue to increase the value achieved in road maintenance, improve network resilience and reduce the burden on revenue budgets through the delivery of effective programmes of preventative work.

Short-term desired outcomes (current year): To deliver the current annual carriageway programme, achieving performance targets of 21% of unclassified roads requiring maintenance whilst holding condition at 10% for non-principal roads and 8% for principal roads.

Medium-term desired outcomes (2 to 5 years): To develop Member endorsed, programmes of work for the following 2 years, achieving annual performance targets of 20% of unclassified roads requiring maintenance, 10% of non-principal and 8% of principal.

Long-term desired outcomes (5 to 10 years): Through the adoption of good asset management principles, develop a compelling case for the funding of carriageway maintenance in East Sussex and to maintain and implement programmes of work delivering best value against Council and Highway Service objectives.

Approach: Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy in line with the East Sussex Highway Asset Management Framework, following standards of best practice and collaborating with our contractors.





Footways and cycleways are critical assets supporting access and mobility for people in East Sussex. Securing continuous improvement in the safety and serviceability of footways and cycleways is necessary to encourage alternatives to car, particularly for journeys in urban areas. Well maintained footways aid social inclusion, particularly improving accessibility for vulnerable people.

East Sussex County Council is responsible for the maintenance of 2,380km of prestige footways in high footfall areas, for example town centres, and 75km of footways providing access in residential and remote areas. The Council also maintains the length of the cycleways. The footway and cycleway asset has a Gross Replacement Cost of nearly £350 million. The typical annual maintenance expenditure is around £1 million, less than 5% of the available highway maintenance budget and below the national average of around 25% for comparable County authorities.

Footway and cycleway condition is assessed through annual condition surveys and inspections, and planned maintenance has

historically been determined on a worst first basis and concentrated in urban areas with high footfall and a history of claims. The shortfall in maintenance budget or expenditure has resulted in overall deterioration of the footway and cycleway network, a problem experienced by highway authorities nationally. The most recent footway condition survey for East Sussex identified 67% of the total footway network as requiring maintenance with the worst conditions found in outlying areas.

Addressing the footway maintenance backlog is a priority for the Council. This will require significant investment and a change to the way in which maintenance for footways and cycleways is managed. This change is now being implemented and a lifecycle plan for these assets is being developed. As with carriageways this will enable the prioritisation of maintenance in line with an asset management based approach and will provide evidence to make the case to decision makers for funding.

Short-term desired outcomes (current year): To develop a fully comprehensive inventory of all footways, footpaths and cycle infrastructure in East Sussex. To use asset inventory and condition data to produce a lifecycle model demonstrating the funding requirement for various performance outcomes, including improvement, sustained condition, or managed deterioration of the asset.

Medium-term desired outcomes (2 to 5 years): To use the developed maintenance model and options as evidence to support a case to decision makers for maintenance funding in 2016 and to develop a 5 year, Member endorsed forward plan of preventative maintenance.

Long-term desired outcomes (5 to 10 years): As part of an asset management based approach, to develop a compelling case for the funding of footway and cycleway maintenance in East Sussex and to implement programmes of work delivering best value against Council and Highway Service objectives.

Approach: Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy in line with the East Sussex Highway Asset Management Framework.





East Sussex County Council actively manages its structural assets in accordance with principles set out in the UK Roads Liaison Group publication 'The Management of Highway Structures, A Code of Practice'.

There are approximately 974 bridges and culverts, 300 retaining walls and 5 tunnels being maintained, with a Gross Replacement

Cost estimated to be £516 million. Routine maintenance of structures is based on a prioritised system of required work with the aim of minimising the risk to public safety and future maintenance costs.

The condition of the structures asset is measured primarily by two factors, BSSCI (Bridge Structural Stock Condition Indicator) and BSCLcrit (Bridge Structure Condition Indicator critical) which are derived from bridge inspections. In accordance with the nationally recognised indicators published by ADEPT and in common with most Local Authorities, there has been a slow reduction in the overall stock value which at present in East Sussex is within the range denoted 'fair'. Out of the total stock, 50 structures are rated below this level. This information is stored within a bespoke database and used to determine lifecycle planning strategies.

All structures are maintained in a condition 'fit for purpose and safe for use'. If safety critical components are identified as being deficient after inspections, immediate steps are taken to make them safe. At present, 18 substandard structures are monitored to determine their structural performance and are managed in accordance with the code of practice.

Desired outcomes: The principle factor for determining the forward strategy is to maintain the asset in a condition 'fit for purpose and safe for use'. The target is to adhere to our 10 Year Structures Plan and maintain the level of the BSSCI. Additional targets include alleviating culverts that cause property flooding, enhancing safety at highway structures and mitigating railway sites where vehicle incursion is an issue.

Approach: There are likely to be further financial pressures in the future, reducing the availability of finance for the maintenance of the structures stock. The key financial driver is to ensure that the time for intervention of planned maintenance to a structure, is determined to provide the best financial return for that investment. This will be managed by use of the structures toolkit, reviewing the 10 Year Plan, monitoring the BSSCIs and applying professional, qualified engineering judgement.



The Council's highway **drainage** asset is critical to ensuring the controlled removal of water from the carriageway to allow customers to use it safely. The impact that failure of the drainage asset can have on other highway infrastructure is significant, particularly to the carriageway.

The current inventory of highway drainage assets across East Sussex includes approximately 98,000 gullies, 10,000 grips; and 500km of drainage ditches. These drainage assets are all proactively maintained through routine clearance works. Outside of routine maintenance, the current approach to repairs and improvements is predominantly reactive. This is the result of an incomplete inventory, lack of condition data and a lack of knowledge of the risks posed by this critical asset across the county. The limitations of this approach have been made evident with the current backlog of drainage defects identified. Our ability to model a capital programme and lifecycle plan for our highway drainage asset is limited for these reasons.

To proactively maintain the entire drainage asset into the future, we will continue to build a complete inventory and good understanding of condition including the associated risks that come with failure. This will enable us to undertake programmes of preventative maintenance whilst monitoring and reviewing performance.

Improving our knowledge of drainage infrastructure across the county enables us to demonstrate evidence-based decisions on drainage maintenance and support our ability to secure future funding investment, while demonstrating savings in revenue expenditure through efficient and effective maintenance.



Desired outcomes: To move away from reactive maintenance towards planned improvements of our whole highway drainage asset. The implementation of a proactive maintenance approach applied across all drainage assets to reduce flooding of the highway and damage to other highway infrastructure.

Approach: Continued proactive maintenance of known drainage assets (gullies, grips and ditches) in accordance with industry guidance such as the HMEP document entitled 'Guidance on the Management of Highway Drainage Assets'. The collection of inventory and condition information for the remaining unknown drainage assets to enable clear lifecycle plans to be developed, and a proactive approach for future programmes of prioritised maintenance to be achieved.



Street lighting is an important highway asset, contributing to public amenity, safety and the night time economy. With a Gross Replacement Cost of £69 million, the lighting asset consists of approximately:

- 37,000 East Sussex street lights (column and wall mounted);
- 10,000 other inventory items (such as illuminated and reflective bollards, subway lighting, internally and externally illuminated signs and school warning lights, and so on);
- 3,000 street lights for parish, borough and district councils under individual, rechargeable maintenance agreements.

The overall condition of the street lighting asset is monitored in accordance with 'Institute of Lighting Professionals Technical Report 22' with a target to maintain the number of columns in excess of the action age at less than 50%.

East Sussex County Council operates a six year routine maintenance cycle, with all columns in the county being visually inspected for structural and electrical condition at each visit. Monthly night scout patrols are also in operation, allowing faults to be identified and logged into a lighting management system. This maintenance cycle has an overall aim of minimising non-routine visits and improves the



efficient operation of the asset. The frequency of these visits has been extended to six years due to the introduction of part-night street light operation and LED light sources.

In addition to these maintenance activities, further capital column replacement projects to replace life expired lighting columns are also undertaken. Replacing the columns at these locations with newer equipment minimises the risk of failure and the occurrence of non-routine faults.

Desired outcomes: To ensure the safety of the public, reduce the risk to maintenance operatives, reduce energy consumption, reduce the cost of maintenance and halt deterioration of the asset.

Approach: Combine routine inspection, regular night scouting, testing and cleaning and record public fault reports to ensure the most efficient and economic routine maintenance service is provided. Continue with several key projects to meet targets for reduced energy consumption, including the reintroduction of part night lighting where appropriate and the installation of dimming and more efficient equipment, such as LED lanterns within East Sussex. These projects will be supported with the use of a computer inventory systems and programmes which also help to mitigate risk and comply with current British standards.

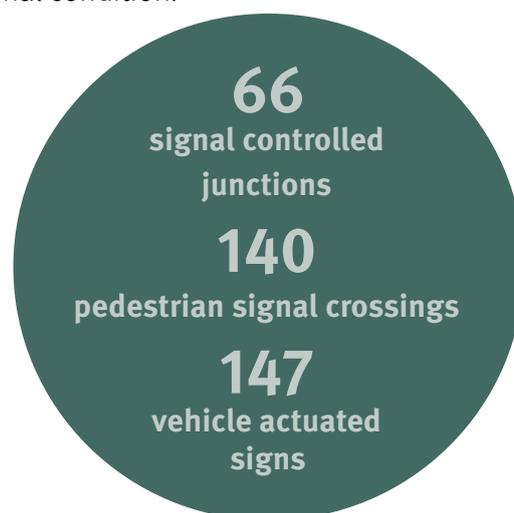




Traffic signal controlled junctions and pedestrian crossings form an important highway asset, contributing to the safe and efficient use of the road network and promoting economic growth within the county. Its efficient operation and maintenance allows those using the road network to move around the county with the minimum of delay and disruption. Efficient maintenance regimes also ensure that the traffic signal installations are maintained in a safe structural and electrical condition.

There are currently 66 signal controlled junctions, 140 pedestrian signal crossings and 147 vehicle actuated signs (VAS) installed across the county with a Gross Replacement Cost of £15 million. The traffic signal sites also have white lining, anti-skid and pedestrian barrier rails associated with them. An annual inspection is undertaken which checks the physical condition of the infrastructure and the operation of the equipment. This includes a visual assessment of the structural and electrical condition as well as an electrical test on every sixth year and for VAS assets, a sign replacement programme is currently in place for signs greater than 10 years old.

A significant number of our installations used to be equipped with remote fault monitoring but this has now been removed to reduce communication costs. Fault notification is now based solely on reports from the public, police and our contractors. Key Performance Indicators (KPI's) are set and monitored to ensure that our contractor attends and rectifies faults within specified contract time periods. An age based refurbishment programme is generated on an annual basis which is reviewed along with the annual inspection results to ensure that all of the signal sites are maintained in an acceptable operational condition.



Desired outcomes: To ensure the safety of the public, the efficient operation of the asset, reduce the risk to maintenance operatives, reduce energy consumption, reduce the cost of maintenance and halt deterioration of the asset.

Approach: Combined routine inspection, testing and cleaning to ensure the most efficient and economic routine maintenance service is provided. The timely attendance and repair of faults and ordered work to ensure the safe operation of the asset. The use of a computer inventory system to record and monitor fault and asset information. A schedule of annual inspections to identify issues that poses a risk to operational efficiency and public safety. Reduced energy consumption through the use of LED lanterns signal heads. The de-cluttering and removal of unwanted equipment or its relocation on to other existing assets to reduce the number of items to maintain and reduce future maintenance costs (combined infrastructure). The replacement of surface cut detection loops with underground vehicle sensors to reduce future maintenance costs, reduce the opportunity of loop failure and maintain the long term structural integrity of the road surface. The design of efficient replacement traffic signals schemes that deliver the lowest whole life costs.



Road Markings, Signs and Street Furniture



A well designed and managed highway environment generates benefits for residents, businesses and visitors to the county. Road markings, signs and street furniture have a significant presence within this environment and appropriate design and maintenance of these assets is required to offer a safe and attractive public realm to road users.

East Sussex County Council is responsible for the maintenance of over: 900 grit bins, 24.7km of pedestrian guard rail, 40,000 safety bollards, 631 safety barriers, 44,000 road signs and nearly 2,500km of road markings.

Road markings, signs and street furniture have historically been maintained by routine and reactive means. With a comprehensive asset inventory collected in 2013, an asset management based approach, delivering prioritised programmes of maintenance is now being developed. In maintaining these assets, the approach will coordinate design and maintenance functions, ensuring that new assets meet the objective of the highway service, are sustainable and serviceable, offering good long term value.



Community initiatives have been set up to work alongside parish and town authorities, to jointly-fund the maintenance of some assets of local importance such as fingerposts.

Short-term desired outcomes (current year): Develop a prioritised programme of preventative maintenance for Road markings in 2015/16 and reduce the level of associated reactive maintenance.

Medium to long-term desired outcomes (2 to 10 years): To develop a case for the funding road markings, signs and street furniture maintenance in East Sussex and to implement programmes of work delivering best value against Council and Highway Service objectives.

Approach: Using inventory data develop a lifecycle model for road markings, signs and street furniture and implement a programme of preventative maintenance in 2015/16. This programme will consider all existing road marking maintenance activity and propose a plan offering a coordinated, best value approach in future. In addition, the signage inventory data will be used to support initiatives such as street de-cluttering to improve the public realm for road users and limit future maintenance liability.





East Sussex understands that in order to drive continuous improvement and inform effective asset management based decision making, having the right data management systems in place is vital.

The road network is surveyed every year using SCANNER, achieving complete network coverage. In addition, county-wide footway and drainage condition surveys are undertaken, with the current footway data collection having been completed in 2013. It is intended that the collection and updating of this data will continue, as it will support the asset management objectives of the Council and will ensure that the outcomes for the individual asset strategies can be met.

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 the implementation of asset management, we will review current data collection techniques and develop a data management strategy.

Best Practice and Performance Monitoring

East Sussex County Council is committed to the development of good practice and continuous improvement, having already played a leading role in the development of the regional agenda on highway asset management. Examples of activities that demonstrate our commitment include:

- Membership of the South East 7 Alliance;
- Membership of the South East Service Improvement Group;
- Participation in Project Outcome (with Surrey);
- Membership of the CIPFA HAMP Network; and
- Attendance at a variety of local and regional events.

Performance Monitoring

An Asset Management Implementation Road Map and a supporting Implementation Plan has been developed. We are continually

reviewing our progress against this plan and will be undertaking formal annual reviews. Asset management objectives as well as service delivery and contract delivery objectives have also been developed. We will monitor performance against these objectives to enable us to identify where we are making progress and where we may need to make changes to ensure we continue to manage the asset in the most efficient manner, and to ensure that we are able to continuously improve.

Strategy Review

This strategy and our Asset Management Policy will be reviewed annually, updated and re-published as appropriate. This process will be managed and implemented by East Sussex County Council officers.



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, taking into account 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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August 2015 • 15-16 209



Highway Asset Management Strategy 2018-2024



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We are pleased to be able to introduce East Sussex County Council's Highway Asset Management Strategy for 2018 to 2024.

The local highway network is East Sussex's largest and most valuable publically owned asset with a replacement value of £8.58bn. It is used every day by residents, businesses and visitors and provides a vital contribution towards the economic, social and environmental well-being of the County.

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.

The importance of asset management and continuous efficiency has also been reinforced by Central Government, where funding streams are linked to those authorities who can demonstrate value for money and efficient delivery of highway maintenance activities.

The County Council is committed to the development of good practice and continuous improvement. Reviews of both the Highway Asset Management Strategy and Asset Management Policy will be undertaken annually, and we shall continue to work in partnership with our customers, elected Members and staff.

By employing an asset management approach, East Sussex will continue to increase the value achieved in road maintenance, improving network resilience and reducing the burden on revenue budgets through the delivery of effective programmes of preventative maintenance over the next six years and beyond.



Rupert Clubb
Director of
Communities, Economy
and Transport



Cllr Nick Bennett
Lead Member for
Transport and Environment



The importance of Highway Infrastructure to East Sussex

East Sussex highway infrastructure provides a vital contribution to the economic growth of the county. The local highway network is without doubt the most valuable publically owned asset managed by East Sussex County Council (ESCC) with a total value of £8.58 billion (2017). The importance of the highway infrastructure to the communities of East Sussex is substantial.

Why Asset Management?

Asset management is a strategic approach that seeks to optimise the value of highway assets over their whole life (Whole Life Cost). East Sussex County Council recognises that by taking an asset management based approach to its local highway maintenance, investment can be targeted on long-term planned activities that prevent expensive short-term repairs. This approach is in line with suggested best practice and Government guidance.

Our Asset Management approach not only maximises value for money, ensuring informed investment decisions can be made, but also manages risk and maintains a highway environment that is safe and secure and accessible for our customers.

Asset Management Policy

The ESCC Highway Asset Management Policy is a high level document which establishes the Council's commitment to infrastructure investment through an asset management approach aligned with the Council Plan. The Policy is not a stand-alone document and is published alongside this strategy on the Council's website.

Asset Management Strategy

This Highway Asset Management Strategy sets out how the Asset Management Policy will be delivered. It is informed by the adoption of a highway asset management framework which establishes the activities and processes that are necessary to develop, document, implement and continually improve highway asset management within East Sussex. It is aligned to the Council's priority outcomes and seeks to follow the latest advice and guidance from recognised bodies such as the Department for Transport (DfT).

In support of the Council Plan 2014-2018¹ and the Local Transport Plan 2011-2026, this Council recognises that an asset management approach to the maintenance of the highway network will aid in the achievement of the Council's vision, as set out below:

Council vision: 'To deliver our priorities at a time of reducing resources and increasing demand we must work as One Council with a clear focus on achieving the best outcomes we can for East Sussex.'

Local transport plan vision: 'To make East Sussex a prosperous county where an 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 of life.'

Service and Contract Delivery Outcomes

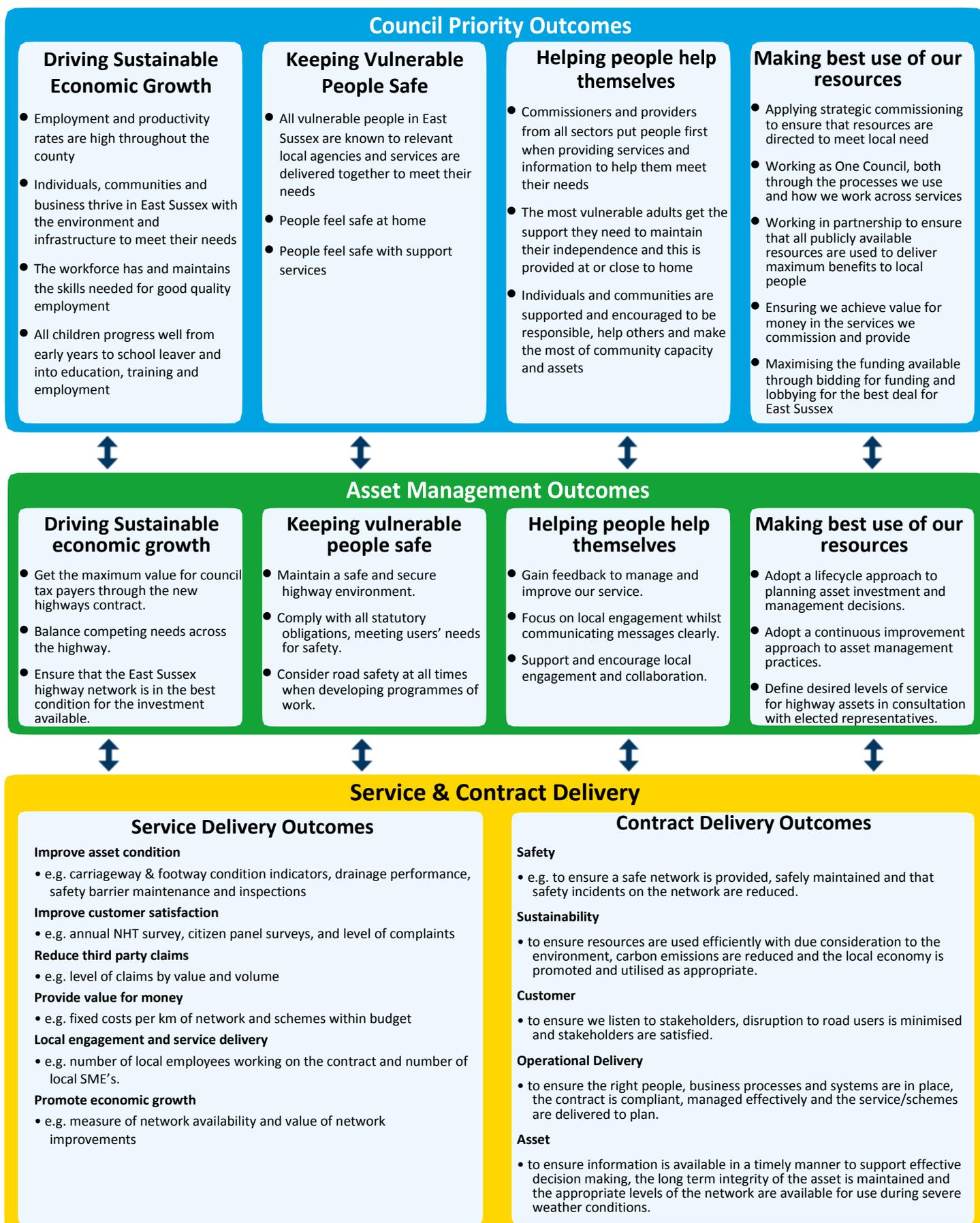
East Sussex County Council recognises that the delivery of an efficient highway service cannot be undertaken without effective maintenance of the existing highway network. It is therefore essential that new infrastructure that supports the Council's priority outcomes can be maintained to the appropriate standard in the future and that existing highway infrastructure remains serviceable. The Council is committed to having the best network condition for the investment available, and supports an asset management based approach for the maintenance of the highway network.

The current highways contract arrangement commenced in May 2016 and a Contract Management Group was established to oversee the delivery of this providing specialist contract, commercial, performance and service development functions. A series of asset management outcomes linked to service outcomes have been created that are directly aligned to the achievement of the Council Plan.

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. The relationships between these outcomes are shown as Figure 1. The highways work programmes are established on an asset management basis for delivery through the highways contract. This will ensure the works remain aligned to this asset management policy and strategy and the Council's priority outcomes. It will also support advance planning of key investment decisions for the Council.



Figure 1 – Relationship between council outcomes and asset management outcomes



East Sussex County Council has developed a Highway Asset Management Framework (see figure 2.) that is based on the recommendations made within the 2013 Highway Management Efficiency Plan (HMEP). The framework summarises all activities and processes that are necessary to develop, document, implement and continually improve our approach to asset management. An Asset Management Implementation road map and a supporting implementation plan are being used to ensure the full implementation of the framework. The framework is shown in figure 2 and is summarised below.

Context

This establishes the context for highway infrastructure asset management in East Sussex. The context includes a variety of factors that need to be taken into consideration when determining the Council's expectations for the highway service. The factors include: national transport policy, local vision and local transport policies, expectations of stakeholders and 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

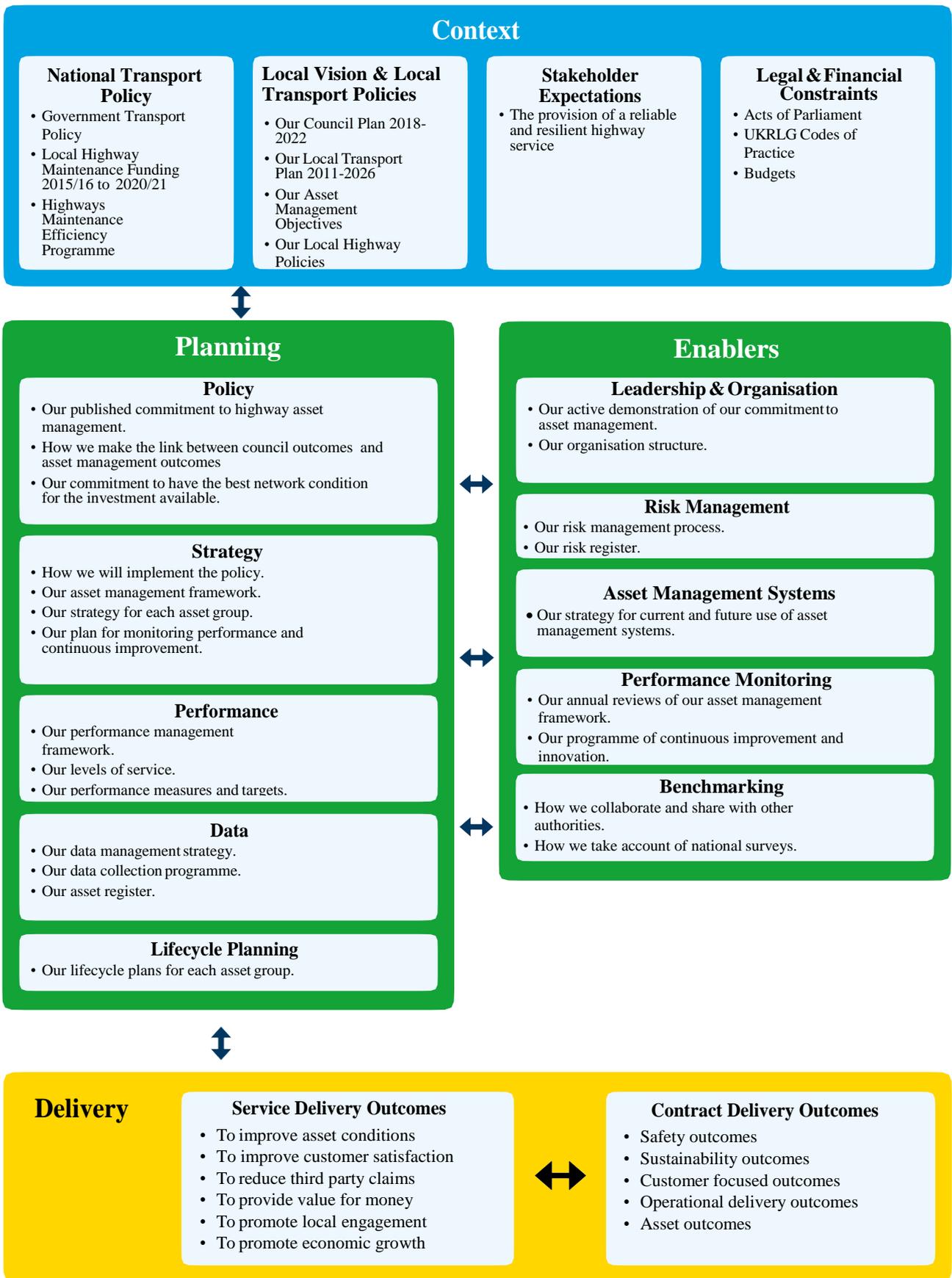
Enablers are a series of supporting activities that support the implementation of the Asset Management Framework. They provide a means of:

- 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

Delivery

As set out in Section 1, the delivery component of the framework sets out how the highway service will be delivered via the new highway maintenance contract for which a series of service delivery and contract delivery outcomes have been established respectively.

Figure 2 – Highway Asset Management Framework



Strategy for Main Asset Groups

Introduction

This section summarises the existing highway asset, its current condition, and a summary of the strategy to be employed for each asset type in the future. An understanding of, and agreement to, the levels of service required from each asset type is essential for the successful delivery of the strategy.

Highway Asset

The highway asset is shown below together with a summary of its current condition.

Table 1 – Summary of Highway Asset – 2016/17 figures

Asset Group	Quantity	Condition
Carriageways	3,375km	Approximately 5% of the principal network, 6% of the non-principal and 19% of the unclassified network in East Sussex is identified as requiring maintenance.
Footways and Cycleways	2,481Km	The 2016/17 performance figures for the footway network show that 30% of the network is either functionally impaired or structurally unsound.
Structures	483 bridges, 239 retaining walls and 2 tunnels	The Bridge Condition Stock Indicator rates the average condition of East Sussex County Council bridge stock at 86 (Good). The BCSI (critical element) value is lower at 76 (Fair). At present ESCC monitors 18 structures at substandard.
Drainage	98,000 gullies and 505 km ditches	96% of the gully stock is free flowing
Street Lighting	37,500 column and wall mounted street lights, 10,000 other inventory items, 3,000 street lights belonging to Parish, Borough and District Councils.	Street lighting assets are monitored in accordance with the Institute of Lighting Professionals.
Traffic signals	66 signal controlled junctions and 140 signal controlled crossings.	A detailed review of condition is taking place in 2018.
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	Road markings are renewed on a budget capped approach with key lines being replaced as a priority and as need arises.
Soft Estate	4,468km of vegetated verge, 75km of verge designated as Wildlife Verges and 55,000 individual trees, 36km of hedges and 50 ornamental shrub sites.	Existing information is being gathered, collated and gap analysis undertaken. Once the gaps in knowledge have been ascertained, surveys will be carried out to plug these, especially relating to the tree resource and the ecology of the soft estate.
Asset Data Management	Inventory of all of the above	The data sets vary in their completeness but they are the source of all that is undertaken upon the highway and key to the highway service achieving its goals.
Highway Asset Lifecycle Planning	Assessing best investment practice for the assets.	Approximately 50% complete 2016 review.



Highway Asset Hierarchy

The carriageway asset is currently managed according to a hierarchy based on road classification, and further divided by urban/rural road type as outlined in Table 2 below. The hierarchy is designed to recognise the relative importance of routes to the communities (social and economic) that they serve. The carriageway hierarchy traditionally has been used as a tool to help ensure that highway maintenance activities are effectively prioritised.

Table 2 – Asset Hierarchy

Category	Road maintenance hierarchy description	East Sussex road hierarchy general description
1	Motorways	Category 1 not applicable to East Sussex
2	Strategic Route	Primary Route
3a	Main Distributor	Inter Urban Route
3b	Secondary Distributors	Intra-Urban Routes
		Intra-Rural Routes
4a	Link Roads	Business or Industrial Roads
		Residential Roads
		Village Roads
4b	Local Access Roads	Country Lanes
		Minor Urban Roads
		Minor Rural Roads

Value and Scope of carriageways

Carriageways are the most valuable highway asset in East Sussex, having a gross replacement cost (GRC) of nearly £3.5 billion and they receive the greatest levels of maintenance expenditure. They were the first asset for which lifecycle plans were developed using current condition and have resulted in the creation of several investment scenarios. This has enabled a greater understanding of where to target investment to achieve the desired levels of service. Lifecycle planning will allow the impact of highway maintenance activities in terms of whole life carbon costs to be taken into account when determining interventions, materials and treatments.

East Sussex County Council is responsible for the maintenance of 3,375km of roads, providing transport links across the county from housing areas to the national motorway network. The condition of the carriageway asset is measured through annual surveys and inspections. In 2016, 19% of the unclassified network was identified as requiring maintenance, compared to just 5% of principal roads and 6% of non-principal roads. The national average figures were: 17% unclassified; 6% non-principal and 3% principal. The figures need to be viewed in context with the increase in local authority road traffic numbers. There was an increase in East Sussex from 1993 to 2016 of 483 million vehicle miles, up 21.4%.



Planned maintenance is delivered by an annual works programme. This programme is capital funded and schemes have been identified using an asset management approach. This evidence approach is endorsed by Council Members and achieved a four year capital programme for carriageways of £70 million between 2014 and 2018 a further five years of programme of capital funding has been agreed totalling £75million to achieve a steady state of condition commencing in 2017/18, £15 million per year.

Management of potholes and other carriageway safety issues arising across the network is delivered using revenue funding which is anticipated to reduce over coming years. By employing an asset management based approach and improving the coordination of road maintenance East Sussex will continue to increase the value achieved in road maintenance. Asset Management will also improve network resilience and reduce the burden on revenue budgets through the delivery of effective capital programmes of preventative work.

Surveying the carriageway and Prioritisation of work

ESCC has reviewed its carriageway survey standards to ensure it records sufficient information to understand the condition of its highway assets and to meet the reporting requirements of the Department for Transport and our approach is to undertake annual SCANNER surveys to meet the requirements of the DfT:

1. SCRIM surveys annually of the primary network
2. Explore the use of Highway Safety Inspectors Reports
3. Explore the use of video surveys for footways and unclassified routes
4. Explore the potential for introducing deflectograph surveys on the primary network

Approach: Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy in line with the East Sussex Highway Asset

Performance Indicator	12/13	13/14	14/15	15/16	16/17
% Principal Roads requiring maintenance (Council Plan)	8	7	5	5	5
% Non-Principal Roads requiring maintenance (Council Plan)	10	9	9	6	6
% Unclassified Roads requiring maintenance (Council Plan)	19	25	17	22	19



Framework to achieve short, medium and long term goals

- Continue to improve the forward programme of works by improved data management
- Introduce more detailed scheme briefs at handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities and continue to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans

Short-term desired outcomes (18/19 Financial Year):

To sustain a steady state of condition with the highway asset:

- 19% of unclassified roads requiring maintenance
- 6% for non-principal roads
- 5% for principal roads

Medium-term desired outcomes 5 years (18/19 to 23/24 Financial Year):

To develop a Member endorsed programme of work for the following five years to effectively deliver the budget plan, and a steady state of annual performance targets:

- 19% of unclassified roads requiring maintenance
- 6% of non-principal
- 5% of principal

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 Financial Year):

- Develop a compelling case for the funding of carriageway maintenance beyond the current five year budget plan
- Implement programmes of work delivering best value against service outcomes





Footways and cycleways are critical assets supporting access and mobility for people in East Sussex. Securing continuous improvement in the safety and serviceability of footways and cycleways is necessary to encourage alternatives to car, particularly for journeys in urban areas. Well maintained footways aid social inclusion, particularly improving accessibility for vulnerable people.

East Sussex County Council is responsible for the maintenance of 2,433km of footways providing access to residential and rural areas. The Council also maintains 48 Km of cycleways both on and off carriageway. The footway and cycleway asset has a gross replacement cost of approximately £399 million.

Footway:	(any defect in the footway or designated cycleway, causing in a change in level, resulting from raised or sunken ironwork, pothole, failed surface, displaced paving, kerb)
High: Cat 1	Greater than 40mm deep and at least 200mm wide in all directions
Medium: Cat 2	Greater than 30mm and less than 39mm deep and at least 200mm in all directions
Low: Cat 3	Greater than 20mm

ESCC is reviewing its present footway network to ensure alignment with the Code of Practice and to make sure that limited resources are appropriately targeted.

Cycleways

The cycleway hierarchy is determined not by use or functionality but by location which reflects the differing risks associated with shared, partially segregated and fully segregated cycle routes. See below.

Description	
1	Cycle lane forming part of the carriageway, commonly a strip adjacent to the nearside kerb. Cycle gaps at road closure point (No Entry to Traffic, but allowing cycle access).
2	Cycle track – a highway route for cyclists not contiguous with the public or carriageway. Shared cycle /pedestrian paths, either segregated by a white line or other physical segregation, or un-segregated.
3	Cycle provision on carriageway, other than a marked cycle lane or marked cycle provision, where cycle flows are significant.
4	Cycle trails, leisure routes through open spaces. These are not necessarily the responsibility of the Highway Authority, but may be maintained by an authority under other powers or duties.

Similarly to footways ESCC needs to review its present cycleway network and reflect the Code of Practice so that limited resources are appropriately targeted.

Surveying the footway / cycleway and Prioritisation of work

ESCC has been reviewing its survey standards and exploring more efficient ways of capturing data and records sufficient information to understand the condition of the asset and to meet the reporting requirements of the Department for Transport.

Work prioritisation needs to be comprehensible to all users of the asset in that it uses criteria which are 'smart': specific, measurable, achievable, realistic and timely. The prioritisation also needs to be flexible to meet the aspirations of stakeholders. ESCC are working on a system that joins condition, hierarchy and risk together, but is also flexible to meet changing needs.



Approach: Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy in line with the East Sussex Highway Asset Management Framework.

Our Performance

Performance	2012/13	2013/14	2014/15	2015/16	2016/17
% footway that is structurally unsound (lower is better)		12	21	15	14
% footway that is functionally impaired (lower is better)		19	3	15	16
% total footway requiring maintenance(lower is better)		31	24	30	30

Framework to achieve short, medium and long term goals

- Continue to improve the forward programme of works by improved data management
- Introduce more detailed scheme briefs at contractor handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve aims through the lifecycle plans

Short-term desired outcomes (18/19 Financial Year):

- To sustain a steady state of condition with the footway and cycleway asset
- To undertake a high definition photographic survey of part of the network (1/3) and understand its condition

Medium-term desired outcomes (18/19 to 23/24 Financial Year):

- To develop a Member endorsed programme of work for the following five years
- To undertake a high definition photographic survey of part of the network (1/3) and understand its condition
- To sustain a steady state of condition/ improvement with the footway and cycleway asset
- To refine the condition survey to meet the objectives of ESCC

Long-term desired outcomes (23/24 to 28/29 Financial Year):

- To develop a second Member endorsed programme of work for five years
- To undertake a high definition photographic survey of the last third of the network and understand its condition
- To sustain a steady state of condition/ improvement with the footway and cycleway asset
- To refine the condition survey to meet the outcomes of ESCC





East Sussex County Council actively manages its highway structures in accordance with principles set out in the UK Roads Liaison Group publication 'Well Managed Highway Infrastructure, A Code of Practice'.

There are 483 bridges and 296 culverts which belong to East Sussex County Council, 239 retaining walls and 2 tunnels being maintained, with a gross replacement cost estimated to be £523.8 million (2017 values). A further 311 structures are being inspected to ensure the safety of the highway user. Routine maintenance of structures is based on a prioritised system of required work with the aim of minimising the risk to public safety and future maintenance costs.

The condition of the structures asset is measured primarily by two factors: BSClavi (Bridge Stock Condition Indicator average) and BSClrit (Bridge Structure Condition Indicator critical) which are derived from bridge inspections.

In accordance with the nationally recognised indicators published by ADEPT (The Association of Directors of Environment, Economy, Planning and Transport) and in common with most Local Authorities, there has been a slow reduction in the overall stock value which at present in East Sussex is within the range denoted 'good'. Out of the total stock, 58 structures are rated below 'fair'. This information is stored within a bespoke database and used to determine lifecycle planning strategies.

All structures are maintained in a condition 'fit for purpose and safe for use'. If safety critical components are identified as being deficient after inspections, immediate steps are taken to make them safe. At present, 18 substandard structures are monitored to determine their structural performance and are managed in accordance with the code of practice.

Desired outcomes: The principle factor for determining the forward strategy is to maintain the asset in a condition 'fit for purpose and safe for use'. The target is to adhere to our 10 Year Structures Plan and maintain the level of the BSCI. Additional targets include alleviating culverts that cause property flooding, enhancing safety at highway structures and mitigating railway sites where vehicle incursion is an issue.

Approach: There are likely to be further financial pressures in the future, reducing the availability of finance for the maintenance of the structures stock. The key financial driver is to ensure that the time for intervention of planned maintenance to a structure is determined to provide the best financial return for that investment. This will be managed by use of the structures lifecycle models, reviewing the 10 Year Plan, monitoring the BSCIs and applying professional, qualified engineering judgement.



Our Performance

Performance	2012/13	2013/14	2014/15	2015/16	2016/17
Number of substandard structures (Lower is better)	17	17	18	18	18
BSCI average rating (Higher is better)	86 good	86 good	86 good	86 good	86 good
BSCI critical element (Higher is better)	76 fair	75 fair	76 fair	76 fair	76 fair

Framework to achieve desired goals

- Continue to improve the forward programme of works
- Introduce more detailed scheme briefs at handover stage
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans

Medium-term desired outcomes 5 years (18/19 to 23/24 financial years)

- To maintain the asset as 'fit for purpose' and 'safe for use'
- Target and maintain the existing BSCI scores
- Alleviate any culverts that are causing flooding to third parties
- Mitigate any risk from road over rail vehicle incursions

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 financial years)

- Build a strategic investment plan for the asset to facilitate investment at the right time for each structure
- Ensure the structures are maintained to the highest safety and condition standard within the available budget



East Sussex County Council is adopting a risk management approach towards highway drainage, taking into account the geographical location of the assets, known local flooding hot spots and risk to the highway. The Council's highway drainage asset is critical to ensuring the controlled removal of water from the carriageway for its safe use. The impact of failure from the drainage asset on other highway infrastructure is significant, particularly to the carriageway. As a consequence it is vital that we have an up to date inventory of all highway drainage assets and their condition.

The current inventory of highway drainage assets across East Sussex includes approximately 98,000 gullies 10,000 grips and 500km of drainage ditches. Outside of routine maintenance the current approach to repairs and improvements is predominantly reactive. This is the result of an incomplete inventory, lack of condition data and a lack of knowledge of the risks posed by this critical asset across the county performance.

The limitations of this approach have been made evident with the current backlog of drainage defects identified. Our ability to model a capital programme and lifecycle plan for our highway drainage asset is limited for these reasons.

To proactively maintain the entire drainage asset into the future, we will continue to build a complete inventory and good understanding of condition including the associated risks that come with failure. This will enable us to undertake programmes of preventative maintenance whilst monitoring and reviewing performance.

Improving our knowledge of drainage infrastructure across the county enables us to demonstrate evidence-based decisions on drainage maintenance and supports our ability to secure future funding investment, while demonstrating savings in revenue expenditure through efficient and effective maintenance.

The proposed new performance indicators are to drive this required improvement in our knowledge.





UFRN	Description	Measure
1	Number of road gullies cleaned and checked as 'free flowing' with their position recorded appropriately	Number
2	Length of drain validated as fit for purpose and position recorded appropriately.	Length metres
3	Length of ditching cleaned and validated as fit for purpose and position recorded appropriately	Length metres
4	Number of headwalls inspected and checked as 'free flowing' and position recorded appropriately	Number
5	Number of Manholes / access chambers inspected and checked as free flowing and position recorded appropriately	Number

Desired outcomes:

- Move away from reactive maintenance towards planned improvements
- Implementation of a proactive maintenance approach to reduce flooding and damage to other highway infrastructure

Approach:

- Continued proactive maintenance of known drainage assets in accordance with industry guidance such as the HMEP Guidance documents
- Collection of inventory and condition information for the remaining unknown drainage assets to enable clear lifecycle plans to be developed
- A proactive approach for future programmes of prioritised maintenance to be achieved

Our Performance

Performance Indicator	12/13	13/14	14/15	15/16	16/17
% Highway gullies that are free flowing and clear of obstruction (PP)		98%	98%	98%	96%



Framework to achieve desired goals

- Continue to improve the forward programme of works by improved data management
- Introduce more detailed scheme briefs at contractor handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans
- Develop a forward programme of capital improvement works to deliver extra investment in drainage over the next six years

Short-term desired outcomes (18/19 Financial Year):

To sustain a steady state of condition with the drainage asset:

- Resolve the various historic paper records into a single image of the network
- Work with the County Flood Risk Management Team and build relationships with the Environment Agency, Southern Water and Borough / Districts in East Sussex to better understand the associated third party concerns

Medium-term desired outcomes 5 years (18/19 to 23/24 Financial Year):

- Continue working with the County Flood Risk Management Team and build relationships with the Environment Agency, Southern Water and Borough / Districts in East Sussex to better understand the associated third party concerns
- Continue to build a robust set of drainage records
- Produce a Member endorsed five year works programme

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 Financial Year):

- Continue to build a robust set of drainage records
- Produce a second five year Member endorsed programme
- Continue working with the County Flood Risk Management Team and build relationships with the Environment Agency, Southern Water and Borough / Districts in East Sussex to better understand the associated third party concerns





Street lighting is an important highway asset, contributing to public amenity, safety and the night time economy. With a gross replacement cost of £70.173million (2017), the lighting asset consists of approximately:

- 37,500 East Sussex street lights (column and wall mounted)
- 10,000 other inventory items (such as illuminated and reflective bollards, subway lighting, internally and externally illuminated signs and school warning lights)
- Approximately 2,000 concrete columns installed before 1982
- 3,000 street lights for parish, borough and district councils under individual, rechargeable maintenance agreements

There is concern as to the accuracy of the inventory figures and stock condition; as a result the following is required:

- Complete inventory undertaken
- Condition data on the inventory
- Listing of any critical risks

East Sussex County Council operates a six year routine maintenance cycle, with all columns in the county being visually inspected for structural and electrical condition at each visit. Monthly night scout patrols are also in operation, allowing faults to be identified and logged into a lighting management system. This maintenance cycle has an overall aim of minimising non-routine visits and improves the efficient operation of the asset. The frequency of these visits has been extended to six years due to the introduction of part-night street light operation and LED (light emitting diodes) light sources.



In addition to these maintenance activities, limited capital column replacement projects to replace life expired lighting columns are also undertaken. Replacing the columns at these locations with newer equipment minimises the risk of failure and the occurrence of non-routine faults.

ESCC are also investigating the opportunity of 'Green Bank' funding to bring the stock up to a modern standard.

Desired outcomes:

- To ensure the safety of the public
- Full inventory and condition assessment
- Reduce the risk to maintenance operatives
- Reduce energy consumption
- Reduce the cost of maintenance
- Halt deterioration of the asset



Approach:

- Working with the Joint Venture and / or a third party for data collection
- Combine routine inspection
- Regular night scouting
- Testing and cleaning
- Record public fault reports
- Continue with key projects to meet targets for reduced energy consumption, including the reintroduction of part night lighting where appropriate, and the installation of dimming and more efficient equipment

The above approach will be supported with the use of inventory systems programmes which also help to mitigate risk, and comply with current British Standards.

Our Performance

Performance	2012/13	2013/14	2014/15	2015/16	2016/17
Number of street light columns in excess of the action age (lower is better)	5,983 16% of total stock	6,137 16.3% of total stock	7,472 19.9% of total stock	7,977 21.3% of total stock	
Kilowatt hours	14,239,492	12,419,934	10,722,502	9,694,404	9,693,828
Carbon used	7,704	6,719	5,716	4,812	4,329

Framework to achieve desired goals

- Continue to improve the forward programme of works
- Introduce more detailed scheme briefs at handover stage
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans
- Develop approach and funding to replace concrete columns

Medium-term desired outcomes 2 to 5 years (20/21 to 23/24 Financial Year):

- Develop a fully comprehensive inventory of all lighting elements
- Produce a hierarchy of need based upon community reassurance
- Refine the lifecycle model demonstrating funding requirement for various performance outcomes
- Develop a five year, Member endorsed forward plan of preventative maintenance

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 Financial Year):

- Develop a programme of work which is Member endorsed for the funding of lighting elements for a second five year period
- Implement programmes of work delivering best value against the proposed investment plan





Traffic signal controlled junctions and pedestrian crossings form an important highway asset, contributing to the safe and efficient use of the road network and promoting economic growth within the county. Their efficient operation and maintenance allows those using the road network to move around the county with the minimum of delay and disruption. Efficient maintenance regimes ensure that the traffic signal installations are maintained in a safe structural and electrical condition.

There are currently 266 signal controlled junctions, 155 pedestrian signal crossings and 151 vehicle activated signs (VAS) installed across the county with a gross replacement cost of £16.38million (2017). The traffic signal sites also have white lining, anti-skid surface and pedestrian barrier rails associated with them. An annual inspection is undertaken which checks the physical condition of the infrastructure and the operation of the equipment. This includes a visual assessment of the structural and electrical condition as well as an electrical test every sixth year.

There is concern as to the accuracy of the inventory figures and stock condition of this asset and as a result the following is required:

- A complete inventory undertaken
- Condition data on the inventory
- Listing of any critical risks

Fault notification is based on reports from the general public, the Police and our partner. Key Performance Indicators (KPI's) are set and monitored to ensure that our contractor attends and rectifies faults within specified contract time periods. An age-based refurbishment programme is generated on an annual basis which is reviewed along with the annual inspection results, to ensure that all of the signal sites are maintained to an acceptable operational condition.

Desired outcomes:

- Ensure the safety of the public
- Full inventory and condition assessment
- Efficient operation of the asset
- Reduce the risk to maintenance operatives
- Reduce energy consumption
- Reduce the cost of maintenance
- Halt deterioration of the asset
- Move towards automatic fault reporting systems

Approach:

- Working with the Joint Venture and / or a third party for data collection
- Combined routine inspection and testing
- Timely attendance and repair of faults to ensure the safe operation of the asset
- Use of an inventory system to record and monitor fault and asset information
- Schedule of annual inspections to identify issues that pose a risk
- Reduced energy consumption through the use of LED lanterns signal heads
- De-cluttering and removal of unwanted equipment or its relocation on to other existing assets to reduce the number of items to maintain and reduce future maintenance costs (combined infrastructure)
- Replacement of surface cut detection loops with underground vehicle sensors to reduce future maintenance costs, reduce the opportunity of loop failure and maintain the long term structural integrity of the road surface
- Design of efficient replacement traffic signals schemes that deliver the lowest whole life costs



Our Performance

Performance	2012/13	2013/14	2014/15	2015/16	Performance
Number of Signal Controllers (Junction and Pedestrian crossings) in excess of action age (Lower is better)	8	52	10	13	Number of Signal Controllers (Junction and Pedestrian crossings) in excess of action age (Lower is better)

Framework to achieve desired goals

- Continue to improve the forward programme of works by improved data management
- Introduce more detailed scheme briefs at contractor handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans

Framework to achieving desired goals: Short to Medium-term desired outcomes:

- A full survey of all of the sites that have powered lights/ equipment is required to understand the type and state of the facilities
- The survey results need to be put into a formal report with recommendations for investment based upon risk to the public, operatives and corporate image
- From the above a formal request for monies so that a programme of works can be instigated

Medium-term desired outcomes 2 to 5 years (20/21 to 23/24 Financial Year):

- Develop fully comprehensive inventory of all traffic signal controlled equipment
- Refine the lifecycle model demonstrating funding requirement for various performance outcomes
- Develop a 5 year, Member endorsed forward plan of preventative maintenance

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 Financial Year):

- Develop a compelling case for long term sustainable funding beyond the current five year budget plan
- Implement programmes of work delivering best value against the proposed preventative investment plan



Road Markings, Signs and Street Furniture



Road markings, signs and street furniture have a significant presence within the public highway environment and appropriate design and maintenance of these assets is required to offer a safe, clear and attractive public space for all users.

East Sussex County Council is responsible for the maintenance of over: 900 grit bins; 24.7km of pedestrian guard rail; 40,000 safety bollards; 28.5km of safety fences / barriers; 43,695 road signs and nearly 2,500km of road markings. In maintaining these assets, the approach is to ensure that they offer good long term value. Community initiatives have been set up to work alongside parish and town authorities such as jointly-funding the maintenance of fingerposts. There is a need to have a robust inventory that is regularly checked and updated to ensure the continuing knowledge of the asset condition.



Approach:

- Develop a lifecycle model for road markings, signs and street furniture from inventory
- Implement a programme of preventative maintenance in 2019/20
- The programme will consider all existing road marking maintenance activity and propose a plan offering a coordinated, best value approach in future
- Use of the signs inventory to support initiatives such as street de-cluttering to improve the public realm for road users and limit maintenance liability

Framework to achieve desired goals

- Continue to improve the forward programme of works by improved data management
- Introduce more detailed scheme briefs at contractor handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve its aims through the lifecycle plans

Medium-term desired outcomes 5 years (18/19 to 23/24 Financial Year):

- Develop a methodology for collecting data that will allow the Asset Management Team to know precisely what assets there are in this category and their condition
- Implement programmes of work delivering best value against service objectives

Long-term desired outcomes 5 to 10 years (23/24 to 28/29 Financial Year):

- Develop a compelling case for long term sustainable funding beyond the current five year budget plan
- Implement programmes of work delivering best value against service objectives





The highway soft estate provides the setting for the county's roads. It includes trees, hedges, verges and other vegetated and natural areas within the boundary of land managed as public highway.

In urban areas it generally comprises verges between the road and pavement and any trees growing within them, but also larger green areas associated with the highway, and individual trees within paved areas. Especially in rural areas, more extensive areas of habitat can be included, often comprising areas of woodland planted to mitigate the visual impact of new roads, and wetland and other habitats provided to compensate for habitat lost during new road construction.

Drainage assets such as ditches, soakaways and balancing ponds often form part of the soft estate.

Increasingly organisations' soft estate elements such as woodlands and wetlands are considered as natural capital with a measurable value, providing equally measurable benefits year on year in the form of what are known as ecosystem services – in other words 'what nature does for us'.

The East Sussex Highway soft estate is no exception, and ecosystem services provided include:

- Visual amenity and aesthetic value; enhancing economic values, improving quality of life and providing health benefits for residents and enhancing the attractiveness of the county to tourists
- Screening to residential areas
- Psychological traffic calming and a safer road environment
- Highway drainage management through run-off areas, ditches and wetlands
- Absorption of atmospheric carbon through vegetation growth
- Air pollution removal by trees and other vegetation, e.g. particulates and noxious gases.

Recent work (2015) in Highways England's Area 1 (Devon and Cornwall) valued the 300,000 or so trees on the network's verges at over £40m using the Capital Asset Valuation for Amenity Trees (CAVAT) method, and the total **annual** benefits provided by the highway soft estate at over £760,000.

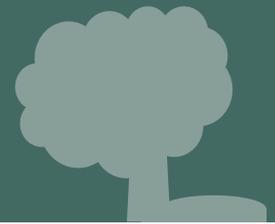
The management of the East Sussex's highway soft estate has suffered in recent years from continual reductions in the funding of planned works such as grass cutting, leading to poor appearance and reduced customer satisfaction, whilst lack of knowledge of the asset has led to a reliance on reactive management of trees and other woody vegetation.

An asset management approach in the future could save money by targeting works aimed at improving the soft estate's aesthetic appeal, the ecosystem services it produces, and its biodiversity, thus also helping the county to comply with wildlife legislation.

The gathering and amalgamation of data currently held in diverse forms, together with new ecological, arboriculture, and other surveys will help us to accurately define our asset whilst ongoing research will provide innovative and cost effective solutions to our soft estate management.

The highway soft estate asset includes approximately 4,468km of vegetated verge, at least 55,000 individual trees on A roads and in major towns and approximately 36km of council maintained hedge. In addition there are a number of areas of woodland and scrub, ornamental shrubs and wetland areas.

Nearly 75km of verges are designated as Wildlife Verges and managed specifically for the wildlife interest they contain.



Approach: Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy in line with the East Sussex Highway Asset Management Framework, following standards of best practice and collaborating with our partners.

Framework to achieve short, medium and long term goals

- Continue to improve the forward programme of works by ongoing survey works where knowledge gaps exist and improved data management
- Introduce more detailed scheme briefs at contractor handover stage to improve the quality of the final product
- Continue to develop and refine lifecycle models
- Benchmark with other authorities as it continues to follow and develop best practices
- Seek to secure appropriate funding levels to achieve aims through the lifecycle plans

Short-term desired outcome – 2018

1. The production of a document that can explain the journey required to achieve a safe, visually appealing and bio-diverse soft estate which is economic to maintain and meets the aspirations of the various communities of East Sussex.
2. The above will need a consultation document produced.

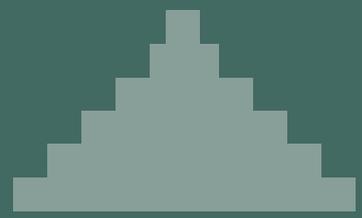
Medium-term desired outcomes 5 years (2019/20 to 24/25)

1. Develop a methodology for collecting data will allow the Asset Management Team to know precisely what assets there are in this category and their condition. Based upon the above document.
2. Implement programmes of work delivering best value against service objectives developed through the consultation process.

Long-term desired outcomes 5 to 10 years (2019/20 to 2029/2030)

1. Develop a compelling case for long term sustainable funding beyond the current five year budget.
2. Implement programmes of work delivering best value against service objectives.





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, in accordance with our Corporate Risk Management Framework and established best practice.

Risk types include:

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

Risk information is recorded corporately as a county council and with our contract partners within the Highways risk register. The Highway risk targets the identification of strategic and operational risks encountered within our works and operations. Risk registers also exist at all levels within the organisation to ensure potential issues are captured, analysed and mitigated.

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.

A review of the current network hierarchies in East Sussex was undertaken in 2018 to ensure that appropriate management is targeted towards roads of greatest need, in order to reflect our risk based approach to the highway network.

Each asset group has different needs based upon its usage and that variance in need is reflected in the management approach taken to the asset.



The East Sussex Highways Sustainability Action Plan provides actions to mitigate direct and indirect impacts of highway maintenance on the environment and communities. This includes; Consideration of whole life carbon costs; Appraisal of materials, products and treatments for maintenance for environmental impact, nature conservation and biodiversity; and risk assessment and mitigations for the effects of extreme weather on highway infrastructure assets (Climate Change Adaptation).

Issues affecting the environment that are taken into account in highway maintenance, include:

- Carbon costs and energy reduction
- Noise
- Materials utilisation
- Waste management and recycling
- Air quality and pollution control
- Nature conservation and biodiversity
- Environmental intrusion

Actions include production and application of a carbon model, operational carbon footprint analysis, and training for sustainable designs of projects.

Highway maintenance sustainability links to the wider environment and sustainability principles and outcomes of East Sussex County Council and our Highways contractors.



East Sussex County Council undertakes a risk based approach to asset management through its knowledge of the various elements of the highway. The knowledge of the asset is undertaken by:

- Holding and updating all appropriate records
- Validating the records
- Ensuring the data is transparent for decision makers

A data management strategy is one way of documenting information and demonstrating the benefits of data. The East Sussex County Council strategy comprises the following elements:

- **Identify business need** - This is through the appropriate data being collected and an appreciation of the validity of the information and how it is best used
- **Data ownership and accessibility** - The Asset Management Team has designated owners of data who are responsible for its validity and access to it
- **Data collection** - East Sussex County Council strives to ensure the data collected is accurate, appropriate and collected in such a way that repeatability of collection is achievable
- **Frequency of collection** - The data collection is based around the risk of that data from changes to the highway network through climate and use



- **Data Storage** – The data is stored to meet the requirements of East Sussex County Council I.T. Strategy and the Data Protection Act 2010
- **Data Management** – The data is managed currently through the ESAMS system developed by East Sussex
- **Data Disposal** – The data collected is not going to be disposed in the medium term as it allows for a reflection on the management changes to the network

East Sussex County Council will collect appropriate data that allows it to make sound judgements on the rate of deterioration of the highway and all of its component parts, these include:

- Carriageways
- Footways
- Structures
- Lighting columns and associated electrical apparatus
- Road gullies, associated pipework and chambers
- Trees, vegetation and associated green space (ecological concerns)
- Safety barriers and fences
- Any other attributes to or on the highway

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 the implementation of asset management, we will review current data collection techniques and continue to update our data management strategy.



Life cycle planning comprises the approach to the maintenance of an asset from construction to disposal. It is the prediction of future performance of an asset or a group of assets based upon investment scenarios, usage and maintenance strategies.

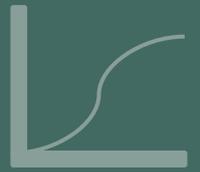
Typically there are five stages to the life of an asset:

1. Creation/ acquisition – a new asset as a result of a new development of capital project
2. Routine maintenance – cyclic and reactive maintenance designed to maintain the asset in a serviceable condition
3. Renewal/ replacement – major work required when cyclic maintenance / reactive works are unable to sustain the asset to the required standard
4. Upgrading – improvement to an asset to meet increased demands
5. Disposal – decommissioning of an asset when past its economic life

Effective lifecycle planning is about making the right investment decision at the right time to ensure that the asset delivers the required level of service over its expected life span to a minimum cost.

The work undertaken by East Sussex Highways is driven by a lifecycle approach through its:

- Knowledge of the asset through the survey work
- The cyclic work undertaken to repair minor faults
- The upgrading work that takes place each year to meet increased demand on the original asset.



East Sussex County Council is committed to the development of good practice and continuous improvement, having already played a leading role in the development of the regional agenda on highway asset management.

Examples of activities that demonstrate our commitment include:

- Membership of the South East 7 Alliance
- Membership of the South East Service Improvement Group
- Participation in Project Outcome (with Surrey)
- Performance Management Framework
- NHT National Survey
- CQC Efficiency Network
- Membership of the CIPFA HAMP Network
- Attendance at a variety of local and regional events

We are continually reviewing our progress against this plan. Asset management, service delivery and contract delivery outcomes are key to good delivery. We will monitor our performance against those outcomes in this document to enable us to identify where we are making progress and where we may need to make changes, to ensure we continue to manage the asset in the most efficient manner, and to ensure that we are able to continuously improve.



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, taking into account 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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August 2015 • 15-16 209