



# Highways Maintenance Policy

& General Principles

May 2019



Essex County Council

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# Essex Highway Maintenance Policy

## 1.1 Introduction

The Essex County Council Highways Maintenance Policy and Strategy has been fundamentally reviewed with maintenance engineers, inspectors and other practitioners to take account of the recommendations and best practice set out in the October 2016 “Well-managed Highway Infrastructure: A Code of Practice”. The Code was developed by the UK Road Liaison Group and is supported, endorsed and recommended by:

Department of Transport  
SCOTS  
CSS Wales  
Department of Infrastructure  
ADEPT  
(Association of Directors of Environment, Economy, Planning and Transportation)  
HMEP  
(Highway Maintenance Efficiency Programme)

The code is not statutory but provides Highway Authorities across the UK guidance on management of the highway. Adoption of any recommendation or deviations from the code is a matter for each Authority. Development of the authorities own standards or level of service will match their local need, priorities and environment.

This Policy, on adoption supersedes the “Essex Highway Maintenance Strategy – Maintenance Policy and Standards”, April 2008.

The 2016 Code of Practice moves away from specific guidance and recommendations as used previously, replaced by the promotion of a risk based approach. It says that Authorities will need to determine and evolve their own standards and levels of service though this approach to deliver maintenance standards appropriate for their own unique Authority.

The code also promotes liaison and collaboration between neighbouring Authorities, to determine levels of service and provide consistency across boundaries. Essex County Council (ECC) is an active member of the Eastern Highway Alliance (EHA)

Other members include;

- Cambridgeshire County Council
- Bedford Borough Council
- Buckinghamshire County Council

- Cambridgeshire County Council
- Central Bedfordshire Council
- Hertfordshire County Council
- Leicester City Council
- Leicestershire County Council
- Luton Borough Council
- Norfolk County Council
- Northamptonshire County Council
- Northumberland County Council
- Oxfordshire County Council
- Peterborough City Council
- Southend Borough Council
- Suffolk County Council
- Worcestershire County Council

The Council recognises the vital role that its Highway Network plays in the lives of its residents, as well as the travelling public and local businesses.

Effective management of the Highway Network and its infrastructure is fundamental in supporting the Council's Vision of Essex and in contributing to the Council's Strategic Aims:

- **Enable inclusive economic growth**
- **Help people get the best start and age well**
- **Help create great places to grow up, live and work**
- **Transform the council to achieve more with less**

This leads to a safe, accessible, serviceable and sustainable Highway Network which is vital for providing the foundation for plans of growth and prosperity, as well as providing access to key services such as employment, healthcare, education, social services, sports and leisure facilities. It is also an integral part of supporting key services such as the police, ambulance, fire and other emergency response services.

The Priority Routes within Essex provide the main arteries for the flow of commerce, goods and people, and therefore carries high volumes of traffic through and around and through the County. However, ECC recognises that although these routes are economically important, so are the local routes that its residents travel on each and every day.

A balanced approach to investment promotes choice as to where people wish to travel and how people wish to travel, by walking, cycling, driving or using public transport. The Highway and Public Rights of Way Network also affords opportunities for exercise and improves wellbeing through walking, cycling, horse riding and access to the countryside.

## 1.2 Objective, Purpose and Scope

The objectives of this Policy are:

- To adopt an asset management approach to highways maintenance. Through this approach the Council shall be able to compare and determine the best methods of achieving; value for money, long term maintenance need, environmental best practice, and public safety.
- To adopt a framework of strategies, service levels and operational practices that are flexible and adaptable to changing needs, legislation, funding, available resources, methods of service delivery and technologies.
- To move away from prescriptive national standards and adopt standards and service levels more suited to local needs and the environment of Essex.
- To continue a risk based approach to operational decision making.
- To adopt an appropriate, efficient and consistent approach in the collection and processing of highway inventory, condition and operational data.
- To work with other Authorities to compare, harmonise, share data and resources.
- To carry out regular reviews and updates as required. These will be generated by changes in legislation, financial situations, resources and service delivery experience

Where possible all strategies, service standards and operational practices shall be backed up with evidence and supporting data. This could be in any form and from a variety of sources.

Where there is little or no available supporting evidence or data, assumption and reasoning may be applied, and this will also be recorded

### 1.2.1 Purpose of highway maintenance

The main purpose of highway maintenance is to maintain a functioning network of Roads, Cycleways, Footways, and Public Rights of Way, as well as other highway assets for the expeditious and safe movement of people and goods.

Functioning is defined as the acceptable standard in order for the highway to operate for the user's needs but achieving:

A level of **safety** that reduces or minimises the risk of accidents and harm, as well as complying with statutory duties. The level needs to be practical and balanced without being an unnecessary burden in cost and resources.

A level of **serviceability** where the network is considered to be available to highway users, as well as reliable and integrated.

A level of **customer service** in that the highway user is informed, can obtain information and can be involved, and is satisfied with how this is carried out.

Is **sustainable**, minimising cost over time, maximising both value to the community and environmental contribution.

### **1.2.2 Scope of Highway Maintenance**

This Policy applies to all maintenance activities carried out in the highway, maintaining the pavement structure, the drainage, any related structure, street lighting, other street furniture and apparatus, providing these assets are maintained by the Council.

Responsibilities for the maintenance of all highway assets in Essex is delivered by the following organisations:

- Essex County Council
- Department for Transport (DfT) – Highways England (A12, A120, M11, M25)
- CountyRoute (A130, between A12 & A127)
- The unitary authorities of Southend and Thurrock
- Private roads (various owners such as housing associations, housing developments and residents.)

This Policy document covers only the assets that are managed or maintained by ECC.

ECC Highways are responsible for the maintenance and management of many different asset types. This Policy document covers the following:

- Carriageways
- Footways
- Cycleways
- Structures
- Vehicle Restraint Systems (VRS) eg crash barriers
- Public Rights of Way (PRoW)
- Street lighting
- Intelligent Transport Systems (ITS)
- Winter maintenance

This Policy is supported by a suite of Strategies that cover the wide and varied asset inventory.

Each asset group has its own individual set of requirements and needs. This is addressed through separating the Strategies between relevant supporting documents. Where the needs of one asset are similar to another they may be managed within the same strategy document.

The Strategy documents are listed below:

- Carriageway, Footway and Cycleway Maintenance & Inspections Strategy
- Public Rights of Way (PRoW) Maintenance & Inspections Strategy
- Structures Maintenance & Inspections Strategy
- Vehicle Restraint Systems (VRS) Maintenance & Inspections Strategy
- Street Lighting Maintenance & Inspections Strategy
- Intelligent Transport Systems (ITS) Maintenance & Inspections Strategy
- Winter Maintenance Strategy

### **1.2.3 Related Activities**

Because of the nature of some minor asset groups they are better suited to be included and picked up on the routine safety inspections or when reported by a member of the public. A reactive risk-based approach will be taken to rectifying problems relating to:

- Embankments
- Signs
- Trees and hedges
- Bus stops
- Bus telematics
- Highway drainage systems

There are a number of other highway activities listed below which are outside the scope of this Highway Policy that would influence directly or indirectly the delivery of highway maintenance.

- Large capital and infrastructure projects
- New housing and business developments
- Network management
- Utility infrastructure works and services
- Rail network operations and activities
- Public transport services
- Flood prevention operations and projects
- Town centre management
- Street cleansing and environmental protection.



### 1.3 Terminology and Glossary

The main relevant definitions used in this Policy and supporting documents are:

**Highway** – The term used to describe all roads, carriageway, footways and Public Rights of Way maintained at public expense.

**Carriageway** – Is the paved running surface and facilities used by motor vehicles.

**Cycleway** – Is the paved running surface and facilities designed to be used by cyclists but could be used by pedestrians and other forms of transportation as exempt and defined by law (i.e. Mobility scooters, or similar)

**Footway** – A paved running surface and facilities designed for used by pedestrians but it can within exceptions of law or legislation or reason, be used by other forms of transportation (i.e. mobility scooters or motor vehicles for specific purposes such as maintenance)

**Remote footway/cycleway** – A paved surface and facilities used by pedestrians and/or cyclists, but are independent of or not immediately adjoining, a carriageway.

**Shared Surface** – A paved running surface and facilities used by all traffic including motor vehicles and motorcycles and pedestrians. Examples would be areas used for residential parking or passage but which do not have a footway or separate area designated for footway traffic. It could also be used for heavily pedestrianized areas where vehicle traffic has not been segregated.

**Public Right of Way (PRoW)** – A collective term used for routes or highways where a right of way has been established. Generally, the surface will be un-made or constructed of loose or unbound material, but there may be cases where the surface is paved. Sub groups are:

**Byway** – PRoW open to all traffic.

**Restricted Byways and Bridleways** – A PRoW open to all traffic except motorised vehicles and motorcycles.

**Footpath** – A highway over which the public have a right of way on foot only.

There are a number of industrial and technical terms that may or may not be used in this document and/or supporting documents, but they are referenced for completeness. They are:

**Running Surface** – A collective term for all surfaces used in the highway for the passage of all highway uses.

**Paved Surface** – A collective term for all hard surfaces.

**Pavement (Construction)** – A term used to described the collective layers and materials used to constructed the paved surface.

**Surface Course** – The top layer of the pavement construction used to receive the highway traffic.

**Binder/base Course** – Structural layer below the surface course. Usually constructed using a bitumen or cement bound material.

**Sub-base/foundation/capping** – The base of the pavement construction usually using un-bound materials.

**Modular Paving** – A surface course constructed using pre-formed paving units, such as modular block, or concrete paving slabs and flag stones.

**Flexible Pavement** – A pavement constructed from bitumen bound material, thus will flex under traffic loading.

**Rigid Pavement** – A pavement constructed from cement bound materials that will not flex under traffic loading.

**Composite Construction** – A pavement with a cement bound base and bitumen bound surface course.

## 1.4 The Maintenance Policy Hierarchy

- Much of highway maintenance activities are based upon statutory powers and duties contained in legislation. It is further detailed and clarified by legal precedents and case law over time. These will continue to evolve over the life time of this Policy. Therefore amendments or changes within the supporting documents will have to be implemented as these develop.
- The most important headline powers and duties are summarised in this Policy. Where appropriate the supporting documents should set out the relevant legal framework in greater detail alongside how this affects the way ECC has to operate. Being contained within the supporting documents, these services can be adjusted quickly and easily as the law and legislation evolves.

The risk based approach to highway maintenance will be more dynamic. This will result in changes or adaptations to experience gained, legal rulings, changes in legislation, changes in procurement, contract or service delivery.

**Essex Highways Maintenance Policy and General Principles**– This document sets out the aims and main principles of the service area. It is envisaged that the document will need no regular reviews unless there is a fundamental or high level change in the Council's structure or role that impacts these principles. It will be the only document that requires Member's approval.

This Policy document is supported by the Strategies below:

**Maintenance and Inspections Strategies (as listed in 1.2.2)**– These documents will detail how the service will be delivered and the standards and service levels they will work to. These shall be regularly reviewed and any amendments shall be signed off by the Cabinet Member.

## **1.5 Inspections**

### **1.5.1 Routine Inspections**

The Council undertakes a system of routine highway safety inspections of all of its maintainable assets in order to comply with its statutory duty to maintain highways pursuant to Section 41 of The Highways Act 1981, and to provide a special defence under Section 58 of the Act. This allows the Council to provide defence against actions brought by third parties for damages resulting from failure to maintain the highway provided there is an efficient and effective highway inspection regime and that thorough and detailed inspection records are kept plus that there is a reasonable system for repair and maintenance.

Inspection intervals vary depending on the asset type and assessed risk of the asset, further details on routine inspection intervals can be found in the relevant supporting strategy documents.

### **1.5.2 Reactive Safety Inspections**

In addition to planned-inspection regimes, the Council receives reports and enquiries from a number of sources regarding its highway assets. The Council operates systems that allow these to be received either electronically or via traditional methods, for example Letter/telephone call. It also operates a system to receive reports or enquiries of an emergency nature out of hours.

### **1.5.3 Special Inspections**

Some assets require bespoke inspections, these are known as Special Inspections. The purpose of a Special Inspection is to provide detailed information on a particular part, area or defect that is causing concern, or inspection of which is beyond the requirements of the Routine Inspection's remit. Special Inspections are carried out when a need is identified. For example, based on the specific characteristics of the asset, identified by a competent team member. The Council carries these out in order to ensure public safety and the frequency can be found in the relevant supporting strategy documents.

## **1.6 Duty of Care**

Even in the absence of specific duties and powers the Council has a general duty of care to users and the community to maintain the highway in a condition fit for its purpose. This duty extends also to ensuring its operations carried out in its name either directly or through contractors, agents or providers are executed in a safe and appropriate manner. For example it needs to ensure, to the best of its abilities that

- Its contractors and their workforce are working in a safe manner.

- Materials are procured appropriately from sustainable and ethical sources.
- Waste materials are disposed of or recycled safely and sustainably.

### **1.6.1 The Main Highway Provision**

The **Highways Act 1980** sets out the main powers and duties of a Highway Authority.

The most important duty is set out in Section 41. This imposes a duty on the Authority to maintain the highways maintainable at public expense for which it is the local highway authority.

Sometimes people suffer damage or injury as a result of travelling on the highway and they may seek to argue that ECC or its contractors is liable for failing to comply with the duty to maintain. In such cases ECC may seek to rely on a defence against such actions which is set out in section 58, on the basis that they had taken reasonable measures to ensure that the part of the highway network in question was not dangerous to the highway user.

The Policy and associated Strategies cover the Highway as defined in the highway record which can be found on the Essex County Council Website.

## **1.7 Risk Based Approach**

Neither legislation nor the Code of Practice has set out or prescribed the minimum standards to be employed. It is up to each Authority to establish and implement their own levels of service to suit their circumstances.

ECC, along with a number of other Authorities, has for some time operated a risk based approach in their maintenance operations. Mainly assessing the level of risk present by highway defects, and then determining the level of response. The recommendation is that ECC ensure the risk based approach is applied to all aspects of the highway service.

The risk based approach can be operated at:

- Operational levels, such as determining risks events in the field so that a course of action could be determined, or at a;
- Strategic level in determining an acceptable level of service or standard to be employed.

Corporate risks are those at a high level that could affect the whole authority. Either financial, political, reputation or legal. These risks are beyond the scope of this Policy.

#### **1.7.1 Application of the risk based approach**

The risk based approach shall be applied using the principles set out in the Code of Practice and the Highway Infrastructure Asset Management – Guidance documents.

For the majority of highway assets, the risk based approach shall be applied through the formulation of a hierarchy, inspection frequencies, risk based defect assessments and corresponding repair times.

Supporting documents shall detail how the level of service or standard at a strategic level was formed. This may be in the form of an Appendix detailing the supporting evidence and reasoning, leading to the assessment and evaluation and final conclusion. These may be updated and adjusted as more information, studies, or data become available.

## **1.8 Sustainability, Recycling and Designing for Maintenance**

As well as providing a value for money service for highway users the Council has an obligation to make sure service delivery is sustainable, protects natural resources, protects the environment and local communities, and reduces future maintenance needs. Wherever practicable, the Council will aim to implement sustainable solutions for Highways activities, in balance with achieving the best value in terms of a long term solution and financial cost.

The key considerations to be made are:

- Waste streams from highway operations are, wherever practicable and efficient, recycled, ideally back into highway.
- Landfill should only be used if there is no other viable alternative.
- Re-use of materials or products that are already in situ.
- Use of products and materials that have a low energy usage in their production
- Employing processes that minimise transportation or haulage
- Using products and materials that have a low energy usage or could be self-sustained or “off grid”.
- Using products and materials that require little or no maintenance
- Using products and materials that could be sustained over a long service life with ease of maintenance and replacement
- Designing for ease of maintenance and the safety of operatives carrying out maintenance operations.

The above principles are applied across the entire service. It is, however, recognised that in some cases, the implementation of the most sustainable solution, may lead to an increase in cost, or reduction in longevity or quality. In such cases, engineering judgement and knowledge will be used to determine the best solution for each particular site.

## **1.9 Competencies, Training and Development**

The Code of Practice (Well Managed Highway Infrastructure 2016) recognises the importance of competency in relation to highway activities. Different highway functions require different skills and competencies for inspection, repair and the like. Each inspection plan will detail the relevant skills and competencies required.

## **1.10 Functional Hierarchy**

The historical system of road classifications (A B C and unclassified) and associated footways does not reflect the actual needs, priorities and highway usage in Essex. This is not just for Carriageways and footways but many other asset types.

In line with the Code of Practice suggestions, functional hierarchies have been developed for the majority of asset types and are also in development for other asset types. Details of these can be found within the supporting strategy documents.

Some of the types of characteristics that are taken into account when creating a functional hierarchy are listed below:

- Character and volume of traffic
- Link to critical infrastructure
- Its importance to maintain economic movement of traffic
- Congestion and traffic sensitivity
- Environment it is within or serves
- Ability to be used as a diversion route

These differ for each asset type due to the unique elements and aspects relevant to that asset.

## **1.11 Finance and Funding**

Funding for highway maintenance is split into two types.

**Revenue** – Is for the day to day costs of maintenance or servicing of the highway asset. Revenue funding is typically used for urgent, safety related maintenance issues. The aim is to maintain the state of the highway to get the maximum usage or life from the asset.

**Capital** – Is typically used for the programmed works aimed at renewing part of the highway asset that have reached the end of their service life, or extending the life of the asset by applying preventative maintenance treatments.

Scope of both revenue and capital works will be determined in line with available budgets each year.

## **1.12 Procurement and Service Delivery**

The main function of the Highway Authority is to maintain the highway network. To achieve this the Authority has to access a range of services, skills and materials, some of which are of a specialist nature.

The Highways Service is presently delivered via a Strategic Partnership which covers all highway services, encompassing delivery of works as well as supporting and strategic functions.

The Council also has options to procure works via other means such as Local and Regional Frameworks. Regular benchmarking of the service is completed in order to verify that the Partnership is delivering best value.



## **1.13 Performance Management**

Performance management is the means to measure the outputs of the service. The outputs can then be used to:

- Monitor if the agreed levels of service are being met.
- Determine if the intended outcomes are being achieved.
- The effects or impact of changes to the service both internally and externally.
- A tool to forecast future demands or pressures.

When carrying out performance management there are a number of key points that are considered in order to be useful and effective.

- The measures are meaningful and relevant to aims and objectives that need to be achieved.
- Data collection should be simple and not a burden, providing additional benefits where possible.
- The cost and resources applied to collecting data shall be proportional to the overall cost of the service.
- Where possible they should be comparable with other Authorities for benchmarking locally or nationally.

### **1.13.1 The Performance Management Framework**

The above is developed annually and sets out the measures that are monitored throughout the service. The measures may be linked to national or regional indicators or are specific to the service delivery in Essex.

This information is issued by:  
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