HIGHWAYS INFRASTRUCTURE ASSET MANAGEMENT FRAMEWORK

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Contents

Document Information

Title {Sub-Title}	Highway Infrastructure Asset Management Framework
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Description	This document highlights how the Authority manages its infrastructure assets through a suite of documents. It maintains a description of the suite of documents and shows the relationships between them.

Document History

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Introduction

An Asset Management Framework is an essential tool for organisations that want to manage their assets effectively and efficiently. It provides a systematic approach to the acquisition, operation, maintenance, and disposal of assets and ensures that they are aligned with the organisation's goals and objectives.

The performance objectives for the Highways & Sustainable Transport Department are likened to its Key Performance Indicators (KPI's) to the maintain an efficient and safe highway network. Maintenance is a key part of this strategy in determining the priority needs of the Borough and the service and in delivering quality and affordable works and services at the right time to the right places in support of a risk-based approach to asset maintenance management. Newham's KPI's are measured through their Asset Management Software and recorded accordingly on a monthly basis, with corporate objectives published on a yearly basis as appropriate.

Newham Highways also use the 'Highways Research Club' to benchmark their performance against other local authorities. This supports proficient service delivery initiatives, operational methodology reviews and an opportunity to review and implement best industry practice arrangements, service improvements and promote partnership discussions to support and achieve competency provisions.

An asset can be anything that has value to an organisation, including physical assets such as buildings, equipment, and infrastructure, as well as intangible assets such as intellectual property and software. Proper management of assets can help organisations reduce costs, improve performance and increase the lifespan of their assets.

This Highways Infrastructure Asset Management Framework (HIAMF) is designed to provide a structured approach to managing infrastructure assets throughout their lifecycle. It discusses processes and procedures for identifying and assessing asset needs, acquiring and deploying assets, monitoring and maintaining assets, and disposing of assets when they are no longer needed.

This framework contains documents set to meet the specific needs of the Authority, outlines the key components of the HIAMF including the processes, procedures, and tools needed to manage assets effectively. It is intended as a guide for the authority for developing or refining their asset management practices and shall be used as a reference.

This HIAMF is part of a suite of documents that set out the policies and plans for management and delivery of the Highways Asset Infrastructure Service.

The foundations for this document suite are the:

- Highways Infrastructure Asset Management Plan
- Highways Infrastructure Asset Management Strategy

This supports a data driven, evidence-based approach to maintaining the Authority's physical highway network. They shall be supported, or are supported by, a comprehensive suite of

documents relating to and Service Delivery for the Authority as listed above and below. The further set of documents that are required to set out the individual policies and detail in the Highways Infrastructure Asset Management Plan (HIAMP) are:

- Infrastructure Maintenance Hierarchy Strategy and Procedure
- Skid Policy
- Highways Infrastructure Life Cycle Planning
- Scheme Prioritisation Strategy
- Highways Safety Inspection Manual
- Winter Service Plan
- Inventory Strategy
- Highways Risk Management Plan and Risk Register
- Road Markings Strategy
- Lessons Learned Strategy
- Asset Valuation Strategy
- Highways Infrastructure Works Stakeholders Communication Plan
- Data Management Strategy
- Planned Maintenance Strategy
- Commuted sums Procedure
- Competency, Qualifications and Training Strategy and Plan

The documents define how all the physical aspects comprising the highway network, i.e. the highway infrastructure assets, can be efficiently and strategically managed in order to protect and preserve them while maintaining the optimal service within the available resources. Each of the documents within the suite is a "living document" subject to regular review and revision as is deemed applicable or necessary through changing circumstances, guidance and legislation.

1. Overview of Document Suite and Scope of Documents

This Highways Infrastructure Asset Management Framework (HIAMF) is part of a suite of documents that set out the policies and plans for management and delivery of the Highways Asset Infrastructure Service for the Authority.

1.1. Highways Infrastructure Asset Management Plan

The Highways Infrastructure Asset Management Plan sets out the formal requirements, objectives and process for HIAM for the Authority. It considers the high level and wider stated policies of the Council's requirements. It considers the Local Transport Plan (LTP) and other relevant documents for the Council. It details the highway assets that are required to be managed assets i.e.

- Carriageways
- Footways
- Cycleways and Other Paved assets
- Structures
- Drainage
- Signs & Lighting
- Street Furniture
- Land

1.2. Highways Infrastructure Asset Management Strategy

The Highway Infrastructure Asset Management Strategy sets out the way in which HIAM policy, requirements and objectives will be managed and implemented to deliver the service effectively, economically and efficiently. It aims to ensure the best possible service levels are achieved while the asset values are maintained at the highest possible levels within the resources available. It outlines the objectives of the HIAMP and supporting documents.

1.3. Highways Infrastructure Maintenance Hierarchy Strategy and Procedure

Maintenance hierarchies are a structured approach to organising and prioritising maintenance activities based on the importance and criticality of the infrastructure asset. By organising maintenance activities into a hierarchy, the authority can prioritise resources, allocate budgets, and focus on the most critical infrastructure asset. Maintenance hierarchies also help organisations to identify and mitigate risks associated with the asset, improving overall safety and reliability.

This document describes how the Highway Authority has created its maintenance hierarchies for all the major asset groups.

1.4.   Skid Policy

The HIAM Skid Policy relates to the maintenance of adequate skid resistance on the Authority's highway network and the application of procedures to deal with those sites identified for further investigation.

This policy details the approach to the monitoring, measurement and management of skid resistance on parts of the Authority's Road network. The policy is based on CS228 from the Design Manual for Roads and Bridges Volume 7 Section 3 and the RSTA best practice guide to maintenance of skid resistance.

1.5.   Highways Infrastructure Life Cycle Planning

The HIAM Life Cycle Planning document details the life cycle planning process and provides the results of analyses in accordance with the processes set out under the HIAMP. Each asset group is considered and analysed in turn to determine the maintenance requirements, the budget required for the maintenance and the programme for delivery. This is then used to assist in the creation of a Forward Works Programme.

The life cycle planning process and generation of the forward works programme also considers aspects of impacts by other entities such as statutory undertakers, contractor's influences on road use and activities e.g. building sites, new estates and commercial activities as well as seasonal or occasional effects on traffic flows.

1.6.   Scheme Prioritisation Strategy

Scheme prioritisation is the process of determining the priority of a scheme over another for all major asset groups. The prioritisation process involves evaluating and comparing the potential benefits, costs, risks and other factors associated with each scheme to determine which ones should be given priority over others. It is a critical process for ensuring that resources are allocated transparently in an auditable process. A well-designed prioritisation process helps the authority to make informed decisions and optimise their use of resources.

1.7. Highways Safety Inspection Manual

The Highways Safety Inspection Manual is a comprehensive guide that provides detailed information about the process and procedures for conducting safety inspections for the Authority. It covers all the assets inspected and what defects the inspector will be looking for.

1.8. Winter Service Plan

The Council as the Highway Authority has the responsibility to provide winter service in accordance with the individual winter service plan for their area. The Highways Act 1980 Section 41(1A) imposes a duty on a highway authority 'to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by ice and snow'. It is recognised that "as far as reasonably practical" limits the network for which winter service can be provided and this is clearly identified through the plan. This winter service plan discusses available resources within the region and how they are to be deployed. What level of training, resource and equipment is required to deliver the service and how it is to be delivered. It will also set out how stockpiles are maintained and how information is to be communicated to stakeholders.

1.9. Inventory Strategy

The Inventory Strategy is a set of guidelines and procedures that dictate how the inventory of infrastructure assets is managed. The strategy outlines the objectives of inventory management for maintaining the asset stock. It contains how important the asset is for business and operationally with a risk assessment of how often the asset is updated.

1.10. Highways Risk Management Plan and Risk Register

This document considers the principal types and levels of risk that are encountered in managing the highway assets and how they are to be addressed.

The main risks reflected are:

- Asset Integrity
- Service Level Delivery
- Efficiency of Use of Resources
- Asset Value
- User Satisfaction
- Corporate Image

Asset risks are assessed considering the latest guidance for a "Risk Based Approach" to asset management. This approach formalises the methods that have been employed for some time in considering risks not just on their severity and probability, but also the likely impact, should the risk event occur. For instance, while there may be a high probability of a severe flooding risk, if it has little impact on asset integrity or service levels (e.g. congestion) then it would have a relatively low priority. This allows resources to be targeted at those risks likely to have the most severe effects on service levels and delivery, thus making the overall asset management process far more efficient.

The actual risks will be identified, classified and quantified along with details of appropriate plans and mitigation of them in the Highways Infrastructure Risk Management Plan and Risk Register (see below for further details).

The Highways Infrastructure Risk Management Plan and Risk Register analyses and documents the risks. Each area of risk is considered and where these are significant enough to require management are analysed as to their probability, severity, impact and cost. This is in order to prioritise them and provide adequate methods of planning and managing the risk mitigation.

The document provides tables and matrices that set out these risks and their management in detail.

1.11.   Road Markings Strategy

This document is a set of guidelines and procedures that will be used to manage road markings and studs. The document outlines the rules and regulations governing the use of road markings, the types of road markings that should be used and the maintenance procedures for road markings. It will also state what testing and inspection regimes will be undertaken.

A well-designed road marking and studs' strategy document will help to promote safety on public roads, ensure consistency in the use of road markings, and reduce the risk of accidents caused by confusion or unclear markings.

1.12.   Lessons Learned Strategy

The lessons learned strategy is a plan that the Authority uses to capture, document, and apply the knowledge and experience gained from past projects or activities. The strategy aims to identify what worked well, what did not work well, and what can be improved in future projects or activities.

The strategy helps the Authority to improve their performance, reduce risks and enhance their ability to achieve their goals. By capturing and applying the knowledge and experience gained from past projects or activities an organization can avoid repeating mistakes, leverage best practices and continually improve its processes and procedures.

1.13.   Asset Valuation Strategy

The highway infrastructure is a vital asset that contributes to the economic viability and development of the Borough. Contained within the Authority's highways infrastructure assets there are many individual asset components, comprising various features and attributes that are required to be managed and maintained at the required service level. The principles of asset management and Whole of Government Accounts (WGA) valuation identify the notional replacement value of the highway network and its assets throughout the region, therefore assisting with the prioritisation of work and budgets. Life cycle planning provides analysis of the asset base to help understand the deterioration of assets and the scale of maintenance requirements. This document describes how asset valuation is conducted within the Authority.

1.14.   Highways Infrastructure Works Stakeholders Communication Plan

A stakeholders communication plan is a structured and comprehensive strategy for effectively sharing information with individuals and groups who have a vested interest in a particular project, organisation, or initiative. The primary goal of a stakeholders communication plan is to create a clear and consistent message that meets the needs of different stakeholder groups and facilitates engagement, collaboration,and support.

This plan details the approach by the Highway Authority to communicate with all users and stakeholders. It includes the objectives of such communication, the differing target audiences, the type of information to be communicated, methods of communication and the policies for carrying out consultations affecting all highway users and stakeholders. Principal methods of communication will be through the Authority's website and the websites of appropriate organisations and partners. Local press will be engaged through both printed and online publication of information whenever possible.

The plan also outlines procedures for users and stakeholders to make reports and/or complaints regarding issues, including the asset condition and/or levels of service.

1.15.   Data Management Strategy

The Data Management Strategy sets out the Authority's strategy for the collection, validation, auditing, storage, disposal and security of the data that is required for effective asset management. This data includes:

- Inventory and condition data collected through surveys, inspections and works records.
- Works records
- Contract specifications
- Maintenance design specifications and records
- Analysed Data
- Actual service levels & KPI's

- Road and other asset condition indicators
- Life cycle planning data and analyses
- Forward Works programmes.
- Costs of works and budgetary requirements.
- Customer and stakeholder reports

N.B. All data is subject to the Authority's overall Data Protection Policy and protocols as well as national legislation and guidance. This data policy document complies with the requirements set out in these.

1.16. Planned Maintenance Strategy

This Planned Maintenance Strategy is a set of guidelines and procedures that the authority uses to manage and maintain its infrastructure assets. It discusses materials to be used for maintenance and procedures and processes to be adopted for each major asset group.

A well-designed planned maintenance strategy helps the authority ensure that their infrastructure assets are in good condition, reduce the risk of failure, increase reliability and availability, whilst reducing maintenance costs over time.

1.17. Highways Carbon Reduction Strategy

The Authority has a Climate Action Strategy in place, and it will be incorporated into the HIAMF at a later date.

1.18. Commuted Sums Procedure

This is the Authority's document explaining how commuted sums are calculated. Commuted sums refer to payments made by developers to the local authority as part of the planning process. These payments are made in lieu of developers having to provide certain infrastructure, services, or facilities that are required to support new development.

Commuted sums are an important mechanism for ensuring that developers contribute to the cost of providing the infrastructure, services, or facilities that are needed to support new development. They also help to ensure that development is sustainable and that the burden of providing new infrastructure, services, or facilities and future maintenance is not borne solely by the local authority or taxpayers.

A comprehensive commuted sums document ensures that the calculations are correct and that the authority is optimising the amounts paid to the authority.

1.19. Competency, Qualifications and Training Strategy and Plan

The competency and training document outlines the competencies required for all the job roles within the Authority. It will contain training and development programs that will be used to develop these competencies. The document is typically used by the Authority to ensure that their employees have the knowledge, skills and abilities needed to perform their jobs effectively. By developing a comprehensive training and development program improvements in employee performance and retention will be achieved.

1.20   Relationship of Documents

The following illustration shows the relationship between the many documents and the Asset Management Process.

Asset Management Process

What Asset do I manage?

Leadership / Senior Management Support Required

Condition	What do I know about it?	Inventory
Winter Service Plan, Skid, etc.	What are my legislative requirements?	Safety Inspection Manual
Asset Management Plan	What are my service levels?	Asset Management Strategy

Lifecycle Planning & Scheme Prioritisation | Risk Register | What are my Risks? | Risk Management Strategy | Inventory Strategy

Delivery to Stakeholders

Asset Management System(s)
Data Management Strategy

Asset Management Framework Documents

- Road Markings Strategy
- Asset Valuation Strategy
- Commuted Sums Procedure
- Highways Infrastructure Works Stakeholders Communication Plan
- Highways Carbon Reduction Strategy
- Competency, Qualifications and Training Strategy and Plan
- Planned Maintenance Strategy
- Lessons Learned Strategy.