

Essex Highways Maintenance Policy

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Essex Highways Maintenance Policy

1. Introduction

The Essex County Council Highways Maintenance Policy 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 Roads Liaison Group (now UK Roads Leadership 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 with guidance on management of the highway. Adoption of any recommendation or deviations from the code is a matter for each Authority to determine.

This Policy, on adoption supersedes previous versions of this document as well as 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 detailed in previous codes of practice for highway maintenance management. Instead, it states that Authorities will need to determine and evolve their own standards and levels of service on a risk-based approach to match their own interpretation as well as local needs, priorities and circumstances.

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

Other members include;

- Cambridgeshire County Council
- Central Bedfordshire Council
- Hertfordshire County Council

- Kent County Council
- Luton Borough Council
- Norfolk County Council
- Peterborough City Council
- Southend-on-Sea City Council
- Suffolk County Council
- Thurrock 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.

Economy

Good jobs

Infrastructure

Further Growth and Investment

Green Growth

Levelling up the Economy

Environment

Transport and Built Environment

Minimise Waste

Green Communities

Levelling up the Environment

Health

Healthy Lifestyles

Promoting Independence

Place-based Working

Carers

Levelling up Health

Family

Education Outcomes

Family Resilience and Stability

Safety

Outcomes for Vulnerable Children

Levelling up outcomes for Families

Effective management of the Highway Network leads to a safe, accessible, serviceable and sustainable network, which is vital for providing the foundation for plans for growth and prosperity, as well as for providing access to key services such as employment, healthcare, education, social services, sports and leisure facilities. It is also essential for 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 carry high volumes of traffic through and around the County. These routes are regarded as of highest strategic importance and generally receive priority for maintenance. However, it is acknowledged that Local Routes are travelled each day and are important to Essex residents and that appropriate maintenance of Local Routes is also required for the long-term serviceability and sustainability of the overall integrated network.

A balanced approach to investment promotes choice as to where people wish to travel and how people wish to travel; either through active travel such as walking or cycling, or by driving or using public transport. The Public Rights of Way Network provides access to the countryside, and it also provides opportunities for active travel, including horse riding, all of which promote health and wellbeing.

2. Objective, Purpose and Scope

The objectives of this Policy are:

- To adopt an asset management risk-based approach to highways maintenance that enables the Council to compare and determine the best methods of achieving:
 - short-term and long-term maintenance need, including environmental and cyclical maintenance
 - environmental best practice
 - public safety
 - value for money
- To adopt a framework of strategies, service levels and operational practices that are flexible and adaptive 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 circumstances unique to 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 data, condition and inspection data and operational data.
- To work with other Authorities to compare service standards and collaborate in determining levels of service where practicable, especially across boundaries with neighbours responsible for strategic and local highway networks. This may require sharing data and resources where appropriate.
- To carry out reviews and updates of this Policy as required. These will be generated by changes in legislation, financial circumstances, or resources, as well as lessons learned through service delivery experience.

Wherever practicable, all strategies, service standards and operational practices shall be supported through evidence and related 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 behind decision making may be applied by the officer(s) suitably competent for the discipline in question as well as suitably experienced, and this information will be recorded.

3. Purpose of highway maintenance

The main purpose of highway maintenance is to maintain a functioning network of Roads, Footways, Cycleways 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 collisions 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.

4. Scope of Highway Maintenance

This Policy applies to all maintenance activities carried out in the highway relating to all assets and apparatus for which the Council has responsibility for management or maintenance.

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

- Essex County Council
- Department for Transport (DfT) – National Highways (A12, A120, M11, M25)
- CountyRoute (A130, between A12 & A127)
- The unitary authorities of Southend-on-sea City Council and Thurrock Council
- 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 is 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), e.g. crash barriers
- Public Rights of Way (PRoW)
- Street lighting
- Intelligent Transport Systems (ITS)
- Winter Management Infrastructure

Each asset group has its own individual set of maintenance requirements, and this Policy is supported by a suite of supplementary strategic Strategies that cover the wide and varied asset inventory above. Where the needs of one asset are similar to another, however, they may be managed within the same Strategy document.

The supplementary Strategy documents are listed below:

- Essex Highways Vehicle Restraint Systems Strategy
- Maintenance and Inspections Strategy: Carriageway, Footways and Cycleways
- Maintenance and Inspections Strategy: Intelligent Transport Systems (ITS)
- Maintenance and Inspections Strategy: Public Rights of Way (PRoW)
- Maintenance and Inspections Strategy: Street Lighting
- Maintenance and Inspections Strategy: Structures
- Maintenance Strategy: Winter

4.1 Related Activities

Because of the nature and materiality of some minor asset groups, they are not subject to separate strategies but are managed through their inclusion in the items for investigation during routine highway safety inspections, or through ad hoc safety inspections undertaken in response to reports from Members or the public regarding asset condition concerns. For example, 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.

5. Terminology and Glossary

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

Benchmarking – is the practice of comparing business processes and performance metrics to best practices from other companies and organisations. Dimensions typically measured are outputs, quality, time and cost.

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)

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

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.

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.

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:

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

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

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

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

Paved Surface – A collective term for all hard surfaces.

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

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

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

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

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

6. 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 lifetime 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 must 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, as well as changes in procurement, contract or service delivery.

This Policy document sets out the aims and main principles of the service area. It is envisaged that this document will only require review when there is a fundamental or high-level change in the Council's structure or role that impacts these principles. Changes to this Policy will require Member approval.

This Policy document is supported by the supplementary Strategies referenced in 4. Scope of Highway Maintenance.

6.1 Supplementary Maintenance & Inspections Strategies

These documents will detail how the service will be delivered and the standards and service levels that apply. These shall be regularly reviewed, and any amendments shall be signed off by the Cabinet Member. Refer to 4. Scope of Highway Maintenance for list of supplementary strategy documents.

7. Inspections

7.1 Routine Inspections

The Council undertakes a system of routine highway safety inspections of all the assets for which it has maintenance responsibility, to comply with its statutory duty to maintain highways pursuant to Section 41 of The Highways Act 1980, 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, and that there is a reasonable system for repair and maintenance.

Inspection intervals vary depending on the asset type and assessed risk of the asset in question in terms of highway user safety or asset condition decline. Further details on routine inspection intervals can be found in the relevant supporting Strategy documents.

7.2 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 outside of normal working hours.

7.3 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 in response to a maintenance need that is beyond the requirements of a Routine Inspection. For example, the maintenance need for which a Special Inspection is required, is based on the specific characteristics of the asset, identified by a competent team member. The Council carries out these types of inspection to ensure public safety, through identifying the maintenance required to

sustain fitness of purpose of the asset, and the frequency of such inspections can be found in the relevant supporting Strategy documents.

8. 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 that are maintainable at the public expense.

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 a highway that is maintainable at the public expense.

In such cases ECC may seek to rely on a defence against such actions, as set out in section 58 (special defence in action against a highway authority for damages for non-repair of highway), 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.

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

9. 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 match their own interpretation as well as local needs, priorities and circumstances.

ECC operates a risk-based approach in their maintenance operations. This includes assessing the level of risk posed by a highway defect, then determining an appropriate level of response. This Policy recommends that ECC ensure the risk-based approach is applied to all aspects of the highway service.

The risk-based approach is operated at:

- Operational levels, such as determining risks events in the field so that a course of action can 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, reputational or legal. These risks are beyond the scope of this Policy.

9.1 Application of the risk-based approach

The risk-based approach shall be applied using the principles set out in the October 2016 'Well-managed Highway Infrastructure: A Code of Practice' and the 'UKRLG Highway Infrastructure Asset Management – Guidance', documents.

For most highway assets, the risk-based approach shall be applied through the formulation in the first instance of a prioritised hierarchy that best reflects the actual needs, strategic importance and highway usage in Essex. The hierarchy will group together assets of similar characteristics that can be expected to perform in a similar way based on similar use, but equally it will also take account of the risk to highway users posed by the asset.

A corresponding safety inspection frequency shall then be determined for each hierarchy, where intervals between inspections consider the level of risk to highway users as well as the maintenance needs of the asset in question.

Where practicable for the asset group in question, the inspection process will detail the items to be included for investigation as well as the 'investigatory levels' (condition characteristics) which must be met before a risk assessment is undertaken.

Where risk assessments identify a localised site, area, or component that:

- Is a risk for causing foreseeable harm or damage to the public
- Represents an immediate or imminent safety hazard
- Is a risk of short-term structural deterioration to the asset

A safety Defect will be identified and recorded and an appropriate response assigned.

*Where risk assessments identify a localised site, area, or component that:

- Is of low risk of causing foreseeable harm or damage to the public
- Is of low risk of causing short-term structural damage to the asset

An 'Observation' will be identified and recorded.

'Observations' only impact long term serviceability and sustainability of the highway asset, and they will not be assigned with a priority for repair. They will only be considered for repair where they coincide with locations subject to broader scoped works identified through other Strategies.

'Observations' will be monitored and reviewed during safety inspections, and in the event that a revised risk evaluation score re-categorises a localised site, area, or component as a Defect, it will then follow the process set out relating to Defects in the supplementary Strategy for the asset group in question.

*The process for recording Defects as well as 'Observations' will be applied where appropriate. Some asset groups must conform to processes set out in best practice guidance and supporting technical specifications which do not include an opportunity for this approach to be applied.

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

10. 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" (not using or depending on public utilities).
- 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 wider aspirations, strategies and targets set by the Council with regard to decarbonisation, local nature recovery, water use, the circular economy (an economic system based on the reuse and regeneration of materials or products), and green infrastructure growth, as well as the requirement to make highway assets more resilient to extremes of weather.

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, knowledge, and awareness of the wider aspirations of the Council, will be used to determine the best solution on a case-by-case basis.

11. Competencies, Training and Development

The October 2016 'Well-managed Highway Infrastructure: A Code of Practice' 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 maintenance plan will detail the relevant skills and competencies required.

12. Functional Hierarchy

The historical system of road classifications (A B C & Unclassified) and associated categorisation of 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 that better reflect the actual needs, priorities and highway usage in Essex than historic classifications. These have been developed for most asset types and are also in development for other asset types. Details of these can be found within the supporting supplementary 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 strategic 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
- Risk posed to highway users

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

13. Finance and Funding

Funding for highway maintenance is split into two types.

Revenue – Is for the day-to-day costs of maintaining 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 achieve the maximum usage or service life from the asset.

Capital – Is typically used for the programmed works aimed at renewing parts 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.

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

The Council also has options to procure works via other means such as Local and Regional Frameworks. Periodic benchmarking of the service is undertaken to verify that the Partnership is continuing to deliver best value.

15. 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.
- Identify the effects or impact of changes to the service both internally and externally.
- Facilitate a tool to forecast future demands or pressures.

When carrying out performance management there are several key points that are considered to sustain relevance in terms of usefulness and effectiveness of the measures:

- 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 so that benchmarking can be undertaken locally or nationally.

15.1 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: Essex County Council

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<https://www.essex.gov.uk/highways>

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