

# **HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT STRATEGY**

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HIAMS 2017

## Introduction

The Council recognises the important role the highway network plays and how an effectively maintained and managed network contributes to the achievement of corporate goals. We understand that adoption of asset management principles is the basis to delivering clarity around standards and levels of service, and to make best use of available resources.

This Highway Infrastructure Asset Management Strategy (HIAMS) sets out how the Council will manage the highway network taking into consideration stakeholders aspirations, customer expectations, network hierarchy, levels of use, network condition and environmental impact within the available resources.

The Strategy will be used to inform highway maintenance schemes; selection of schemes will be driven predominantly by condition and hierarchy data however, challenge from local members is also vital to ensure that local priorities are incorporated into delivery plans.

Formalising a strategic approach to maintaining highway assets is therefore essential to inform priorities in the planning process. The approach will be used to support continuous improvement of highway asset management, in addition to development of processes, to support budget and lifecycle management planning.

The Strategy covers all highway maintenance works funded by Revenue and Capital streams. It does not directly relate to Capital improvement schemes but where cross over exist, these will be identified.

## Asset Management Framework

The Council has been applying the principles of a formalised approach to highway asset management for a number of years. The Highway Infrastructure Asset Management Strategy (HIAMS), together with the Highway Infrastructure Asset Management Policy (HIAMP), sit within the wider highway asset management framework and are key strategic documents related to the delivery of the Council's highway services. They form links with the Council's vision, Wirral Council Plan – A 2020 Vision (2015 – 2020), focused on Wirral, its people, businesses and the environment.

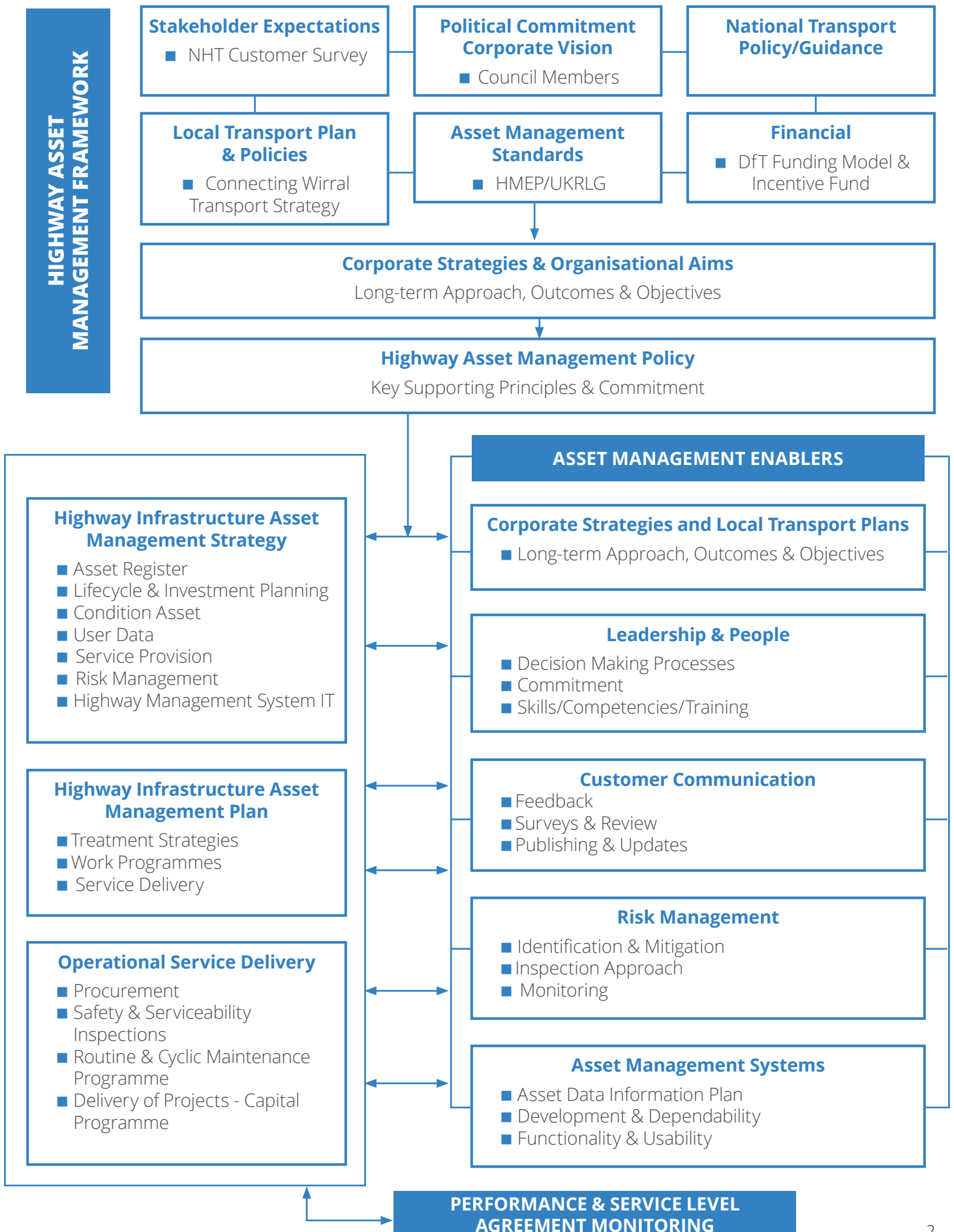
The Highway Asset Management Strategy documents that were presented to Cabinet in March 2012 and the new Street Lighting Policy and Strategy documents (October 2014) have previously supported Council priorities and key policy documents. Much has been achieved since the initial HAMP document, enabling the Council to continue to provide a safe and efficient highway infrastructure which remains among the highest performing in the country.

The Council has continued to review the approach to the highway asset management framework with the aid of the Highways Maintenance Efficiency Programme (HMEP) guidance and training in addition to the new Code of Practice 'Well-managed Highway Infrastructure' (October 2016) which replaces 'Well-maintained Highways, Management of Highway Structures and Well-lit Highways'.

The new Code is designed to promote the adoption of an integrated asset management approach to highway infrastructure based on the establishment of local levels of service through risk-based assessment. It also includes guidance on some additional topics.

The Code provides a period of up to two years for highway authorities to make the transition to the new approach however, we will continually monitor our approach and our asset management framework will evolve accordingly even after this time.

The HIAMS is instrumental in realising the Council's objectives and will inform priorities in the planning and delivery processes and therefore, support continual improvement in the management of the highway asset.



## **Strategic Approach**

As the highway infrastructure forms the largest and most valuable public asset within the Council's control, its management and maintenance needs to be undertaken in an organised, efficient manner. The effective management of these diverse and complex assets can only be addressed within a strategic framework that balances the demands placed upon it with the reality of the financial situation.

The aim of the HIAMS is to develop a lifecycle approach to the task of managing these assets. A preventative rather than re-active maintenance regime targeting areas in need of intervention at the optimum time will allow us to maintain highway assets to an agreed standard. Understanding how long specific treatments last, the relative cost of these treatments and the levels of service developed are essential pre-requisites to good asset management.

## **Stakeholders' Needs**

The Council, as highway authority, is the custodian of the borough's highway assets. In adopting an asset management approach we will ensure that the network meets the needs and expectations of our stakeholders as much as possible within the constraints we face. It is therefore, fundamental that we listen to and communicate with all stakeholders on a regular basis using the most appropriate media.

## **Highway Network**

To support a clear strategic approach we have identified the need to review our current highway network hierarchy to reflect the new Code. The revised hierarchy will also be divided into sub-sets to ensure that it reflects stakeholder expectations, levels of use and strategic importance; it will be used to define inspection frequencies, to support an assessment of risk, to reflect network condition and to prioritise treatments.

The need to develop a strategic approach to the 'Resilient Network' has also been identified. Resources are currently focused on the Winter Service Plan, i.e. gritting and snow clearance, which is currently under review. However, in July 2014 the Department for Transport published the 'Transport Resilience Review – A review of the resilience of the transport network to extreme weather events'. This recommended that highway authorities develop a Resilient Network in order to maintain economic activity and access to key services during severe weather events. The new Code extends the function of the Resilient Network to cover all disruptive events, not just severe weather.

## **Data Management**

Understanding our network is crucial to the delivery of strategic asset management and this begins with an inventory of the key assets. We currently hold a substantial amount of inventory data on these key assets: carriageways, footways, cycleways, structures, street lighting, traffic signals and drainage. However, there are some gaps in assets such as line markings, bollards, guard rail and street signage. In order to improve the quality of data we hold we will undertake a gap analysis to facilitate updating the asset registers we have.

The computer systems and databases we use to hold our asset registers and asset information are personalised disparate systems and although comprehensive, some are due to lose maintenance support in the near future. Where these inadequacies are identified we will take a business case approach to ensure financial investment will provide the appropriate resolution.

Work will be ongoing in reviewing our inventory and consolidating our asset register. A procedure will be developed to clearly identify how we specify what we record, how we collect and update a register, where and in what form the data will be held, who will have ownership, and who will have access.

### Condition Assessment

Monitoring the condition of the assets is a crucial element of asset management in order to demonstrate the levels of service being delivered, to identify trends in improvement or deterioration, to identify priorities for focussing available resources, to monitor the effect of treatment strategies and to provide the base data required for lifecycle monitoring.

We undertake comprehensive annual surveys on the carriageway asset and have recently undertaken surveys on other key assets to collect condition data which will support our lifecycle monitoring.

### Lifecycle Planning

The development of lifecycle methodology will ultimately enable us to better manage highway maintenance activities. This involves understanding asset condition and deterioration, and the improved qualities of the asset following treatments which will deliver the required level of service at minimum cost. We need to complete these models for all key assets before rolling the process out to secondary assets.

Initially, the Council will use the HMEP Lifecycle Planning Toolkits for carriageways, footways and other key assets. The analyses will support treatment strategies and decisions regarding the distribution of budgets. They will not be used to identify specific schemes or programmes of work but will act as tools for testing and managing treatment strategies. In future, budgets must be allocated to the right schemes for the right reasons to minimise whole-life costs.

### Levels of Service

A level of service is a way of defining the standard of service that is provided or required for each asset based on its location and usage. It is a direct link to the Council's corporate aims and objectives, plus other Council strategy documents. At a minimum level, they must satisfy the Council's statutory duties. They should also take account of the management and mitigation of risk both to the service user and the Council.

It is also important to consider local views and therefore, the findings from the local residents' annual survey plus the National Highways and Transportation Survey (NHT) will be considered.

### Planning and Design

Good asset management begins at the planning and design phase when decisions can be made that affect the amount of maintenance required, the ease with which the maintenance crews can do the work and the whole life costs of the asset. Asset management principles will be followed from the planning stage onwards.

The highway maintenance service is provided by service partners. These are experienced practitioners serving numerous clients in the UK and therefore, should be able to share their experience of best practice. The Council will regularly request these partners to share their knowledge and experience and will feed this into the planning, design and lifecycle processes for highway assets.

### Risk Management

At a very basic level, the asset management approach can be considered as an exercise in managing risk. Risk is perceived through a variety of different perspectives ranging from the broad strategic and corporate risks, such as the loss of the asset, to a significant change in the corporate budget, to those risks that may affect discrete processes or assets, such as the risk that an individual defect might present to stakeholders.

Risk is present throughout asset management because of the extensive choices, often made without full understanding of the asset, how it will perform and the consequences of failure, combined with a variety of uncertain external factors influencing the performance of the network, including weather, changes in budget provision and political direction plus the demand from other service areas.

It is not possible to eliminate all risk from asset management. This means that while some mitigation is possible, the usual approach will be to understand the degree of risk and its possible consequences and then balance this against the cost of reducing or eliminating the risk and the benefits of accommodating the risk.

More specific risks associated with the maintenance of highway assets will be assessed against an understanding of the strategic importance of the asset or assets concerned. Fundamental to this will be the development of our local road hierarchy and our Resilient Network, both of which will reflect strategic significance. Risks will be rated by considering the likelihood of the risk occurring, against the severity of its consequences but then further factored by the strategic significance of the asset.

### **Treatment Strategy**

As part of the highway asset management framework, highway assets have been divided into individual asset groups.

A fundamental approach in the asset management process is to understand the spending needs of each of these groups, component and maintenance activity, against performance, aims and objectives. Essential to this process is a need to understand the influence of budget decisions on customer satisfaction and delivery of corporate priorities. Furthermore, the impact that investing on one asset may have on the overall performance of other assets, as well as the whole asset is examined.

This approach allows for the available budgets to be split at a strategic level and successful implementation relies on a good understanding of the asset, its current and future performance, expenditure, customer feedback and the difference of various service levels.

The current condition of the network reflects the good level of preventative treatment and renewals undertaken over the last ten to twenty years. However, to maximise the serviceable life of assets and therefore reduce the frequency of asset renewals, we need to explore different treatment strategies to some of those previously applied and we will do this by focussing on preventative treatments.

### **Sustainable Asset Management**

One of the aims of good asset management is to improve co-ordination between highway improvement and highway maintenance schemes. Taking into account the cost and implications of maintaining the asset at the design stage will ensure that whole life costs of schemes are optimised. Acknowledging sustainable asset management will raise awareness of this issue by ensuring that new infrastructures adopt the most appropriate design option and the most appropriate materials.

Moving forward, the Council will aim to implement a process for incorporating new works into the existing highway network. The process would advocate lifecycle management values to ensure that asset management principles are considered and agreed as part of scheme implementation.

The purpose would be to ensure that all Capital and Revenue investment options are considered and that new works should only require maintenance in line with expected lifecycles.

Additionally, maintenance programmes, when appropriately planned, will contribute to environmental sustainability by reducing waste and minimising whole life costs.

### Best Practice

By looking out for articles, research and other means of exploring good practice, and in analysing actions taken at national, regional and local levels, the Council is committed to learning from best practice outcomes in order to embed a continuous improvement approach.

Conversely, the Council is willing to share its finding with others. The network links the Council has with each of the City Region local authorities will look to these relationships as far as maximising the sharing of good practice. The recent Devolution Agreement and the emerging development of the Key Route Network (KRN) across the City Region will further contribute to this process.

Similarly, the Council has network links with Cheshire West and Chester Council sharing actual land boundaries across the highway network. A working relationship with colleagues will be further developed to maximise the sharing of best practice on this cross boundary part of the network.

### Next Steps

This HIAMS has been prepared to identify how the priorities embedded within the 'Wirral Council Plan: A 2020 Vision' and the HIAMP can be used to influence the way in which we manage highway assets. Delivery of the core concepts identified within this Strategy will require the development of a number of accompanying documents as outlined below:

**Develop a Communications Plan** – capture the lessons learnt through individual consultation exercises and use them to influence service improvements;

**Develop a Performance Management Framework** – link long-term investment to defined service levels, targets and desired outcomes;

**Develop an Asset Data Information Plan** – ensure that information is being collected in an auditable format that supports the implementation of the Performance Management Framework and Communications Strategy;

**Develop a Risk Based Approach to Highway Service Delivery** – for the highway network, structures and street lighting detail how the HIAMS will be implemented; and,

**Review the inspection and reactive maintenance procedure** – to reflect the new Code of Practice risk based approach and replace with a Highway Maintenance Framework.

### Performance Monitoring and Review Process

Performance will be monitored against this Strategy to ascertain where progress is being made and to identify areas that need greater focus; the Strategy will be reviewed annually with minor amendments as required. However, a formal review will be undertaken every 3/5 years, in-line with the review of the Wirral Council Plan, to ensure that highway assets are managed in the most effective and efficient manner to ensure that Wirral's highway infrastructure is able to maximise improvements. However, if there are significant changes in national policy or guidance that affects management of the highway, the review will be brought forward.

These reviews and subsequent development of our highway asset management approach will allow us to seek ways of working more efficiently.

