



Working in partnership with  
**CAPITA**

# Part 4: Highway Asset Management Framework



## North Tyneside Council

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## Executive Summary

This framework document is Part 4 of North Tyneside Council's Highway Asset Management Plan (HAMP) and should be read in conjunction with it. The Council's HAMP is made up of four parts and aligns with the Council's Transport Strategy 2017 to 2032 which sets out the overall vision for transport in North Tyneside. The HAMP will be used to plan our highway maintenance activities during the same period as the Transport Strategy in order to get the best outcomes within the resources available.

In recent years the investment in highway infrastructure and its performance has been increasingly under the spotlight. Financial challenges and increased public demands and expectations have meant central government and the Department for Transport (DfT) have had to rethink the way local authorities manage their highway infrastructure.

At the direction of central government, the DfT commissioned and worked with the UK Roads Liaison Group (UKRLG) and the highway sector to review three national codes of practice: 'Well-maintained Highways', 'Management of Highway Structures' and 'Well-lit Highways'.

The aim was to enable local authorities to maintain their highways and infrastructure in the most effective and efficient way by strengthening guidance on what is known as 'risk based' highway maintenance. A risk based approach to asset management of highway infrastructure assets takes account of risks to an asset as well as its condition. The review resulted in the publication in October 2016 of 'Well-managed Highway Infrastructure, A Code of Practice'.

All local authorities must implement the code of practice's 36 recommendations across their highway service by October 2018. In North Tyneside a Well Managed Highway Board (WMHB) consisting of North Tyneside Council and Capita officers provides governance, monitors performance and directs progress towards the recommendations' implementation.

Throughout this document, reference is made at the start of each section to the relevant recommendation. A brief overview of the recommendation is also provided to assist the reader to understand better the requirements.

Our risk management strategy provides a structured and coherent approach to identifying, assessing and managing risk and is fundamental to informing our risk based approach. It was developed in conjunction with the following Tyne and Wear authorities; South Tyneside Council, Gateshead Council, Newcastle City Council and Sunderland City Council. This included consultation held in November 2017 with the respective insurance teams for each authority as well as a member of Zurich's insurance team.

It is important to note that this document also contains strategies which will set out the way we will manage and plan the long-term maintenance of our highway infrastructure assets.

The framework will be supported by a Highway Management Plan which will set out how our various specific programmes and technical procedures for day to day delivery of the highway maintenance service will be carried out.

## 1. An Introduction to the new Code of Practice, 'Well-managed Highway Infrastructure'

The new code of practice is set to profoundly change the future direction of the UK's highway maintenance sector through the application of good asset management principles and adoption of a risk based approach.

Adoption of the new code is expected to be tested in the Courts where local highway authorities seek to defend third party liability claims. Legal guidance suggests that Solicitors will be viewing local authorities' processes to determine their ability to defend third party claims. Implementation of the code is also likely to be of interest to the local media, residents and key stakeholders in understanding our response and risk management to significant events such as flooding and other causes of traffic disruption on our network. We will also be required to demonstrate to the DfT that we have fully implemented the codes into our working practices. It is widely anticipated that the implementation of the codes will form part of the highway self-assessment process for attaining capital funding.



This document illustrates our approach to risk management and will provide vital supporting evidence to demonstrate the implementation of the 36 recommendations in October 2018.

Asset management delivery in the UK highways sector has moved significantly over recent years from 'reactive', to 'time based', then to 'condition based' and now, through the implementation of the new code of practice, to a 'risk based approach'. A reactive approach to maintenance could be summed up as, "wait until the asset fails then fix everything: whereas a time-based approach – for example micro-asphalting a road every seven to 10 years – is about, "fix everything and even if it hasn't failed". A condition based approach takes the view, "still aim to fix everything and create lists of the unaffordable" but a risk based approach to asset management takes account of risks to an asset as well as its condition.

This document may be required to be disclosed in the event of a third party claim against North Tyneside Council therefore it is imperative that we work with our neighbouring local authorities to ensure consistency in the adoption of a risk based approach.

This Highway Asset Management Framework (HAMF) document is developed in line with 'Recommendation 2 – Asset Management Framework' of the code of practice. This recommendation states, 'An asset management framework should be developed and endorsed by senior decision makers.

## 2. Strategic Context

The HAMF supports and complements the strategic vision for North Tyneside which is contained in the Our North Tyneside Plan.

The Our North Tyneside Plan comprises three inter-related themes: Our People, Our Places and Our Economy. It includes a clear statement within the Our Places themes in relation to highway asset management as follows:

***“Our places will have an effective transport and physical infrastructure – including our roads, cycleways, pavements, street lighting, drainage and public transport”***

The North Tyneside Local Plan provides a framework for land use planning that supports making the Borough a sustainable, attractive and prosperous place to live and work. To support the Local Plan the borough requires an effective transport network with appropriate infrastructure to support new development and existing needs. The Plan supports significant job creation and new homes across the Borough for which highway maintenance activities will need to respond to.

The Council’s Transport Strategy 2017 to 2032 sets out the overall vision for transport in North Tyneside whilst the Highway Asset Management Plan (HAMP) 2017 – 2032 sets out how we plan our highway maintenance activities during the same period as the Transport Strategy to achieve the best outcomes within the resources available.

This document is Part 4 of the HAMP and sets out how we will manage and plan the operational maintenance of our highway infrastructure assets. The HAMF is designed to be flexible so it can accommodate changes in resources or priorities.

## 3. Document owner

The Highway Asset Manager is 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 reported in the HAMP Annual Information Report, published annually in October.

## 4. An Asset Management Framework for North Tyneside

The individual strategies contained within this HAMF are developed in line with recommendations documented in the code of practice, an explanation previously provided in section 2.

At the beginning of each strategy will be an introduction which illustrates which of the 36 recommendations the strategy or section relates to. Within the introduction will be a brief overview of the requirements of the recommendation.

## 5. Scope of our Asset Management Framework

This framework covers highway infrastructure assets in the ownership of North Tyneside Council. The infrastructure assets are:

- carriageways
- footways
- bridges and related structures.

The street lighting stock is managed through a long term PFI contract and the traffic signals are managed by Newcastle City Council so these assets are not included within the HAMF.

## 6. Information and Data Management Strategy

### Introduction

This strategy is developed in line with Recommendations 8, 9, 10, 11 and 17. These recommendations and a brief explanation is provided 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**

North Tyneside Council is committed to embedding the following principles in the management of its data as outlined in our Data Quality and Use of Information Policy. Management of data will be undertaken in accordance with the Environmental Information Regulations, the Freedom of Information Act and the General Data Protection Regulation (to be introduced in May 2018). The data will be:

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

The Technical Services Partnership will ensure that it:

- Collects and submits data accurately
- Has processes in place that produce accurate reliable data
- Has management oversight of data quality processes
- Challenges data before reporting
- Reports data with confidence
- Scrutinises data quality
- Assesses 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. The HAMP and its supporting HAMF relates to the Council's carriageways, footways and bridges/structures. North Tyneside Council considers data to be the most essential component of its Highway Asset Management Plan. Robust collection and management of data will allow us to:

- Provides the data required to support the Council's approach to asset management
- Describes the asset and its performance
- Provide the basis for informed decision making
- Facilitate communications with our stakeholders
- Inform the assessment and management of risk
- Supports the management of North Tyneside's statutory requirements
- Supports continuous improvement by the Council.

## **Asset Data**

Asset data comprises information on what physical highway infrastructure assets the Council, as highway authority for North Tyneside, is responsible for and includes number, location, performance, financial 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 data associated with the asset, including inventory, location and performance. An asset register has to be the 'single source of truth'. In their basic form, asset registers are databases for each individual asset type. They are used to support 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 called ExpertAssets (XA).

This specialist system is used to manage the highway asset and deliver vital information in a format which is easily understood to inform important decisions regarding service levels and delivery.

## **Collection of Inventory and Condition Data**

The purpose of highway data collection is two-fold. Firstly, to provide up to date accurate and reliable data to inform operational decisions. Secondly, to co-ordinate the required data gathering to ensure that funding decisions are informed by appropriate, current and reliable data.

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

| <b>Survey method</b>  | <b>Asset</b>         | <b>% of network</b>                             | <b>Length in km's</b> |
|---|----------------------|---|-----------------------|
| Scanner (specialist survey vehicle)                             | A, B & C Roads       | One direction<br>100%                           | 246                   |
| Annual Engineering Inspection (AEI)                             | All roads            | 100% (in the first year & 50% consequent years) | 945.6                 |
| Footway Network Survey (FNS)                                    | Footways             | 20%   | 478                   |
| Sideway-force Coefficient Routine Investigation Machine (SCRIM) | Classified Roads     | Both directions                                 | 246                   |
| Structures – general inspections                                | Bridges / structures | In accordance with ongoing programme            |                       |
| Structures – principal inspections                              | Bridges / structures | In accordance with ongoing programme            |                       |



## **Risk Based Approach to Data Collection**

Where the cost of data collection outweighs the benefit to the Council and/or may not be affordable, a risk based approach to the collection of data may be considered. In doing so, the Council will consider each asset group separately and consideration given to:

- Any historic concerns over existing performance
- How it supports statutory requirements
- The 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.

A risk based approach has been successfully implemented for the inspection of highway structures. This has increased the period between Principal Inspections for North Tyneside bridge stock using Highways England Interim Advice Note 171/12 Risk Based Principal Inspection Intervals. A programme of inspections is in place for the next 12 years.

## **Data Owner**

The Technical Partner's Highway Asset Manager is the 'data owner' and is responsible for annually reviewing the method of data collection, the percentage of the asset to be surveyed, procuring the surveys and managing the collected data.

Each year the Highway Asset Manager will document the proposed surveys and present them to the North Tyneside Council Client Manager for approval prior to the procurement of the surveys.

The data owner is responsible for the annual 'Road Condition' returns to the Department for Transport and ad hoc requests for condition data, such as the ALARM annual survey. In addition, the data owner is responsible for providing the condition data to inform the development of the HAMP Annual Information Report.

## **Disposing of Data**

The data owner is responsible for archiving or disposing of out-of-date data if applicable and only when the following scenarios have been considered:

- Will the data be required at a later date?
- Will it be disposed of completely?

It should be noted that whilst the data owner is responsible for disposing out-of-date data, the final decision remains the responsibility of North Tyneside Council. Any

decisions to be made will be taken following consultation with the Client and the disposal of data will follow the corporate data management strategy.

## **Corporate Data Management and Access to Information**

The North Tyneside Council 'Data Store' has been created to provide a central point for data that the Council and other public sector organisations hold. Where possible the data is published in accordance with UK Open Government Licence. This enables individuals to access and use data freely and flexibly, with only a few conditions.

The governance and access to information is documented on the Council's website in terms of Freedom of Information, Data Protection, Council Data and Information, Research and Statistics and Fees and Charges.

The Council recognises the need to gather and maintain its highway infrastructure data to fulfil the requirements of the Whole of Government Accounts (WGA), 'Road Condition Statistics', single data list return to the Department for Transport and implement the asset management principles adopted in its HAMP.

## **Statutory Data Returns**

### **Road Condition Statistics**

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

- Carriageway Work Done Survey
- Skidding Resistance Survey.

The Department for Communities and Local Government (DCLG) 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 Department for Communities and Local Government's website.

In recent years the timing of the launch of the survey for 'Road Statistics' has been September, however this is subject to change. Upon receipt of a central government department's request for data, the Client will forward onto the data owner, in this instance the Highway Asset Manager.

Upon receipt of the survey request from the Client, the Highway Asset Manager will populate the return and submit to the respective government department within the prescribed timeframe, informing the Client when completed.

## Road Length Statistics

The R199b road length consultation is a regular exercise completed by the DfT, with the support of the DCLG, to update records on road lengths that are used for central government funding and analytical purposes. The process forms part of the 'single data list' and is further underpinned by the Local Government Finance Act. Local authorities are required to respond to the consultation.

Upon receipt of a central government department's request for data, the Client will forward onto the data owner, in this instance the Highway Asset Manager. Upon receipt of the survey request from the Client, the Highway Asset Manager will populate the return and submit to the respective government department within the prescribed timeframe, informing the Client when completed.

## **Freedom of Information Act, 2000**

Requests for information are routed through the Council's Freedom of Information Officer who will offer guidance on what information should and should not be released. Reference should be made to the Council's guidance document which is available by visiting our website.

## **Data Protection Act, 1998**

Generally, highways data contains little personal data, however care will be taken to ensure that the provisions of the Act are not breached. Reference should be made to the Data Protection Act, <https://www.gov.uk/data-protection/the-data-protection-act>

## **Asset Valuation and Whole of Government Accounts (WGA)**

All highway authorities in England are required to account for the value of their highway assets in their end of year accounts in a prescribed manner and format. In order to comply with these requirements, the Council has to calculate and publish the depreciated replacement cost (DRC) and the gross replacement cost (GRC) associated with its highways asset.

DRC is a method of valuation that provides the current cost of replacing an asset with its modern equivalent asset. It encompasses deductions for all physical deterioration and all relevant forms of obsolescence, when a highway asset is no longer needed and may still be in a good working order, and optimisation, where the most effective use of an asset is made. GRC is based on the cost of constructing a modern equivalent new asset. The difference between the DRC and GRC is the amount of the value of the asset that has been consumed by the authority during its useful life.

The WGA is independently audited, which supports effective scrutiny by Parliament. This scrutiny has been exercised by the Public Accounts Committee who examine the accounts each year.

The production of information on a consistent basis by highway authorities, facilitates benchmarking and means that information can be aggregated to provide data at regional and national level on spending patterns and needs.

The comprehensive gathering of inventory and condition data and subsequent processing by the ExpertAssets software system means that North Tyneside Council can calculate the overall value of highway and infrastructure assets with some degree of accuracy.

The role of the data owner, in this instance the Highway Asset Manager, in the provision of data to the Client is paramount to the submission of the annual WGA return. The submission role for the WGA return is undertaken by North Tyneside Council's finance team.

## 7. Communication Strategy

### Introduction

This strategy is developed in line with Recommendation 4. This recommendation and a brief explanation is provided below.

- **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 Objectives

North Tyneside Council has agreed communications principles and standards, as set out in its Corporate Communications Guidelines for officers. In order to fulfil these it is essential to work with all partners to ensure that communications to external audiences (residents, partners, media, etc) and internal audiences (employees, and members) are managed in a professional manner, and achieve the standards required.

To do this it is expected that all communications in relation to council services:

- **Meets all legal requirements** - including the Local Government Act Protocol for Local Government Publicity, which also includes principles for communications around times of heightened sensitivity e.g. elections and referendums and a recommendation that councils consider how any publicity can help them in the elimination of discrimination, the advancement of equality and the fostering of good relations.
- **Is well co-ordinated** - partners should be involved and informed, sharing information with each other to ensure forward planning and consistent messaging. The Council's communications team, in partnership with its design/branding expertise based within Engie - will co-ordinate decisions on all aspects of communications and its corporate identity in liaison with senior officers and executive members of the local authority.
- **Proactive** - wherever possible communications should focus on informing in advance, rather than reacting to situations or issues after they arise.

- **Supports the Council's commitment to transparency in providing information about how public money is spent.** It is acknowledged that some information will be classified as commercial confidential and cannot be disclosed.
- **Engaging** - all communications should be two-way - not just sharing information but also providing opportunities for feedback. We must ensure that there are mechanisms in place to achieve this and to share feedback between partners where relevant e.g. feedback from Residents Surveys.
- **Consistent** - including delivering a consistent style/brand and message.
- **Accurate** - the Council must remain a trusted and reliable source of information, therefore accuracy is essential in all communications from the council and on behalf of the Council and its services.
- **Timely** - our staff, public and partner organisations should hear significant news from us first, where possible and practical.
- **Correct branding:** Respecting the needs of each partner by accurately meeting branding requirements.
- **Supports the Council's commitment to effective customer service**

The communications strategy will be supported by a rolling 12-month communications and engagement forward plan to support the delivery of the Our North Tyneside Plan, which sets the Council's priorities and guides the authority's policy and budget framework. This forward plan sets out the communications and engagement actions and milestones - including campaigns, themes and deadlines. Partners are members of the network and are encouraged to contribute proposed communications actions to that forward plan.

Following the principles of the Communications Strategy, each year we will develop a specific highways communication plan. This will aim to raise awareness and understanding of the Council's key objectives of the HAMP, as outlined in the Policy, Part 1:

1. To ensure the Council adheres to its duty of care under the Highways Act 1980
2. To ensure there is a commitment to highway asset management across all tiers of the Council's organisation
3. To ensure that highway asset management work supports the strategic policy direction for North Tyneside, set by the Elected Mayor and Cabinet
4. To actively engage with our elected members, residents, businesses and visitors so that services can be aligned with their priorities and expectations wherever possible
5. To increase our commitment to the improvement of footways across the borough
6. To gather and manage robust and accurate inventory and condition data so we fully understand our assets and invest in ICT to make sure our plans and decisions are right

7. To apply the principles of effective asset management to our highway network to develop forward works programmes over a number of years and to direct investment on the basis of prevention is better than cure
8. To ensure that all processes and procedures are in place to maximise funding opportunities and to manage risk appropriately and effectively
9. To manage and monitor performance so that we can continually improve
10. To ensure that all aspects of highway management are reported in accordance with the Council's established governance and performance systems

We will aim to make relevant stakeholders aware of the condition of our assets and the continual work that takes place to manage and improve the network.

## **Scope**

The communication plan will cover all areas within highways including the following:

- Carriageway resurfacing
- Footway resurfacing and reflagging
- Reactive repair safety defects
- Gully emptying and drainage
- Bridges / structures.

## **Communication with Stakeholders**

We aim to communicate a range of stakeholders, including:

- Residents of North Tyneside
- Council service users
- Employees of North Tyneside Council
- Elected Mayor and Cabinet
- Elected Members
- Members of staff in partner organisations (TUPE transfers and secondees) - where relevant
- Other partners (Note: These will change according to the communications issue, but will include businesses, other local and national government organisations, health, emergency services, etc)
- Media.

The communication plan will be set out in the annual Highway Maintenance Plan.

## **How we will communicate**

Effective communication will be a prerequisite to the success of the highways service. Communication will be based on the following principles:

- All communications will be clear, non-technical, open, and effective and encourage two-way dialogue.
- The tone of all communications will be consistent, honest, positive and accurate.
- All communications will have inherent flexibility, to enable development of all plans and messages.
- There will be a clear and consistent identity for all communications, to which people can relate and which will reinforce key messages.
- We will apply current best practice and make efficient use of national campaign material to support the Council's messages, placing them in a national context.
- All communications will be delivered on time and at minimum cost budget.
- Green techniques and methods for communication will be used.
- Communications will adhere to a defined approval and sign off protocol, which will avoid ambiguity, ensure clarity and permit appropriate flexibility.
- We will abide by the principles of the Council's Equality Impact Assessment (EIA) process, demonstrating that the Council gives due regard to people with protected characteristics identified under the Equality Act, 2010.
- We will abide by the principles of the Council's Health Impact Assessment tool to demonstrate that the Council carries out the duties defined in the Health and Social Care Act, 2012.
- Communications will be targeted, where possible, to ensure that messages reach intended recipients and that they are relevant to recipients and that communication is cost effective. Blanket communications will be used where resources and budgets permit.
- We will monitor, review and evaluate communications and adjust and amend where necessary.

### **A guide for elected members**

We are committed to providing an enhanced service for our elected members. We have produced an informative document to provide elected members with the answers to commonly asked questions of the highways team. This document is available to our elected members via a hard copy or electronically.

### **Feedback from our residents**

When we carry out planned improvement works on the highways and footways we will circulate a leaflet to those residents directly affected by the works. This will ask residents for their views on our performance and this valuable feedback will be used to improve the way we carry out planned improvement works in future financial years. The gathering of feedback following our improvement works is a year on year exercise which will enable us to benchmark our performance.

### **How our customers can contact us**

There are a number of ways the public can report road or footpath defects:

- Web: [www.northtyneside.gov.uk](http://www.northtyneside.gov.uk) via the 'Report it' section.



- Email: [highways@northtyneside.gov.uk](mailto:highways@northtyneside.gov.uk)
- Direct line: (0191) 643 8515.
- North Tyneside Council Contact Centre: 0345 2000 101
- Councillor: Report is forwarded to the team via the Members Enquiries System.

## 8. Performance Management Strategy

### Introduction

This strategy is developed in line with Recommendations 26 and 27. These recommendations and a brief explanation is provided below.

- **RECOMMENDATION 26 – PERFORMANCE MANAGEMENT FRAMEWORK**  
A performance management framework should be developed that is clear and accessible to stakeholders as appropriate and supports the asset management strategy.
- **RECOMMENDATION 27 – PERFORMANCE MONITORING**  
The performance of the Asset Management Framework should be monitored and reported. It should be reviewed regularly by senior decision makers and when appropriate, improvement actions should be taken.

### Objectives of the Technical Partnership and Corporate Context

Our performance is measured through the Technical Partnership, specifically against a suite of Strategic Partnership Objectives, Operational Performance Indicators (PIs) and Key Performance Indicators (KPIs). This performance is reviewed on a monthly basis through the submission of a range of metrics reviewed in the first instance by the relevant service area sub-group.

Each year an 'Annual Service Plan' (ASP) is produced and agreed by the Technical Partnership for the forthcoming year's objectives. To contribute to residents' priorities, the Technical Partnership will contribute to the following objectives:

- Ensure that North Tyneside is a great place to live, work and visit
- Reduce the borough's carbon footprint
- Respond effectively to emergency situations
- Build community resilience to respond to flooding, including introducing a network of community flood wardens.

Specifically we will deliver;

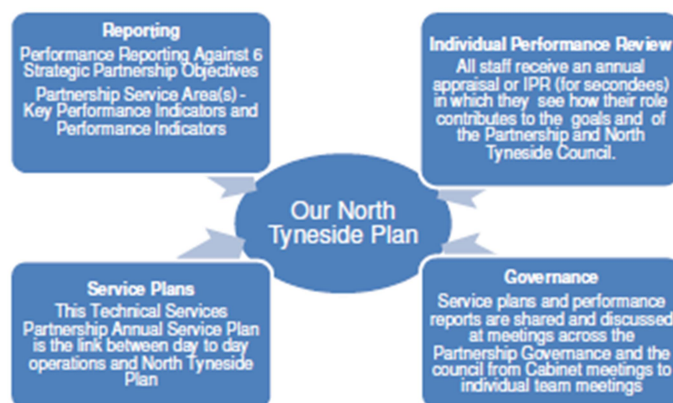
- Engineering and Highways
- Highway Asset Management

- Continuous service improvements.

The Partnership will achieve this by:

- Looking at all of the resources we currently commit to services, and the intent and effectiveness of the ways in which they are deployed
- Redesigning our services to meet the needs of our residents and communities
- Developing our strategic approach to property and council accommodation
- Building community resilience to respond to flooding, including introducing a network of community flood wardens working with businesses and residents to reduce our carbon footprint
- The following diagram illustrates how the core functions of the Partnership feed into the North Tyneside Plan, specifically; Reporting, Service Plans, Governance and Individual.
- North Tyneside Plan, specifically; Reporting, Service Plans, Governance and Individual Performance.

The following diagram illustrates how the core functions of the Partnership (including highway maintenance) feed into the North Tyneside Plan.



The table below illustrates the engineering Operational and Key Performance indicators we report against on a monthly basis.

| KPI ref. | Definition  | Expected    |     |
|----------|---|-------------|-----|
| ENG 2.1  | Roads and Pavements – Percentage of routine street care safety inspections carried out on time    | 97%         | 92% |
|          |   |             |     |
| ENG 2.2  | Roads and Pavements – Percentage of CAT 1 highway defects that were compliant within 24 hours     | 98%         | 95% |
|          |   |             |     |
| ENG 2.3  | Roads & Pavements – Percentage of Cat 2 Highways defects made compliant within 10 working days    | 98%         | 96% |
|          |   |             |     |
| ENG 2.4  | Parking - No. of PCNs correctly issued  | 99%         | 95% |
|          |   |             |     |
| ENG 2.5  | Roads and Pavements – Quality of maintenance repairs  | 90%         | 85% |
| ENG 1.1  | Roads and Pavements – Time taken to respond to permit request                                     | 99%         | 95% |
| ENG 1.2  | Roads and Pavements – Permit scheme compliance of Capita workforce.                               | 90%         | 85% |
| ENG 1.3  | Roads and Pavements – Residents Satisfaction  | 2% increase | N/A |
| ENG 1.4  | Roads and Pavements – Percentage of principal roads where maintenance should be considered.       | 5%          | N/A |
| ENG 1.5  | Roads and Pavements – Percentage of other classified roads where maintenance should be considered | 7%          | N/A |
| ENG 1.6  | Cycle Growth  | 7% increase | N/A |
| ENG 1.7  | Casualty reduction  | See PI      | N/A |
| ENG 1.8  | Land charges  | 95%         | 90% |

## 9. Risk Management Strategy

### Introduction

This strategy is developed in line with Recommendations 5 and 14. These recommendations and a brief explanation is provided below.

- **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 to asset management. Strategic, tactical and operational risks should be included as should appropriate mitigation measures.

### Corporate Context

The management of current and future risks associated with our highway assets is embedded within our approach to asset management. Corporate, strategic and operational risks will be included along with appropriate mitigation measures.

The approach and content of this strategy has been developed through joint working with Newcastle, South Tyneside, Sunderland and Gateshead Councils. The joint approach is intended to ensure consistency across neighbouring authorities within the North East region.

As the highway authority for North Tyneside, we are required to manage a variety of risks at all levels within our organisation. The likelihood and consequences of these risks can be used to inform and support the approach to asset management and inform key decisions on the following:

- Maintenance hierarchies
- All highway assets within the scope of the Highway Maintenance Plan
- Inspection frequency
- Levels of service
- Service standards
- Performance
- Investment decisions
- Implementation of works programmes.

A risk can be defined as an uncertain event which, should it occur, will have an effect on the desired performance of an asset or series of assets.

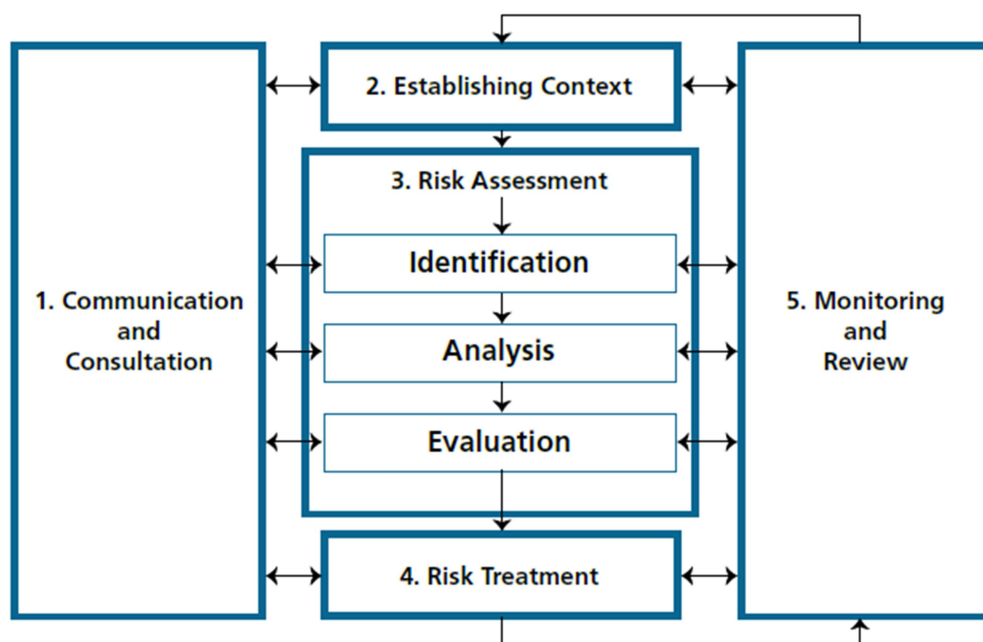
It consists of a combination of the likelihood of a perceived threat or opportunity occurring and the magnitude of its impact on the objectives where:

- **Threat** is used to describe an uncertain event that could have a negative impact on the levels of service; and
- **Opportunity** is used to describe an uncertain event that could have a favourable impact on the levels of service.

The most commonly understood risks affecting the highway service relate to safety. However, there are a wide range of other risks and their identification and evaluation is a crucial part of the asset management process. Risks may include:

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

Our understanding and management of risk is fundamental to effective asset management and the approach we have adopted for the management of risk is shown in the risk management process below. ISO 31000: 2009 Risk Management Principles and Guidelines sets out the principles of risk management and the organisational framework and process required to develop and implement a risk based approach. The risk based process described within ISO 31000 is illustrated below.



The illustration set out five essential 'activities' that are required to manage risk.

## Our approach to risk management

In North Tyneside we intend to apply the principles of ISO: 31000 to the management of the strategic, tactical and operational risks that impact on highway asset management.

Our risk is managed at several levels using a consistent risk framework that enables the comparison of risks across all services. This may include risks seen as:

- **Corporate** – High level risks that effect the whole authority. Such risks include corporate reputation, civil defence, emergencies; business continuity, health and safety, political and legal and financial risk. Risk policy and management of these risks is usually undertaken by the senior decision makers and is beyond the scope of this Guidance;
- **Strategic** – Risks affecting the management of the highways infrastructure should be considered throughout at both strategic and tactical levels. This Section focuses on these risks; and
- **Operational** – Risk should also be managed when undertaking operational activities.

We intend to refer to recent published guidelines by the Institute of Highway Engineers (IHE), Well Managed Highway Liability Risk. In October 2016 the UK Road Liaison Group (UKRLG) published the first edition of Well-managed Highway Infrastructure: A Code of Practice, which the recently published guidance is intended to support and be considered as supplementary advice and therefore the two documents will be read in conjunction.

## Communications and Consultation

When consulting with internal stakeholders it is our intention to invite feedback, which will be analysed and, if applicable, may be taken into consideration when implementing our risk based approach.

## Identifying Critical Assets

The identification of our critical assets is essential for supporting the social and business needs of North Tyneside. Our critical assets will be identified separately and assessed in greater detail as part of the identification of the resilient network.

This will be achieved by applying broad assumptions about the implications of failure. For example the non-availability of a major structure or tunnel would have a significant impact on the local or possibly the national economy while it could be assumed that higher trafficked roads have a larger consequence of failure than lower trafficked roads. By adopting this approach, simple criteria can be defined to assess the loss of service. For example, loss of use of a road will:

- Affect the ability to safely connect people
- Have a negative effect on the local economy
- Adversely impact on businesses within the region.

## Evaluating the risks

Our risk assessment involves determining the likelihood and consequence of an event. The risk assessment 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. We can then determine our level of exposure to the risk and the actions necessary to minimise that risk.

We describe the overall risk as **Risk = Likelihood x Consequence**

### Likelihood

Likelihood is the chance of an event happening, for example, a failure (asset as well as organisational) or service reduction. It can be measured objectively, subjectively, qualitatively or quantitatively. It can be described using general or mathematical terms such as frequency or probability. Issues to be considered include:

- Changes in policy and funding
- Current and historic performance (severity and extent) of the asset
- Severity of the environment, rate of deterioration and/or current age of the asset
- Asset type, material type, mode of failure, extent of failure, etc
- Exposure to incidents of all types
- Human behaviour and workmanship
- Vulnerability to climate change
- Quality of asset management approach and systems.

The likelihood of physical failure of an asset is related to the current condition of the asset, hence the importance of realistic and accurate condition assessment. The likelihood of natural and external events is determined less easily but scientific studies are usually available. The likelihood of other events, such as poor work practices or planning issues can be difficult to ascertain.

### Consequence

Consequence is the outcome of an event, such as increased journey times, isolation of local communities or a drop in public perception of the service provided. It can have positive or negative effects and can be expressed qualitatively or quantitatively. The consequences associated with an event leading to failure or service reduction may include:

**Safety** – including fatalities and personal injuries

**Functionality** – impact of a loss or reduction in service at route, asset or component level, such as weight restrictions on a bridge

**Cost** – increased costs due to bringing forward or delaying work, repair costs, fines or litigation costs and loss of income or income potential

**Sustainability** – any impact on future use of highway infrastructure assets

**Environment** – environmental impacts, such as pollution caused through traffic delay or contamination from spillages, the sensitivity of the route/area, etc



**Reputation** – public confidence in organisational integrity  
**Community costs** – damage to property.

The table below illustrates the qualitative matrix approach which will be considered when evaluating risks in North Tyneside.

| LIKELIHOOD OF EVENT OCCURRING | CONSEQUENCE OF EVENT OCCURRING |        |        |      |        |
|-------------------------------|--------------------------------|--------|--------|------|--------|
|                               | NEGLIGIBLE                     | LOW    | MEDIUM | HIGH | SEVERE |
| NEGLIGIBLE                    | 1                              | 2      | 3      | 4    | 5      |
| VERY LOW                      | 2                              | 4      | 6      | 8    | 10     |
| LOW                           | 3                              | 6      | 9      | 12   | 15     |
| MEDIUM                        | 4                              | 8      | 12     | 16   | 20     |
| HIGH                          | 5                              | 10     | 15     | 20   | 25     |
| KEY TO RISKS                  |                                |        |        |      |        |
| LOW                           |                                | MEDIUM |        | HIGH |        |

## Managing the risks

The issuing of the Well-managed Highway Instructure: A Code of Practice in October 2016, dictates that all highway authorities should adopt a risk management approach to managing their highway infrastructure assets.

Risks and their management will be documented in the 'Highway Maintenance Plan', currently being developed in line with the Department for Transport's deadline date for delivery of the risk based approach to managing infrastructure assets of October 2018. The 'Highway Management Plan' is currently being developed and will be available via North Tyneside's website once completed.

## 10. Lifecycle Plans

### Introduction

This section is developed in line with Recommendation 29. This recommendation and a brief explanation is provided below.

- **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.

## Corporate Context and National Guidance

In line with current national guidance and best practice and the Council's first HAMP, we will continue to apply a lifecycle approach to maintaining our highway infrastructure assets. The lifespan of specific maintenance treatments, the relative cost of treatments and the levels of service provided are essential pre-requisites to good asset management.

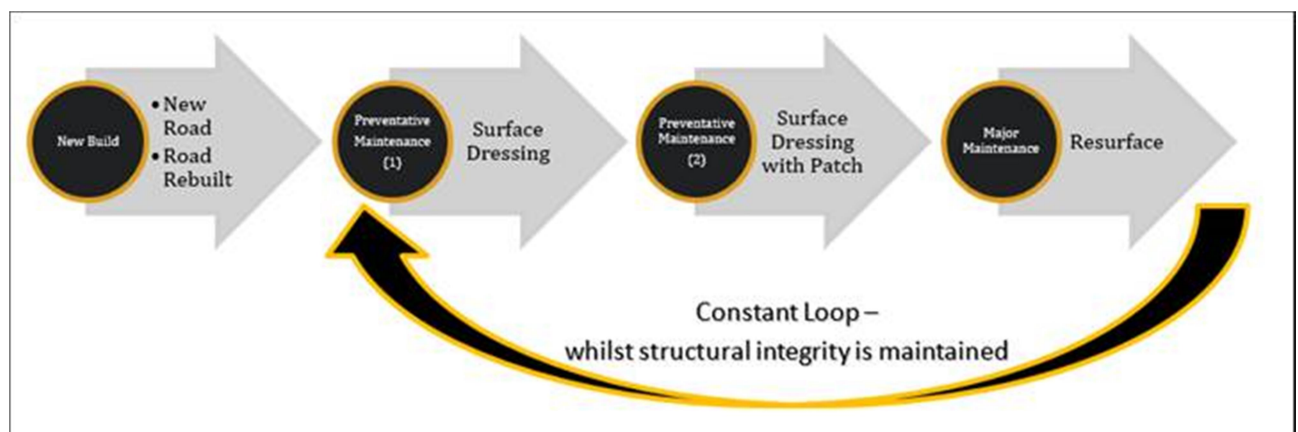
A key component is maximising the life of an asset whilst minimising the budget and resource implications. The lifecycle plans consider the whole of the assets' life and cost modelling diagrams. The investment required to maintain the asset over a long-term period of 15 – 20 years is considered for most highway assets, however this will be over a much longer term for highway bridges and related structures.

This approach enables planned maintenance to be carried out on the network at the right time in order to achieve value for money, delivering the agreed Levels of Service and achieving the objectives from performance monitoring and continuous improvement.

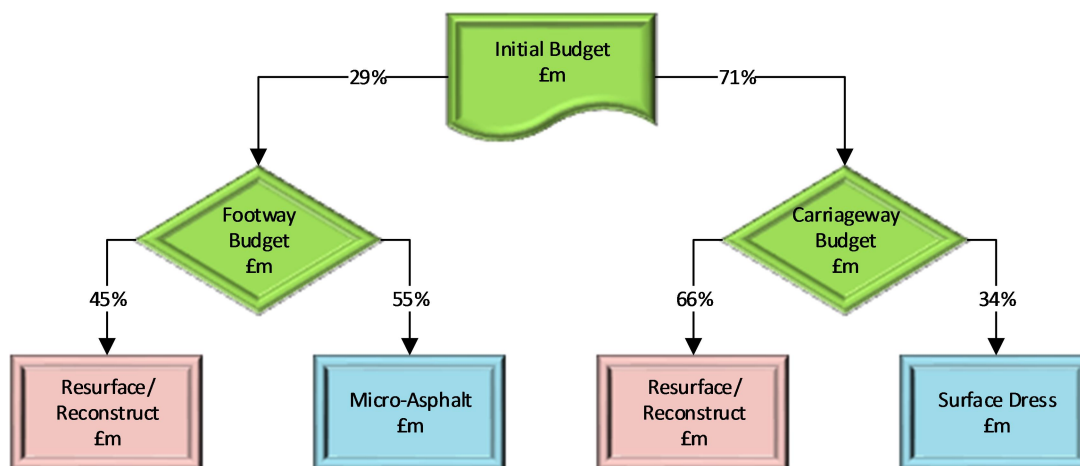
## Lifecycle Plans

Lifecycle plans have been developed for carriageways, footways and bridges / related structures and are located within the Highway Management Plan. These plans will be reviewed on an annual basis with a candidate list of schemes being prepared for consultation with stakeholders. The candidate list of schemes will be available to view via our website.

The illustration on the following page shows how a typical road might be maintained over 60 years. It compares and contrasts traditional maintenance practice with the approach that the Council intends to apply through the HAMP. It demonstrates how preventative maintenance can extend the life of the carriageway and lead to better value for money.



The diagram below (illustration only) shows the framework which will be used to apportion annual highways spending across the footway and carriageway asset types along with the split between the different maintenance treatments that might be applied.



Lifecycle plans will be developed for our carriageways, footways and bridges/structures and will be documented within the Highway Maintenance Plan. The annual progress of these lifecycle plans and the work delivered as a result will be reported in the HAMP Annual Information Report.

## 11. Service standards

### Introduction

Our service standards enable us to develop and inform our 'Lifecycle Plans' and achieve best value from the resources available. Our service standards are bespoke to North Tyneside and have been developed in consultation with our senior management team and elected members.

Our service standards are derived from condition data surveys collected during the last 12 months by engineering analysis and used to:

- Monitor the overall condition of the assets
- Monitor the assets year on year performance
- Compare overall progress against the previous year's,

The findings from the above activities will be reported in our HAMP Annual Information Report. The report will set out the percentage defectiveness of the asset in each of four service standards that are set out below. We will provide illustrative diagrams to enable the reader to visualise the overall condition of the asset and compare year on year performance. These findings will enable us to determine where best to target our resources, provide long-term planning opportunities and develop lifecycle plans for each highway asset within the scope of this document.

The condition surveys undertaken by North Tyneside can be found in section 6 of this document.

For our carriageways and footways we have identified four service standards of GOOD, EARLY LIFE, MID LIFE and LATE LIFE. Generic details of these service standards are shown in Appendix 1 of this document. For illustrative purposes the percentage of defectiveness for the four service standards will be colour coded as follows:

|                   |  |
|-------------------|--|
| <b>GOOD</b>       |  |
| <b>EARLY LIFE</b> |  |
| <b>MID LIFE</b>   |  |
| <b>LATE LIFE</b>  |  |

## **13. Competency and Training Framework**

### **Introduction**

This section is developed in line with Recommendations 5 and 15. These recommendations and a brief explanation is provided below.

- **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 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**

To ensure our officers are competent in the principles and practices of asset management, this framework will identify and provide competencies expected of a prescribed role.

The Incentive Fund introduced by the Department for Transport requires a competency framework to be developed to attain level 3, maximum funding for North Tyneside Council.

To ensure appropriate levels of competence, the training and development needs of all officers will be established and reviewed annually, including health and safety and appropriate vocational qualifications.

We believe that by developing and enhancing our officers it will assist in the implementation and delivery of asset management practices to manage all our highway infrastructure assets.

The approach and content of this competencies framework has been developed through joint working with Newcastle, South Tyneside, Sunderland and Gateshead Councils. The joint approach is intended to ensure consistency across neighbouring authorities within the North East region.

## **Scope**

All officers responsible for managing the highway infrastructure assets will be required to use the competency framework. For each role a prescribed number of competencies will be necessary to manage the highway assets. These competences and descriptors are documented in tables 1 and 2 below.

There is a competency requirement for the lead cabinet member to be familiar with the principles of highway asset management.

## **Alignment of Guidance**

This competency framework has been developed to align with the principles of ISO55000. The key roles associated with this competency framework are delivery of the Codes of Practice, Well-managed Highway Infrastructure's recommendations, completion of the Incentive Fund highway assessment questionnaire and managing highway assets.

Competencies and training are covered in the UKRLG Highway Infrastructure Asset Management Guidance, Part C. This document should also be referred to.

Competence is especially important in the case of inspections and surveys where the quality and treatment of data could have significant legal and financial implications. All training, experience and other forms of staff development will be recorded and documented.

## **Details of the Competency Framework**

We define a '**competent person**' as follows;

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

The table 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. | <p>A senior manager will typically be in a leadership role and may have management of substantial resources, both financial and personnel.</p> <p>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.</p> | 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 and the relevant skills and knowledge assigned to each role.

Table 2: Role Descriptions

|   | 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 |
|---|-------------------------|---------------------|-----------------------------|------------------------------|---------------------|--|---------------------------|-----------------------------------|---|--|---|---------------------------------------|--|--|---|---|--|---|--------------|--------------------------------|---|--|
| Professional Level  |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |
| <b>Basic asset management awareness</b> [highway safety inspectors, claims officer and lead member] |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |
| <b>Foundation Practitioner</b> [junior technician/engineer]   |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |
| <b>Practitioner</b> [senior engineer/team leader/manager]   |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |
| <b>Senior Manager</b> [reports to the senior leader]  |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |
| <b>Senior Leader</b> [responsible overall for the delivery of asset management]                     |                         |                     |                             |                              |                     |  |                           |                                   |   |  |   |                                       |  |  |   |   |  |   |              |                                |   |  |



## **Competency Assessment**

When assessing the competency of each officer against table 2, a gap analysis will be completed against the role descriptors in table 2. The findings from this gap analysis will be documented in a training matrix and will inform individual development plans if required.

The training plans will be reviewed annually as part of the annual appraisal and recorded as part of the appraisal process.

A completed table 2 will be available in the Highway Maintenance Plan and will be revised annually to ensure an individual's competency is monitored by the Highway Asset Manager.



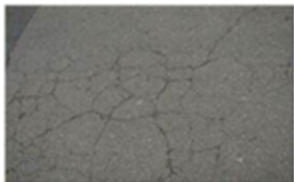

## **Training Matrix**



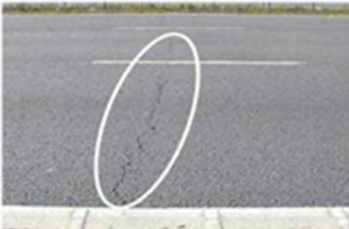

The training matrix will replicate the content of table 2 but names of individual officers will be listed where currently professional levels are recorded.



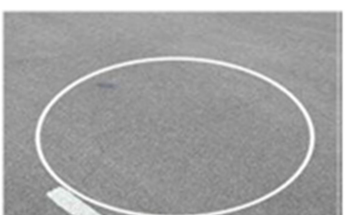
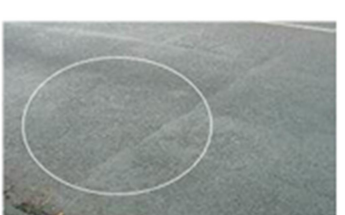
The training matrix will be monitored and maintained annually or in the event of a change of role or new starter.

The senior leader will have overall responsibility for the content of this competency framework.

## Appendix 1 – Description of Service Standards

| Service Standard | Description of Service Standard  | Illustrative  |
|------------------|--|---|
| <b>Late Life</b> | <p><b>Definition</b><br/>The minimum level of service to meet statutory requirements. The risks and consequences associated with providing this service level are summarised below.</p> <p><b>a) Legal</b></p> <ul style="list-style-type: none"> <li>The authority complies with the requirements of the relevant codes of practice in all key respects; any derogation is documented and supported by a robust risk assessment;</li> </ul> <p><b>b) Safety</b></p> <ul style="list-style-type: none"> <li>High reliance on Safety Inspection regime to identify defects;</li> </ul> <p><b>c) Availability</b></p> <ul style="list-style-type: none"> <li>The majority of the asset is available for normal reasonable use.</li> </ul> <p><b>d) Condition</b></p> <ul style="list-style-type: none"> <li>The condition of the asset is deteriorating.</li> </ul> <p><b>e) Asset Value</b></p> <ul style="list-style-type: none"> <li>The asset value is likely to be depreciating as a result of minimum investment.</li> </ul> | <div>  <p>Severe local settlement /subsidence</p> </div> <div>  <p>Wheel track major cracking</p> </div> <div>  <p>Whole carriageway major cracking</p> </div> <div>  <p>Whole carriageway major fretting</p> </div> |

|                 |  |  |
|-----------------|--|--|
| <b>Mid Life</b> | <p><b>Definition</b><br/>A level of service that meets statutory needs. The risks and consequences associated with providing this service level are summarised below:</p> <p><b>a) Legal</b></p> <ul style="list-style-type: none"> <li>The authority complies with the requirements of the relevant codes of practice in all respects and a robust risk assessment exists, except where it chooses not to carry one out. In all such instances any derogation is documented and supported by a robust risk assessment;</li> </ul> <p><b>b) Safety</b></p> <ul style="list-style-type: none"> <li>Safety defects are well defined with performance standards for rectification of those defects;</li> </ul> <p><b>c) Availability</b></p> <ul style="list-style-type: none"> <li>The asset is available for normal reasonable use;</li> </ul> <p><b>d) Condition</b></p> <ul style="list-style-type: none"> <li>The condition of the asset is stabilised or with minor deterioration;</li> </ul> <p><b>e) Asset Value</b></p> <ul style="list-style-type: none"> <li>The asset value is likely to be depreciating as a result of other external factors rather than under investment.</li> </ul> | <div data-bbox="1265 156 1612 379">  </div> <div data-bbox="1630 156 2049 223"> <p>Moderate local settlement/subsidence</p> </div> <div data-bbox="1265 395 1612 624">  </div> <div data-bbox="1630 427 2049 494"> <p>Whole carriageway major chip loss</p> </div> <div data-bbox="1265 671 1612 900">  </div> <div data-bbox="1630 699 2049 734"> <p>Transverse/reflection cracking</p> </div> <div data-bbox="1265 938 1612 1177">  </div> <div data-bbox="1630 938 2049 1005"> <p>Whole carriageway major fatting</p> </div> |
|-----------------|--|--|

|                   |   |  |
|-------------------|---|--|
| <b>Early Life</b> | <p><b>Definition</b><br/>A level of service that is above statutory needs. The risks and consequences associated with providing this service level are summarised below:</p> <p><b>a) Legal</b></p> <ul style="list-style-type: none"> <li>The authority generally exceeds the requirements of the relevant codes of practice in key respects; any derogation is minor and defensible, documented, and supported by a robust risk assessment.</li> </ul> <p><b>b) Safety</b></p> <ul style="list-style-type: none"> <li>Safety defects are well defined with performance standards for rectification of those defects;</li> </ul> <p><b>c) Availability</b></p> <ul style="list-style-type: none"> <li>The vast majority of the asset is available for normal reasonable use.</li> </ul> <p><b>d) Condition</b></p> <ul style="list-style-type: none"> <li>The condition of the asset has been stabilised and it is assumed that the rate of deterioration is minimal.</li> </ul> <p><b>e) Asset Value</b></p> <ul style="list-style-type: none"> <li>The asset value is maintained as far as is reasonably practical.</li> </ul> |  <p>Whole carriageway minor chip loss</p>  <p>Whole carriageway minor fretting</p>  <p>Whole carriageway minor cracking</p>  <p>Whole carriageway minor fatting</p> |
|-------------------|---|--|

|      |  |   |
|------|--|---|
| Good | <p><b>Definition</b><br/>A level of service that is well above statutory needs. Service delivery aimed at maintaining the asset to a high standard. The risks and consequences associated with providing this service level are summarised below:</p> <p><b>a) Legal</b></p> <ul style="list-style-type: none"> <li>The authority complies with the requirements of the relevant codes of practice in all respects; any minor local derogations are documented and supported by a robust risk assessment;</li> </ul> <p><b>b) Safety</b></p> <ul style="list-style-type: none"> <li>Significant reduction in claims against NTC personal injury and third party damage;</li> <li>Safety defects are well defined with performance standards for rectification of those defects;</li> </ul> <p><b>c) Availability</b></p> <ul style="list-style-type: none"> <li>The asset is available for normal reasonable use.</li> </ul> <p><b>d) Condition</b></p> <ul style="list-style-type: none"> <li>The condition of the asset is improving strongly with asset value increasing;</li> <li>It is increasingly possible to flexibly assign resources to selected programmes each year as the relative deterioration is marginal year on year.</li> </ul> <p><b>e) Asset Value</b></p> <ul style="list-style-type: none"> <li>The investment required to maintain an as new condition is reducing.</li> </ul> |  <p>Not defective</p>  <p>Not defective</p>  <p>Not defective</p> |
|------|--|---|