

HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT STRATEGY



Stockton-on-Tees
BOROUGH COUNCIL

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Highway Infrastructure Asset Management Strategy

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Introduction

The highway infrastructure asset is the most valuable asset owned by the Council and vital for local economic prosperity and the residents' quality of life. The significant levels of funding necessary for the management of this asset are under continuous scrutiny, with increasing pressure from central government and the public for transparency, accountability and more efficient use of the limited resources available.

The management of such a valuable and vital asset needs to be undertaken in a systematic and considered manner which takes account of the Council's objectives, service user's expectations, maintenance needs and the available financial resources. This then needs to be balanced against the risk of service failure and the likely future demand on the Council's finances. The effective management of these diverse and complex issues can only be adequately addressed within a strategic framework that balances the demands and aspirations with the reality of the current and foreseeable financial situation. The purpose of the Highway Infrastructure Asset Management Strategy is to outline how the authority will approach the task of managing our most valuable and important public infrastructure.

Asset management of the highway infrastructure is accepted as a key factor in enabling the Council to deliver its services and corporate objectives in an efficient and effective manner. It enables the management of highway infrastructure assets through long-term planning, ensuring that standards are defined and achievable for available budgets. It also supports the case for funding and ensures better communication with customers and stakeholders, giving them a greater understanding of the contribution highway infrastructure assets make to economic growth and the needs of the local community.

In terms of responsibility, it should be noted that the Council are liable for maintaining all highway infrastructure assets within the Borough boundary with the exception of those maintained by Highways England. The Department for Transport (DfT) is the highway authority responsible for those assets via their agents Aone+ (for A66T) and Autolink Concessionaires (A19) Limited (for A19T and part of A66T).

Throughout this document the term "Highway" refers to all infrastructure assets within the highway boundary which have been officially adopted by the Council, e.g. roads, footways, bridges, street lighting, traffic signals, street furniture, public rights of way and public open spaces. Assets that have not been adopted, or are located on private streets, are not maintainable at public expense and are not included within the Highway Infrastructure Asset Management Strategy.

1.0 The Need for Asset Management

1.1 Background

There are a number of published definitions that describe the key elements of asset management. This definition offered in the Highways Management Efficiency Programme (HMEP) document *Highway Infrastructure Asset Management Guidance* offers an interpretation of asset management for highway infrastructure as:

“A systematic approach to meeting the strategic need for the management and maintenance of highway infrastructure assets through long-term planning and optimal allocation of resources in order to manage risk and meet the performance requirements of the authority in the most efficient and sustainable manner”.

Asset management has been widely accepted by central and local government as a means to deliver a more efficient and effective approach to management of the highway infrastructure assets through long-term planning. Such an approach enables more efficient and effective use of resources, while fulfilling legal obligations, delivering stakeholder needs and safeguarding the engineering integrity of the network.

The Council recognise the importance of a strong link between its highway infrastructure asset management policy and strategy and their alignment to its corporate objectives. Efficient and effectively managed assets play a significant role in achieving corporate goals and meeting stakeholder's expectations. The sound use of asset management principles offers potential benefits and the authority is in the process of developing asset management plans to better reflect this approach.

The Department for Transport has encouraged authorities to embrace and adopt good practice in respect to efficiencies and asset management for a number of years and has now introduced an incentive element into its formula for capital funding to local authorities. The amount of incentive funding awarded to each local highway authority will be based on their score in a self-assessment questionnaire and will be relative to the amount received through the needs-based funding formula.

In 2015/16, all authorities received their full share of the incentive fund but from 2016/17 only those authorities who can demonstrate their commitment to asset management will receive their full share, whilst authorities who cannot will only receive 90% of their share. Those authorities who continue to fail to adopt good asset management practices will find their share of the incentive funding decreasing markedly in each subsequent year until by 2020/21 they will not receive any monies from the incentive fund.

1.2 Aims and Objectives

The Council's vision is of a Borough that is more confident, more vibrant and more successful than ever before. A place where people prosper and grow, where they feel happy, safe and healthy. A place where people can see that our drive, integrity and imagination have delivered genuine improvements and exceptional value for money. A place that every single one of us is proud of.

All the key themes in the Council's Plan, *Big Plans, Bright Future* are dependent, to a greater or lesser extent, on an effective highway infrastructure and efficient asset management of this infrastructure is fundamental in assisting the delivery of the Council's ambitions. In relation to the key themes, highway infrastructure asset management will support with the:

- Delivery of key infrastructure including enhancing the transport network;
- Delivery of vibrant and economically successful town centres;
- Further regeneration of the Borough's housing;
- Improvement of economic prosperity for residents across the Borough;
- Improvement of economic prosperity for new and existing businesses across the Borough;
- Creation of a culture that encourages and sustains enterprise and start-up businesses;
- Development and delivery of the Council's Green Vision;
- Improving resilience to extreme weather events;
- Optimisation of the use of Council assets;
- Delivery of Customer Service Excellence;
- Development and delivery of a sustainable events programme that contributes to local social and economic improvements; and
- Continued development of a strong and vibrant voluntary, community and social enterprise sector.

The provision, maintenance and management of public infrastructure such as highways, bridges, street lighting, public rights of way and public open spaces is vital to the delivery of the Council's vision. The adoption of an effective asset management framework will assist in achieving its objectives by providing:

- A strategic and systematic approach to managing highway infrastructure assets over the long term;
- A clear understanding of the extent and condition of the highway infrastructure;
- A clear methodology for linking goals, aspirations and objectives with levels of service;
- A better ability to predict the levels of funding required in delivering desired levels of service and the potential impact of funding constraints;
- A better understanding of risk and how it can be mitigated;
- A consistency of approach which assists in managing the expectations and experience of stakeholders; and
- The ability to incorporate good practice and lessons learned in one service area across the whole of the organisation.

The core elements of this approach are set out in Section 2 of this document and encompass:

- Inventory and Gap Analysis;
- Performance and Levels of Service;
- Lifecycle Planning;
- Finance;
- Risk Management; and
- Communications, Performance Monitoring and Collaboration.

2.0 The Approach to Asset Management

2.1 Inventory and Gap Analysis

Effective asset management planning requires knowledge of the assets together with their condition and use. This entails the collection and maintenance of asset data that can assist in a consistent approach to decision making, reporting and monitoring.

This data needs to be accurate, consistent, up-to-date, useful and well-maintained. Without this essential information it will not be possible to monitor current condition, demonstrate current or predict future performance and realise the potential benefits that improving these assets could achieve. In addition, it will not be possible to accurately determine the value of highway assets as required by HM Treasury for Whole of Government Accounts (WGA) purposes.

The Council has a wide range of highway infrastructure assets and the available inventory and condition information of these assets varies in its extent, age, accuracy and how it is stored.

In order to maximise the effectiveness of our data management it is intended to carry out a gap analysis across all highway infrastructure asset groups to identify what information currently exists and what additional data is required to support the asset management process.

The gap analysis will look at the following elements:

- How the data supports the approach to asset management - identifying the need;
- Data quality, age, coverage and frequency of updating;
- Potential opportunities to share or re-use existing data to reduce duplication in data collection;
- Historic data and its appropriateness for future use;
- Removal of redundant or out-of-date data;
- Statutory requirements;
- Cost of data collection, storage and day-to-day management, including the need for any additional resources and software, licences and IT requirements;
- Is the data needed for lifecycle planning; and
- Value of data and/or the risk of not collecting it.

Following the analysis, any gaps identified will be prioritised and, if necessary, a case made for additional funding.

Regular reviews of data requirements and strategy will be undertaken to ensure that the data held continues to support highway infrastructure asset management.

2.2 Performance and Levels of Service

As part of effectively managing the highway network, it is necessary to assess how the processes and procedures in place are meeting the corporate goals and objectives of the Council.

Levels of Service broadly describe the standard of service that is provided or required. These levels link directly back to the Council's corporate aims and objectives, departmental and service plans and other strategic documents. They must also take note of statutory duties and the management and mitigation of risk both to stakeholders and the authority.

Levels of service are then broken down into more concise standards and targets which can be measured and used to monitor the performance of the authority and provide guidance in the decision making process necessary for the management of the asset.

In line with HMEP guidance and our corporate vision, we have developed levels of service in support of a highways infrastructure network that:

- Is safe and serviceable in relation to its use;
- Provides accessibility to and from communities for people, goods and services;
- Enhances the sense of place within our communities and promotes active and healthy lifestyles;
- Promotes the development and maintenance of sustainable communities;
- Contributes to wider economic growth;
- Contributes to wider environmental management;
- Makes effective and efficient use of our local resources; and
- Is appropriately maintained to conserve its value and integrity for current and future service users whilst delivering value for money.

For each level of service, a number of performance measures and targets are identified which are then combined to give an overall level of performance that is reported as minimum, fair, good or excellent. When setting the individual performance measures we take into account nationally recognised performance indicators, internal management information, budgetary constraints and results from public opinion surveys. In addition, the performance measures can be weighted to emphasise their importance and contribution to the level of service. The Council will strive to achieve an overall Excellent level of service for the highway infrastructure, subject to sufficient funding being made available.

When determining levels of service it is important to recognise that the aspirations of customers and stakeholders are likely to focus on aesthetics and safety related condition of the highway. Whilst these elements are relevant, the asset manager must also take into account the engineering needs based on detailed, and often complex, condition surveys coupled with knowledge and experience of how the assets behave over time.

In selecting performance measures, their future management has been considered with the aim being to maximise the use of existing data and minimise the need for collection of additional data. Measures have been chosen that demonstrate key aspects of performance, have targets set that reflect the level of performance that needs to be achieved and are not excessive in number. In developing targets, consideration is given to past and current performance, what is achievable and at what cost in the short, medium and long term.

The performance measures and targets will be regularly reviewed to ensure they continue to be appropriate and achievable.

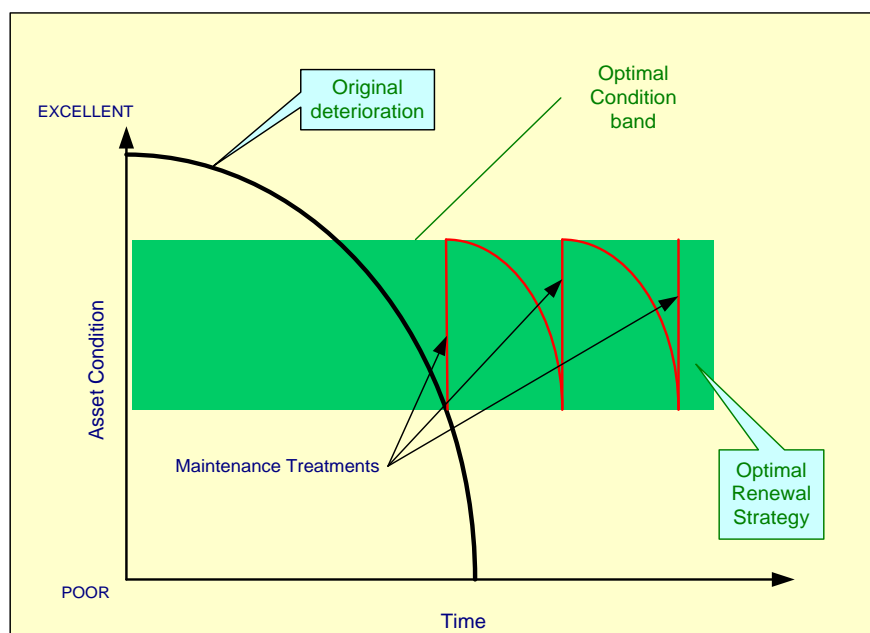
2.3 Lifecycle Planning

Lifecycle planning is a technique which enables links to be made between a particular asset or groups of assets, levels of service, the current condition, future maintenance needs and future funding for the asset. Its objectives are to:

- Identify long-term investment for highway infrastructure assets and develop an appropriate maintenance strategy;
- Predict future performance of highway infrastructure assets for different levels of investment and different maintenance strategies;
- Determine the level of investment required to achieve the required performance;
- Determine the performance that will be achieved for available funding and/or future investment;

- Support decision making, the case for investing in maintenance activities and demonstrate the impact of different funding scenarios; and
- Minimise costs over the lifecycle while maintaining the required performance.

At a detailed level, lifecycle plans can be developed for both determinate and indeterminate life assets, i.e. those with a fixed life or those whose life can be extended indefinitely given appropriate maintenance treatments at optimum intervals. Lifecycle plans can chart the journey from cradle to grave for determinate life assets or, for assets with a more indeterminate lifecycle, from creation through to maintenance refurbishments which restore the asset to an “as new” condition, whereupon the cycle is repeated. This is illustrated in the diagram below.



The authority will continue to develop lifecycle plans and use them to assist in the preparation of works programmes which make best use of the available funding in meeting long-term objectives and mitigating the risk of failure by allocating funds to where they will be most beneficial. However, in line with asset management principles, it must be noted that this type of allocation moves away from a “worst first” approach and targets works programmes at those parts of the highways infrastructure which present the greatest risk and where early treatment can achieve the most beneficial whole of life cost.

Such an approach will enable the delivery of a service which is as effective as possible, allows a clear and logical allocation of resources to those areas which will contribute most to the overall goals and objectives of the Council and allows an assessment to be made of the residual risk. Lifecycle plans will be updated regularly as new asset data becomes available.

As well as providing the benefits outlined above, lifecycle planning is an integral part of the financial process used for annually reporting the value of our highways infrastructure assets to HM Treasury for Whole of Government Accounts (WGA) purposes.

2.4 Finance

Capital and Revenue funding

Current funding arrangements for maintaining highway infrastructure assets have evolved over many years. Revenue budgets are primarily used for cyclic and reactive maintenance works, e.g. gully cleaning, pothole repairs, street cleansing with the main aim to keep the highway network safe and accessible for customers and stakeholders. Capital funding aligned with central government block funding is used for implementing planned maintenance works programmes for more major schemes, e.g. road reconstruction and resurfacing schemes.

It is important to understand what funding streams are likely to be available for maintaining the highway network over the coming years and essential that the Council is well placed to take advantage of grant and other funding opportunities as they arise both locally and nationally. Through improvements in asset management it will be easier to look at what parts of the asset should benefit from such funding opportunities and having accurate, accessible data will improve the likelihood of successful funding bids whilst ensuring that any additional funding received will be spent in the most cost effective manner.

As stated earlier, the Department for Transport has encouraged authorities to embrace and adopt good practice in respect to efficiencies and asset management for a number of years and has now introduced an incentive element into its formula for capital funding to local authorities. The amount of incentive funding awarded to each local highway authority will be based on their ability to demonstrate their commitment to, and implementation of, good asset management practice with those failing to embrace asset management penalised until by 2020/21 they will receive no monies at all from the incentive fund.

Given that both the revenue and capital funding streams for maintenance of highways assets are expected to be under severe pressure for the foreseeable future, it is essential that the authority manages its most valuable asset as efficiently as possible in order to gain best value for money. By adopting highways asset management principles and procedures, the authority will get the best out of its network whilst securing its share of additional funding from the central government.

Whole of Government Accounts (WGA)

The Chartered Institute of Public Finance and Accountancy (CIPFA) first published the *Code of Practice on Transport Infrastructure Assets* (the Transport Code) in 2010 following a review on behalf of HM Treasury and the Department for Transport to look into accounting, management and finance mechanisms for local authority transport infrastructure assets. Having considered the available approaches, the review concluded that an asset management based approach was the only one capable of fully supporting sound financial management decisions and effective long term stewardship of the asset base.

Since 2010, the Transport Code (revised in 2013) has been used to provide information for the Whole of Government Accounts (WGA) to HM Treasury and is based on the principle that the same data should be used for asset management, financial management and financial reporting, with the more effective management of assets being the key driver. The intention is that each local authority will develop a single set of financial management information about these assets and that this should be robust and consistent between authorities.

Traditionally, local authorities have recorded the value of their transport infrastructure assets at historical cost. CIPFA/LASAAC, the body responsible for the *Code of Practice on Local Authority Accounting in the United Kingdom* (the Accounting Code), considers that current value is a more appropriate measurement base for local authority assets and has therefore decided that the measurement requirements of the Transport Code will be adopted in the Accounting Code from 2016/17. Transport infrastructure assets will be measured on a depreciated replacement cost basis from that point.

In essence, this means that local authorities must adopt an asset management based approach to managing their highway infrastructure assets in order to provide accurate financial information necessary for annually reporting their value to HM Treasury for WGA purposes.

2.5 Risk Management

Local authorities are required to manage a variety of risks at strategic, tactical and operational levels. The likelihood and consequences of these risks can be used to inform and support their approach to highways infrastructure asset management and inform key decisions regarding performance, investment and implementation of works programmes.

The adoption of an asset management based approach will result in the incorporation of all aspects of management activity into one all-embracing, interconnected system so that conflicting demands, objectives, delivery targets, funding and statutory duties can be balanced against each other and risks identified and mitigated.

Successful implementation of infrastructure asset management requires a comprehensive understanding and assessment of the risks and consequences involved. A key element in this process is in identifying risks and this may be done by grouping the assets by type into a hierarchy which reflects their importance in service delivery terms relative to one another. This then enables the quantification and allocation of risk which is the basis of the asset management process and is fundamental in determining levels of service, setting the scope and frequency of inspections, the allocation of budgets, the development of works programmes and the management of critical assets.

When used in conjunction with robust lifecycle planning the asset management based approach enables the authority to respond to challenges as they occur, make accurate predictions of the funding required to sustain levels of service and to quantify the risk to the authority in terms of network safety, third party liability claims, reputation, service delivery and the loss of value and integrity of the infrastructure assets.

By adopting an asset management based approach the authority will look to understand, identify, evaluate and manage those risks associated with the highways infrastructure.

2.6 Communications, Performance Monitoring and Collaboration

Communications

Engaging with customers and stakeholders in order to understand their needs and expectations provides the authority with information which can assist in determining and reviewing the service provided by the highway infrastructure. The highway network is often of significant interest to the public and the media and this interest is likely to continue as there are high public expectations of how the network should function.

Providing good quality information to customers and stakeholders on what can be expected from the asset management approach is an important aspect of service to the public. A clear and effective approach to communications is an excellent means of providing information and responding to challenges relating to programmes of maintenance works, reporting performance and value for money. It also assists with customer requests, reports from multiple sources and allows interaction by the public in decisions that affect the highway network.

In line with its adoption of an asset management based approach to managing highway infrastructure, the Communications Strategy established by the authority assists in describing how the asset management approach is actively communicated through engagement with customers and stakeholders in setting requirements, making decisions and reporting performance.

Performance Monitoring

Performance monitoring will be used to oversee and review the asset management approach to managing the highways infrastructure. A well-developed system of performance monitoring will support the authority in reviewing progress in the delivery of our asset management strategy, performance requirements and works programmes.

The information and data arising from implementation and delivery of asset management will be used in identifying actions for continual improvement of the approach, including delivery of the overall service. Such an approach will enable relevant processes and practices to be assessed and improved where required and lessons learnt. This will form the basis for continuous improvement and will also enable critical issues regarding performance to be identified and improvement plans developed.

Performance reviews will be carried out at regular intervals in order to consider results, factors contributing to performance, and options for when performance requirements have not been met.

As a result of the reviews, it is likely that a number of improvements may be identified. These improvements will be formally documented in an improvement plan which will detail the expected outcomes of the plan, the specific actions to be taken, the owner, the resources needed to deliver them and timescales. This will ensure that focus is maintained on the outcome of the improvement and the ultimate benefit it may provide to the authority and its customers and stakeholders.

Any actions highlighted by the improvement plans will be prioritised and placed into timeframes that are realistic and affordable. In prioritising the actions, a balance between risks, costs, strategic priorities, levels of service and expected benefits will be considered.

A further tool in monitoring and improving the authority's performance is by benchmarking. This is the systematic process of collecting information and data to enable comparisons with the aim of improving performance, both absolutely and relatively to others. The process involves seeking out better practice in similar authorities that can then be integrated into our asset management approach.

The authority takes part in the National Highways and Transport (NHT) Public Satisfaction Survey which is a national public opinion survey in England to which many highway authorities subscribe. The survey measures performance across a number of highways related functions and is a powerful way for the authority to compare its performance against other authorities.

In addition to taking part in the NHT survey, the authority is a member of the NHT Customer, Quality and Cost (CQC) Efficiency Network which is a national benchmarking organisation that collaborates with authorities to measure efficiency, evaluates the likely impact of changes to practice and process, and provides a stimulus to realising cost savings by encouraging the adoption of the efficient practices of other authorities.

Collaboration

A key element in the asset management based approach to managing the highway infrastructure is collaboration which can aid in driving down costs and driving up efficiencies. Collaboration has been evidenced as one of the starting points to achieving savings around the delivery of highway maintenance services and one of the main areas where some of the biggest savings can be achieved.

HMEP have produced a number of toolkits, including the Collaborative Alliance Toolkit and the Shared Services Toolkit, aimed at local authorities to help advise on how their highway maintenance services and procurement might be delivered more efficiently. This can be achieved by working collaboratively with several other authorities to drive down costs through economies of scale by entering into frameworks to procure such services. The authority will study the guidance available and look to adopt those procedures and practices it believes will increase the efficiency of its highway maintenance services.

The new British Standard, BS11000: Collaborative Business Relationships, is based on the concept that companies working together can often achieve much more than they can alone. It sets out a comprehensive methodology of how to develop collaborative working with a whole range of stakeholders and the authority will examine the standard and the possibilities it offers.

3.0 Abbreviations

	Definition
CIPFA	Chartered Institute of Public Finance and Accountancy
CQC	Customer, Quality and Cost
DfT	Department for Transport
HMEP	Highways Maintenance Efficiency Programme
LASAAC	Local Authority (Scotland) Accounts Advisory Committee
NHT Public Satisfaction Survey	National Highways and Transport Public Satisfaction Survey
WGA	Whole of Government Accounts