HIGHWAY ASSET MANAGEMENT PLAN (HAMP)

SECTION 1 - POLICY

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Status - Final
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Contents

1. Introduction

The HAMP is divided into two separate sections:

- Section 1 – Policy (which sets out the principles of the HAMP)
- Section 2 – Annual update report **INSERT LINK**

Our HAMP will be used to plan our highway maintenance activities, in line with our Highway Maintenance Plan. It sets out the Council's long-term plan of managing our highway assets, through programmed capital maintenance, subject to available budgets. Using asset management principles, we can ensure that the right treatment is used at the right time, to ensure a safe, serviceable, and sustainable highway network.

The Annual update report provides information on our highway assets including condition and public satisfaction along with details of the works undertaken in year.

Investment in highway infrastructure and its performance has been increasingly under the spotlight. Due to financial challenges and public demands, the Department for Transport (DfT) reviewed the codes of practice Local Highway Authorities (LHA) worked to: 'Well-maintained Highways', 'Management of Highway Structures' and 'Well-lit Highways'.

The aim of this was to focus LHA's towards more effective and efficient ways of managing their highway assets, using a 'risk based' approach. This method takes account of the risks associated with an asset, along with its condition. This review resulted in the publication, in October 2016, of an updated version of the 'Well-managed Highway Infrastructure – A Code of Good Practice'.

This new code contains 36 recommendations for effective and efficient management of the highway network. Throughout this document, reference is made to these recommendations, and a brief overview is provided to assist the reader to better understand the requirements.

2. British Standard BS ISO 55001: Asset Management

The Council has a comprehensive system of asset management in place and was one of the first Councils in the UK to be awarded ISO 55001 accreditation in December 2015. This accreditation is annually audited, and we have successfully maintained and renewed the accreditation since. Durham County Council (DCC) value the benefits of maintaining ISO 55001.

This accreditation demonstrates our commitment to good asset management, and has allowed us to maintain the highest possible funding level from the DfT.

3. Document Owner

The Highway Asset Manager, along with the Senior Asset Management Engineer, are responsible for the content, updating and annual review of this document. The performance of this document and the findings from the annual review will be shared annually.

4. Our Infrastructure Assets

This document covers the highway infrastructure assets in the ownership of DCC. The infrastructure assets are:

- Carriageways
- Footways
- Structures
- Street Lighting
- Drainage
- Public Rights of Way (PROW)

5. Information and Data Management Strategy

This strategy has been developed in line with Recommendations 8, 9, 10, 11 and 17 from 'Well-managed Highway Infrastructure – A Code of Practice'. These recommendations are detailed below:

- RECOMMENDATION 8 – INFORMATION MANAGEMENT

  Information to support a risk-based approach to highway maintenance should be collected, managed and made available in ways that are sustainable, secure, meet any statutory obligations, and, where appropriate, facilitate transparency for network users.

- RECOMMENDATION 9 – NETWORK INVENTORY

  A detailed inventory or register of highway assets, together with information on their scale, nature and use, should be maintained. The nature and extent of inventory collected should be fit for purpose and meet business needs. Where data or information held is considered sensitive, this should be managed in a security-minded way.

- RECOMMENDATION 10 – ASSET DATA MANAGEMENT

  The quality, currency, appropriateness and completeness of all data supporting asset management should be regularly reviewed. An asset register should be maintained that stores, manages and reports all relevant asset data.

- RECOMMENDATION 11 – ASSET MANAGEMENT SYSTEMS

  Asset management systems should be sustainable and able to support the information required to enable asset management. Systems should be accessible to relevant staff and, where appropriate, support the provision of information for stakeholders.

- RECOMMENDATION 17 – CONDITION SURVEYS

  An asset condition survey regime, based on asset management needs and any statutory reporting requirements, should be developed and implemented.

Corporate Context

DCC is committed to managing our data in accordance with the Environmental Information Regulations, the Freedom of Information Act and the General Data Protection Regulation. The data will be:

- Fit for purpose
- Obtained, maintained and used ethically and legally
- Readily checkable and able to with stand changes in the organisation
- Clearly required
- Monitored regularly
- Cost effective to produce
- Clearly presented

We will ensure that we:

- Collect and submit data accurately
- Have processes in place that produce accurate reliable data
- Have management oversight of data quality processes
- Challenge data before reporting
- Report data with confidence
- Scrutinise data quality
- Assess third party data in line with correct legislation

Objectives of Asset Data Management

Reliable and robust highway asset data is essential to support the right investment decisions and to ensure that stakeholder requirements, value for money and efficiency can be delivered. DCC considers data to be the most essential component of its Highway Asset Management Plan. Robust collection and management of data will allow us to:

- Provide the data required to support the Council's approach to asset management
- Describe the asset and its performance
- Provide the basis for informed decision making
- Facilitate communications with our stakeholders
- Inform the assessment and management of risk
- Support the management of DCC's statutory requirements

- Support continuous improvement by the Council

Asset Data

Asset data comprises information on what physical highway infrastructure assets the Council, as highway authority for County Durham, are responsible for and includes number, location, condition, value and public opinion. To enable the Council to apply effective asset management planning and informed decision making, it relies on this data being available, appropriate, reliable and accurate.

Inventory Register

An asset register holds all the data associated with the asset, including inventory, location and condition. The asset register is the single source of all condition data for each individual asset type. They are used to support the maintenance management and the management of defects as part of the asset management system.

The Council holds its infrastructure inventory and asset data in a single computerised integrated asset management system. - This is a specialist system used to manage the highway asset and deliver vital information in a format which is easily understood, to inform important decisions regarding service delivery.

Collection of Inventory and Condition Data

The collection of highway data provides up to date accurate and reliable information to inform operational decisions. It is also used to ensure that funding decisions are informed by appropriate, current, and reliable data.

The following table illustrates the typical annual condition surveys undertaken. The data captured will be used to inform forthcoming year's maintenance programmes, monitor the effectiveness of the maintenance programme, and facilitate lifecycle planning to ensure the right treatment is implemented at the right time, to extend the life of the asset.

Asset	**Survey**	**Frequency**	**Performance Measure**
Classified Roads (A, B & C Roads)	Surface Condition Assessment for the National Network of Roads (SCANNER)	100% surveyed in one direction only annually	% where maintenance should be considered
Unclassified Roads	Coarse Visual Inspection (CVI)	Minimum 25% annually	% where maintenance should be considered
Drainage	Not routinely surveyed	N/A	% where useful life has expired
Footways	Footway Network Survey (FNS)	Minimum 25% annually	% functionally/ structurally impaired

Structures	Structures – General Inspections	Every 2 years	Bridge Condition Index – Principal roads Bridge Condition Index – Non-Principal Roads
	Structures – Principal Inspections	Between 6 to 12 years depending upon risk assessment	
	Structures – Special Inspections	As required	
	Underwater Inspections	Every 2 years or following severe flood conditions	
Street Lighting	Age analysis of inventory	Annually	% columns > 40 years
	Age analysis of inventory	Annually	% lanterns > 20 years
	Visual Inspection	Annually	% lit signs where useful life has expired

Risk Based Approach to Data Collection

Where the cost of data collection, for certain asset types for example kerbs, outweighs the benefit to the Council, a risk-based approach to the collection of the data may be considered. In doing so the Council will consider each asset group separately and will give consideration to:

- Any historic concerns over existing performance
- How it supports statutory requirements
- Reputational consequence of network disruption, reduction in serviceability, etc. which may have been avoided if data existed
- Critical parts of the network
- Safety of the network
- The likely increased long-term cost of maintenance with inadequate asset data to make long-term investment decisions
- The critical nature of the asset in supporting the function of the network

In addition to the above condition surveys, our highway network is inspected in accordance with the Council's Highway Safety Inspection Manual which supports additional maintenance activities.

Statutory Data Returns

The DfT release annually two online surveys for the 'Road Condition' in England, these are:

- Carriageway Work Done Survey

- Skidding Resistance Survey

Central Government also require annual data returns from items on the 'single data list', these are:

- (130-01) Principal roads where maintenance should be considered
- (130-02) Non-principal classified roads where maintenance should be considered
- (130-03) Skidding resistance survey
- (130-04) Carriageway work done, treatment, lengths

Further information on the 'single data list' can be found by visiting the Government's website.

Single Data List - GOV.UK (www.gov.uk)

6. Communication Strategy

This strategy has been developed in accordance with Recommendation 4 from 'Well-managed Highway Infrastructure – A Code of Practice'.

- RECOMMENDATION 4 – ENGAGING AND COMMUNICATING WITH STAKEHOLDERS

  Relevant information should be actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance.

Corporate Context

DCC have set out their communications principles and standards, which are set out in the Council Plan. It is essential that we ensure all stakeholders, both external (residents, partners, media etc.) and internal (employees and members) are communicated with in a professional manner, and we achieve the standards required.

All communication, in relation to council services, should:

- Meet all legal requirements
- Be well co-ordinated
- Be proactive
- Support the Council's commitment to transparency in relation to how public money is spent
- Be engaging
- Be consistent
- Be accurate
- Be timely
- Use correct branding
- Support the Council's commitment to effective customer service

Our aim is to ensure all stakeholders are aware of the condition of our highway assets, and what we are doing to maintain and improve the network.

Feedback from residents

The Council participates in the National Highways & Transportation (NHT) Public Satisfaction Survey, which is undertaken by IPSOS/MORI. The results from this are summarised in Section 2 – Annual Update Report of our HAMP.

We rely on reports from the residents, to detect any highway defects that occur between scheduled safety and service inspections. In order for us to maintain our highway assets in the best possible condition.

All this customer feedback helps inform the HAMP, including investment levels and priorities.

How to contact us

There are numerous ways members of the public, and elected members can contact us:

- Web: www.durham.gov.uk via the 'Do it online' section
- Email: strategichighways@durham.gov.uk
- Durham County Council Contact Centre: 03000 260000
- Councillor: Reports forwarded to Members Support

7. Risk Management Strategy

This strategy has been developed in accordance with Recommendations 5 and 14, from 'Well-managed Highway Infrastructure – A Code of Practice'.

- RECOMMENDATION 5 – CONSISTENCY WITH OTHER AUTHORITIES

  To ensure that users' reasonable expectations for consistency are taken into account, the approach of other local and strategic highway and transport authorities, especially those with integrated or adjoining networks, should be considered when developing highway infrastructure maintenance policies.

- RECOMMENDATION 14 – RISK MANAGEMENT

  The management of current and future risks associated with assets should be embedded within the approach of asset management. Strategic, tactical and operational risks should be included as should appropriate mitigation measures.

Corporate Context

DCC as highway authority, is required to manage a variety of risks at all levels within the organisation. The likelihood and consequences of these risks are used to inform and support our approach to asset management, and inform key decisions on the following:

- Maintenance hierarchies
- Inspection frequency
- Level of service
- Standard of service
- Performance
- Investment decisions
- Capital works programmes

Risks are defined as an uncertain event which, should they occur, will have an effect on the desired performance of an asset, or series of assets. They consist of a combination of the likelihood of a perceived threat or opportunity occurring, and the magnitude of the impact it has on an asset.

- **Threat** – an uncertain event that will have a negative impact
- **Opportunity** – an uncertain event that could have a positive impact

Safety is the main priority when managing the highway network. However, there are a wide range of other risks that are considered critical these include:

- Reputation
- Asset loss or damage
- Service reduction or failure
- Operational
- Environmental
- Financial
- Contractual

Our approach to risk management

DCC's approach to risk is managed at several levels, using a consistent risk framework, that enables the comparison of risks across all service areas.

- **Corporate** – High level risks that effect the whole authority. Such as corporate reputation, civil defence, emergencies, business continuity, health and safety, political, legal and financial risk
- **Strategic** – Risks affecting the management of the highways infrastructure should be considered throughout, at both strategic and operational levels
- **Operational** – Risk should also be managed when undertaking operational activities

Evaluating the risks

Risk assessment looks to determine the likelihood and consequence of an event occurring. The assessment of risks will allow us to identify the risks to be analysed in a systematic approach, to highlight which risks are the most severe, and which are unacceptably high.

Risk is described as **Risk = Likelihood x Consequence**

Likelihood is the chance of an event happening, such as the failure of an asset. It can be measured objectively, subjectively, qualitatively or quantitatively. Generally it is described in mathematical terms, such as frequency or probability.

Consequence is the outcome of an event, such as increased journey times. They can have either positive or negative impacts and are expressed qualitatively or quantitatively.

8. Lifecycle Plans

This strategy has been developed in accordance with Recommendation 29, from 'Well-managed Highway Infrastructure – A Code of Practice'.

- RECOMMENDATION 29 – LIFECYCLE PLANS

  Lifecycle planning principles should be used to review the level of funding, support investment decisions and substantiate the need for appropriate and sustainable long-term investment.

National Guidance

To assist Local Highway authorities with lifecycle planning of their assets, Highways Maintenance Efficiency Programme (HMEP) have developed toolkits to provide planning level decision support, they include:

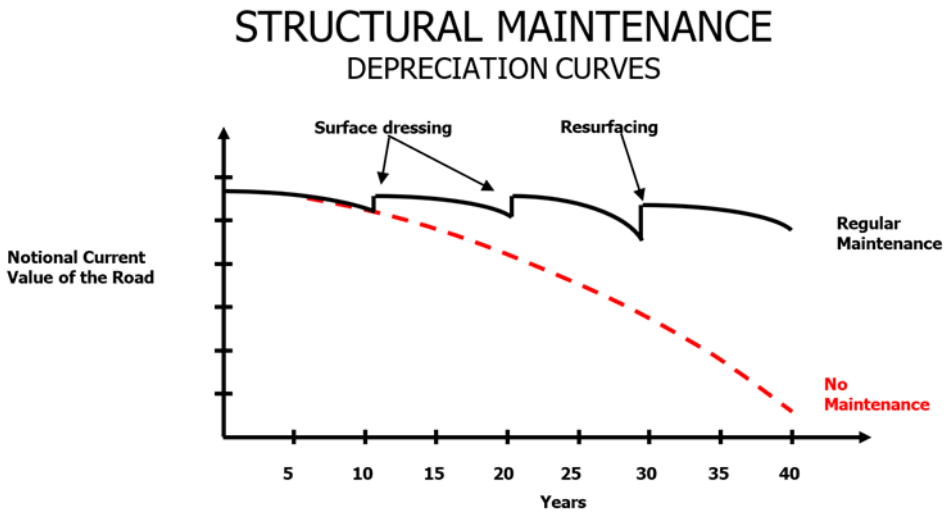
- Assessing the impact of different levels of funding on asset performance and asset maintenance needs
- Investigating current and future levels of funding required to sustain or improve the condition or performance of the asset
- Identifying the level of funding required to minimise whole life costs
- Allocating resources to assets and treatments that provide the best whole life costs

The main focus of providing a good asset management system is to enable accurate condition data to ensure the right treatment is delivered at the right time. By doing so we will provide a safe and satisfactory highway network managed effectively and efficiently.

Lifecycle Plans

The right treatment at the right time minimises whole life costs as it is less costly than letting the asset continue to deteriorate and undertaking a more extensive treatment at a later date. Further if the asset is in poor condition, then additional costs will be incurred in terms of reactive maintenance, routine maintenance, and public liability claims.

The diagram below shows the typical deterioration curve of a carriageway surface if no programmed maintenance is carried out compared to the right programmed maintenance treatment at the right time. This intervention arrests the decline of the surface and extends the life and reduces the subsequent whole life cost.



9. Competency and Training Framework

This has been developed in accordance with Recommendations 15, from 'Well-managed Highway Infrastructure – A Code of Practice'.

- RECOMMENDATION 15 – COMPETENCIES AND TRAINING

  The appropriate competency required for asset management should be identified, and training should be provided where necessary.

Strategic and National Context

Research undertaken to date has revealed a variety of approaches used by different highway authorities to manage the skills, competences and training requirements of their staff. In response to this, the UK Roads Liaison Group Asset Management Board has produced a framework, aligned to 'Well-managed Highway Infrastructure – A Code of Practice', and the international standard ISO 55001.

The framework has been developed for highway authority roles to include:

- Competence requirements for highway authorities
- Definition of generic highway roles/responsibilities
- Competence required for each generic role/responsibility
- A template to document and track competences

Using a consistent approach throughout all highway authorities, with defined roles, competences and competence levels, will help identify the training needs or experience required to enhance officers' capabilities.

Details of the Competency Framework

A competent person is defined as follows:

- Someone is competent where they have sufficient training and experience or knowledge and other qualities to properly undertake the roles referred to in this framework
- Someone who has the ability, appropriate training, knowledge and experience to carryout the work being undertaken against defined standards, assessed consistently, over time, in the workplace

The table 1 below lists the competency levels applied to this framework, detailing the expected levels of knowledge and responsibility for each role.

Table 1: Competency Level Descriptions

Professional Level	**Basic asset management awareness** [highway safety inspectors, claims officer and lead member]	**Foundation Practitioner** [junior technician/engineer]	**Practitioner** [senior engineer/team leader/manager]	**Senior Manager** [reports to the senior leader]	**Senior Leader** [responsible overall for the delivery of asset management]
Level Description	An individual who has basic asset management awareness and has limited professional and technical skills. They would typically be someone who has a conceptual understanding of asset management. They may provide indirect input into the development of asset management policies and procedures.	A foundation practitioner is typically someone who is working towards attaining the necessary competencies and experience over time, both in terms of gaining and applying professional and technical skills of asset management.	A practitioner will typically be someone who has a high level of sector-specific knowledge and skills and for this reason may work independently or be the manager of a small team.	A senior manager will typically be in a leadership role and may have management of substantial resources, both financial and personnel. A senior manager would typically be a key decision maker with some knowledge of the implementation of asset management principles and practices. This role would be a key advocate for the advancement of asset management principles and practices.	A senior leader will typically be in a head of service or director role with significant budgetary responsibility for highway asset management, policy development and/or operational delivery and associated staff.

Based on these competency level descriptions, each role requires the requisite level of knowledge, skills and responsibilities. Table 2 below shows the associated role competency descriptions for each competence level within the team, along with the relevant skills and knowledge assigned to each role.

Table 2: Role Descriptions

Professional Level	HMEP E-learning Toolkit	HMEP Pothole Review	Transport Resilience Review	HMEP Highway Drainage Assets	Inspection Training	Codes of Practice, Well-managed Highway Infrastructure	General HAMP Presentation	Development of lifecycle planning	Important of HAMP to senior decision makers	Development of Asset Management Policy	Development of Investment and Delivery Strategy	Development of appropriate Frameworks	Completion of annual highway self-assessment questionnaire	Data and inventory management / analysis	Customer engagement and consultation strategies	Development of future works programmes for all highway assets	Understanding of the principles of risk based approach	Application of the risk based approach and completion of lessons learnt	Benchmarking	Application of risk management	Fostering of collaborative working and consistency with other authorities	Delivering best value and efficiencies through best practice procurement of highway services
Basic asset management awareness [highway safety inspectors, claims officer and lead member]																						
Foundation Practitioner [junior technician/engineer]																						
Practitioner [senior engineer/team leader/manager]																						
Senior Manager [reports to the senior leader]																						
Senior Leader [responsible overall for the delivery of asset management]																						

Competency Assessment

The competency of each officer will be assessed against table 2, and gap analysis will be utilised to identify training needs. This will be documented in a training matrix and can be used to develop individual development plans if required.

Training needs will be reviewed annually as part of the professional development review process, to ensure an individual's competency is monitored.