Highway Asset Management Strategy 2015-2022
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.
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

#### Council Objectives

<table>
<thead>
<tr>
<th>Driving economic growth</th>
<th>Keeping vulnerable people safe</th>
<th>Helping people help themselves</th>
<th>Making best use of our resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• create the conditions for growth and enterprise.</td>
<td>• keep vulnerable children and adults safe.</td>
<td>• enhance what individuals, families and communities can do for themselves.</td>
<td>• maximise the value from public finance.</td>
</tr>
<tr>
<td>• help local businesses thrive and grow.</td>
<td>• maintain a safe and secure highway environment.</td>
<td>• reduce demand for services.</td>
<td>• maximise operational efficiency and effectiveness.</td>
</tr>
<tr>
<td>• ensure local people have the skills they need to succeed.</td>
<td>• comply with all statutory obligations, meeting users' needs for safety.</td>
<td>• break dependency.</td>
<td>• services meet the needs of local communities.</td>
</tr>
</tbody>
</table>

#### Asset Management Objectives

<table>
<thead>
<tr>
<th>Driving economic growth</th>
<th>Keeping vulnerable people safe</th>
<th>Helping people help themselves</th>
<th>Making best use of our resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• get the maximum value for council tax payers through the new highways contract.</td>
<td>• maintain a safe and secure highway environment.</td>
<td>• gain feedback to manage and improve our service.</td>
<td>• adopt a lifecycle approach to planning asset investment and management decisions.</td>
</tr>
<tr>
<td>• balance competing needs across the highway.</td>
<td>• comply with all statutory obligations, meeting users’ needs for safety.</td>
<td>• focus on local engagement whilst communicating messages clearly.</td>
<td>• adopt a continuous improvement approach to asset management practices.</td>
</tr>
<tr>
<td>• ensure that the East Sussex highway network is in the best condition for the investment available.</td>
<td>• consider road safety at all times when developing programmes of work.</td>
<td>• support and encourage local engagement and collaboration.</td>
<td>• define desired levels of service for highway assets in consultation with elected representatives.</td>
</tr>
</tbody>
</table>

#### Service & Contract Delivery

<table>
<thead>
<tr>
<th>Service Delivery Objectives</th>
<th>Contract Delivery Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve asset condition</td>
<td>Safety</td>
</tr>
<tr>
<td>• e.g. carriageway &amp; footway condition indicators, drainage performance, safety barrier maintenance and inspections</td>
<td>• e.g. to ensure a safe network is provided, safely maintained and that safety incidents on the network are reduced.</td>
</tr>
<tr>
<td>Improve customer satisfaction</td>
<td>Sustainability</td>
</tr>
<tr>
<td>• e.g. annual NHT survey, citizen panel surveys, and level of complaints</td>
<td>• to ensure resources are used efficiently with due consideration to the environment, carbon emissions are reduced and the local economy is promoted and utilised as appropriate.</td>
</tr>
<tr>
<td>Reduce third party claims</td>
<td>Customer</td>
</tr>
<tr>
<td>• e.g. level of claims by value and volume</td>
<td>• to ensure we listen to stakeholders, disruption to road users is minimised and stakeholders are satisfied.</td>
</tr>
<tr>
<td>Provide value for money</td>
<td>Operational Delivery</td>
</tr>
<tr>
<td>• e.g. fixed costs per km of network and schemes within budget</td>
<td>• to ensure the right people, business processes and systems are in place, the contract is compliant, managed effectively and the service/schemes are delivered to plan.</td>
</tr>
<tr>
<td>Local engagement and service delivery</td>
<td>Asset</td>
</tr>
<tr>
<td>• e.g. number of local employees working on the contract and number of local SME’s.</td>
<td>• to ensure information is available in a timely manner to support effective decision making, the long term integrity of the asset is maintained and the appropriate levels of the network are available for use during severe weather events.</td>
</tr>
<tr>
<td>Promote economic growth</td>
<td></td>
</tr>
<tr>
<td>• e.g. measure of network availability and value of network improvements</td>
<td></td>
</tr>
</tbody>
</table>
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

Context

National Transport Policy
- Government Transport Policy
- Local Highway Maintenance Funding 2015/16 to 2020/21
- Highways Maintenance Efficiency Programme

Local Vision & Local Transport Policies
- Our Council Plan 2014-2018 and Objectives
- Our Local Transport Plan 2011-2016
- Our Asset Management Objectives
- Our Local Highway Policies

Stakeholder Expectations
- The provision of a reliable and resilient highway service

Legal & Financial Constraints
- Acts of Parliament
- UKRLG Codes of Practice
- Budgets

Planning

Policy
- Our published commitment to highway asset management.
- How we make the link between council objectives and asset management objectives.
- Our commitment to have the best network condition for the investment available.

Strategy
- How we will implement the policy.
- Our asset management framework.
- Our strategy for each asset group.
- Our plan for monitoring performance and continuous improvement.

Performance
- Our performance management framework.
- Our levels of service.
- Our performance measures and targets.

Data
- Our data management strategy.
- Our data collection programme.
- Our asset register.

Lifecycle Planning
- Our lifecycle plans for each asset group.

Works Programmes
- Our rolling works programmes for each asset group.

Enablers

Leadership & Organisation
- Our active demonstration of our commitment to asset management.
- Our organisation structure.

Communications
- Our communication strategy.

Competencies and Training
- Our skills matrix.
- Our development plan for all highways staff.

Risk Management
- Our risk management process.
- Our risk register.

Asset Management Systems
- Our strategy for current and future use of asset management systems.

Performance Monitoring
- Our annual reviews of our asset management framework.
- Our programme of continuous improvement and innovation.

Benchmarking
- How we collaborate and share with other authorities.
- How we take account of national surveys.

Delivery

Service Delivery Objectives
- To improve asset conditions
- To promote economic growth
- To reduce third party claims
- To provide value for money
- To promote local engagement

Contract Delivery Objectives
- Customer focused objectives
- Operational delivery objectives
- Sustainability objectives
- Safety objectives
- Asset objectives
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

<table>
<thead>
<tr>
<th>Asset group</th>
<th>Quantity</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carriageways</td>
<td>3,210km</td>
<td>Approximately 15% of the carriageway network in East Sussex is identified as requiring maintenance.</td>
</tr>
<tr>
<td>Footways and cycleways</td>
<td>2,481km</td>
<td>East Sussex is currently 40% through a 5 year condition survey for footways. Approximately 67% of the network is identified as requiring maintenance.</td>
</tr>
<tr>
<td>Structures</td>
<td>974 bridges, 300 retaining walls and 5 tunnels.</td>
<td>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.</td>
</tr>
<tr>
<td>Drainage</td>
<td>98,000 gullies and 525km ditches.</td>
<td>According to current defect reports, approximately 90% of our gullies are free and running.</td>
</tr>
<tr>
<td>Street lighting</td>
<td>37,000 column and wall mounted street lights, 10,000 other inventory items, 3000 street lights for parish, borough and district councils.</td>
<td>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%.</td>
</tr>
<tr>
<td>Traffic signals</td>
<td>66 signal controlled junctions and 140 traffic signal crossings.</td>
<td>Target to maintain the number of columns in excess of the action age at less than 50%.</td>
</tr>
<tr>
<td>Road markings, signs and street furniture</td>
<td>1001 grit bins, 24.7km of guard rail, 39,875 safety bollards, 43,695 road signs and 2,500km road markings 664 safety barriers</td>
<td>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.</td>
</tr>
</tbody>
</table>
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

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

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 BSCIcrit (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.
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.
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.
East Sussex Highway Asset Management Strategy