

Highways Asset Management Strategy

2016

DRAFT

Document Control

Author/ title	Julie Nelder – Highways Infrastructure Manager
Authorised/title by	Ann Osola – Head of Transportation & Highways
Date Authorised	
Signature	

Version	Status (Draft/Approved)	Date	Author/Editor	Details of changes
3	Draft	21/06/16	Ayesha Basit	Formatting
3.1	Draft	24/06/16	Julie Nelder	Completion dates
3.2	Draft	27/07/16	Ayesha Basit	Asset Management Roles
3.3	Draft	05/08/16	John Devono	Risk Management
3.4	Draft	05/08/16	Ayesha Basit	Performance Measures
3.5	Draft	10/08/16	Ayesha Basit	Removed inspection frequency table and referred to Highways Maintenance Policy (August 2016)
3.6	Draft	28/08/16	Ayesha Basit	Header & Footer changed

Contents

1. Introduction	3
2. National Policy & Legislative Requirements	4
2.1. <i>Government Guidance for the Local Transport Plan</i>	4
2.2. <i>Whole Government Accounting (WGA) Requirements</i>	4
2.3. <i>Guidance</i>	4
3. Local Policy Framework	5
3.1. <i>Thurrock Transport Strategy: 2013 to 2026</i>	5
3.2. <i>Maintenance priorities</i>	6
3.2.1. <i>Safety</i>	6
3.2.2. <i>Congestion</i>	6
3.2.3. <i>Climate change and air quality</i>	7
3.2.4. <i>Accessibility</i>	7
3.2.5. <i>Regeneration</i>	7
4. Asset Management Framework	8
5. Strategy for Individual Assets	9
6. Assets	9
6.1. <i>Asset Groups</i>	9
7. Asset Management Roles	10
7.1. <i>Senior Decision Makers' Roles</i>	10
7.2. <i>Asset Management's Roles</i>	10
7.3. <i>Asset Team's Roles</i>	10
8. Asset Management Planning	11
8.1. <i>Gross Replacement Cost and Depreciated Replacement Cost</i>	12
9. Future Demand	12
9.1. <i>Lower Thames Crossing</i>	12
10. Benefits of Asset Management Strategy	12
11. Improvement Plan	13
12. Good Practice	15
13. Risk Management	15
13.1. <i>Introduction to risk management</i>	15
13.2. <i>The risk management cycle</i>	16
13.3. <i>Risk based asset management</i>	16
13.3.1. <i>Condition Surveys</i>	17

13.3.2.	<i>Service Inspections</i>	17
13.3.3.	<i>Safety Inspections</i>	18
13.4.	<i>Risk management implementation</i>	18
13.4.1.	<i>Risk Identification & Evaluation Meetings, (monthly activity)</i>	18
13.4.2.	<i>Management and Review Meetings (quarterly activity)</i>	18
13.6.	<i>Risk management compliance</i>	19
14.	Performance Measures.....	20
15.	Supporting Documentation	29
16.	Review Process.....	29

1. Introduction

Thurrock Council recognises the importance of the highway infrastructure in the context of the well-being of all who use it. The Council as Highway Authority is committed to the good management of the highway asset not only for now but also, for future generations, and recognises that effective asset management is essential to deliver clarity around standards and levels of service, and to make best use of available resources.

The Asset Management Strategy underpins the Highway Asset Management Policy and is one of the key strategic documents related to the delivery of the Council's highway services.

This document reflects the guidance laid down in the suite of national Codes, in particular the Code of Practice '*Well-maintained Highways*' and the guidance issued by the Highway Maintenance Efficiency Programme (HMEP) on the use of asset management principles

The purpose of this document is to:

- Formalise strategies for investment in key highway asset groups
- Define affordable service standards
- Improve how the highway asset is managed
- Enable more effective and efficient Value for Money (VfM) highways services to be delivered.

2. National Policy & Legislative Requirements

Developing a Highways Asset Management Strategy (HAMS), keeping it up to date and actually using it to feed into the decision making process is widely seen to be a valuable exercise. However, there are a number of other drivers.

2.1. Government Guidance for the Local Transport Plan

The requirement to produce a HAMS was first highlighted in the Full Guidance on Local Transport Plans (LTP) published by the Department for Transport in December 2004. This required all Transport Authorities to produce a statement in their Provisional second LTP submissions on their proposed approach to producing a HAMS. Following further guidance from Department for Transport, these statements were revised for the Final second LTP submissions in March 2006.

It is clear that the Department for Transport sees HAMSs as the key tool in the future management of the highway network. This is further indicated by recent events with regard to the way the Government allocates funding for structural maintenance. For 2011/12, the Department for Transport started to remove road condition data from the formula used to allocate the capital maintenance block between authorities, moving towards just using road lengths and classification to allocate funding. However, a working group of local authority officers will consider further changes to the maintenance formula. The Department for Transport is “attracted by the suggestion of linking the formula to highways asset management”, i.e. a HAMS.

2.2. Whole Government Accounting (WGA) Requirements

Since 2006 all local authorities have been required to produce a valuation of their highway assets. Under these requirements from 2007/08, local highway authorities were expected to determine not only the value of their assets, but also monitor year on year whether or not they are depreciating following investment. There is therefore a close relationship between asset management and asset valuation.

2.3. Guidance

Also available at the national level is a series of guidance documents on asset management. The HAMS for Thurrock has been developed making use of these, which are:

- Guidance on the Requirements for the Production of Highways Asset Management Plans and a Simple Valuation Methodology – TRL (2006)
- Guidance Document for Highway Infrastructure Asset Valuation – County Surveyors Society/TAG Asset Management Working Group (2005)
- Highway Asset Management Worldwide Experience and Practice – County Surveyors Society (2004) Framework for Highway Asset Management
- Management of Highway Structures: A Code of Practice – Roads Liaison Group (2005)

3. Local Policy Framework

A full review of the HAMS will commence towards the end of 2016. It is anticipated that the HAMS will be a tactical document that links both the strategy set out in the Thurrock Transport Strategy 2013 - 2026 and the priorities in the LTP to the more detailed operational and business plans, especially the annual programme for highway maintenance works. This chapter therefore summarises the key objectives and policies of Thurrock Council, especially as described in the Thurrock Transport Strategy 2008-2021 and the contribution that well-structured maintenance can make.

3.1. Thurrock Transport Strategy: 2013 to 2026

The Thurrock Transport Strategy 2013 to 2026 comprises the strategy element of the statutory Local Transport Plan. It has a number of transport specific objectives that are supported by maintenance practices, including:

- Delivering Accessibility
- Tackling Congestion
- Improving Air Quality and Addressing Climate Change
- Safer Roads
- Facilitating Regeneration

To meet these and other objectives, the Thurrock Transport Strategy has five thematic strategies concerning accessibility, congestion, safety, air quality and climate change, and regeneration.

The thrust of the accessibility strategy will work to deliver the following outcomes:

- Enhanced access to key services, goods and opportunities for disadvantaged groups, especially to employment, hospitals and further education;
- People have sustainable transport options providing accessibility to shops and businesses, education and leisure facilities;
- Residents in rural areas have access to appropriate transport options;
- Improved access to London Gateway;
- Improved access for people to sustainable transport options;
- Improved physical fitness, especially in disadvantaged communities, through greater use of active transport such as walking and cycling; and
- Sustainable access to areas of new development and regeneration.

The strategy for tackling congestion will be to deliver a targeted programme of measures to encourage a modal shift to more sustainable modes of transport such as walking and cycling, and improve the efficiency of the transport network. Key relevant policies include:

- The development of a network of high quality inter-urban public transport routes;
- A modal shift towards walking, cycling and public transport;
- Improved highway network efficiency.

Improving air quality and mitigating/ adapting to climate change will be achieved by supporting modal shift and then reducing emissions from vehicles, as well as reducing Thurrock's vulnerability to climate change. Key relevant policies include:

- Transport measures that reduce both greenhouse gas and air pollution emissions will be prioritised;
- Mitigating the adverse impacts of freight operations by reducing emissions from Heavy Goods Vehicles in Thurrock;
- When undertaking transport improvements, including maintenance schemes, the Council will integrate climate change adaptation measures into design to ensure that vulnerability to the transport network from climate change is minimised.

The safety strategy, whilst aiming to reduce casualties where people are killed or seriously injured on the Thurrock road network, will take a broader and proactive approach, aiming to reduce road danger and improve personal security and thereby promote modal shift and community regeneration. Key policies include:

- A priority will be safety around schools;
- Integrating road safety into all work programmes, including maintenance;
- Creating a safer environment for pedestrians and cyclist.

The regeneration strategy is largely integrated into the other thematic areas, particularly in terms of social and economic regeneration. However, key policies related to environmental regeneration are:

- When designing and implementing transport improvements the Council will ensure they contribute to the quality of the public realm and the integrity of its historic and cultural setting;
- When designing and implementing transport improvements the Council will ensure they contribute to the protection and enhancement of habitats and biodiversity, the integrity of water quality, and the preservation and enhancement of the landscape.

3.2. Maintenance priorities

Maintenance is important for all of the Local Transport Plan objectives, for example:

3.2.1. Safety

Maintenance practice can impact on road safety, including accidents and safety concerns that might inhibit modal shift, as well as personal security such as through the availability and quality of street lighting after dark.

3.2.2. Congestion

Maintenance practice can help to promote modal shift by improving conditions for pedestrians and cyclists, and improve network efficiency such as through careful

programming and coordination of maintenance works, especially on key routes so as to minimise congestion and disruption. It can also reduce the likelihood of incidents on important routes.

3.2.3. *Climate change and air quality*

Maintenance practice can reduce emissions in a number of ways, such as:

- In-situ recycling to reduce lorry movements
- Recycling of materials to reduce the need for the quarrying of primary aggregates and the associated processing and transportation of raw materials
- Eco-driver training for maintenance staff
- Use of low emission/ fuel efficient maintenance vehicles
- Adapting to climate change, such as through flood prevention measures

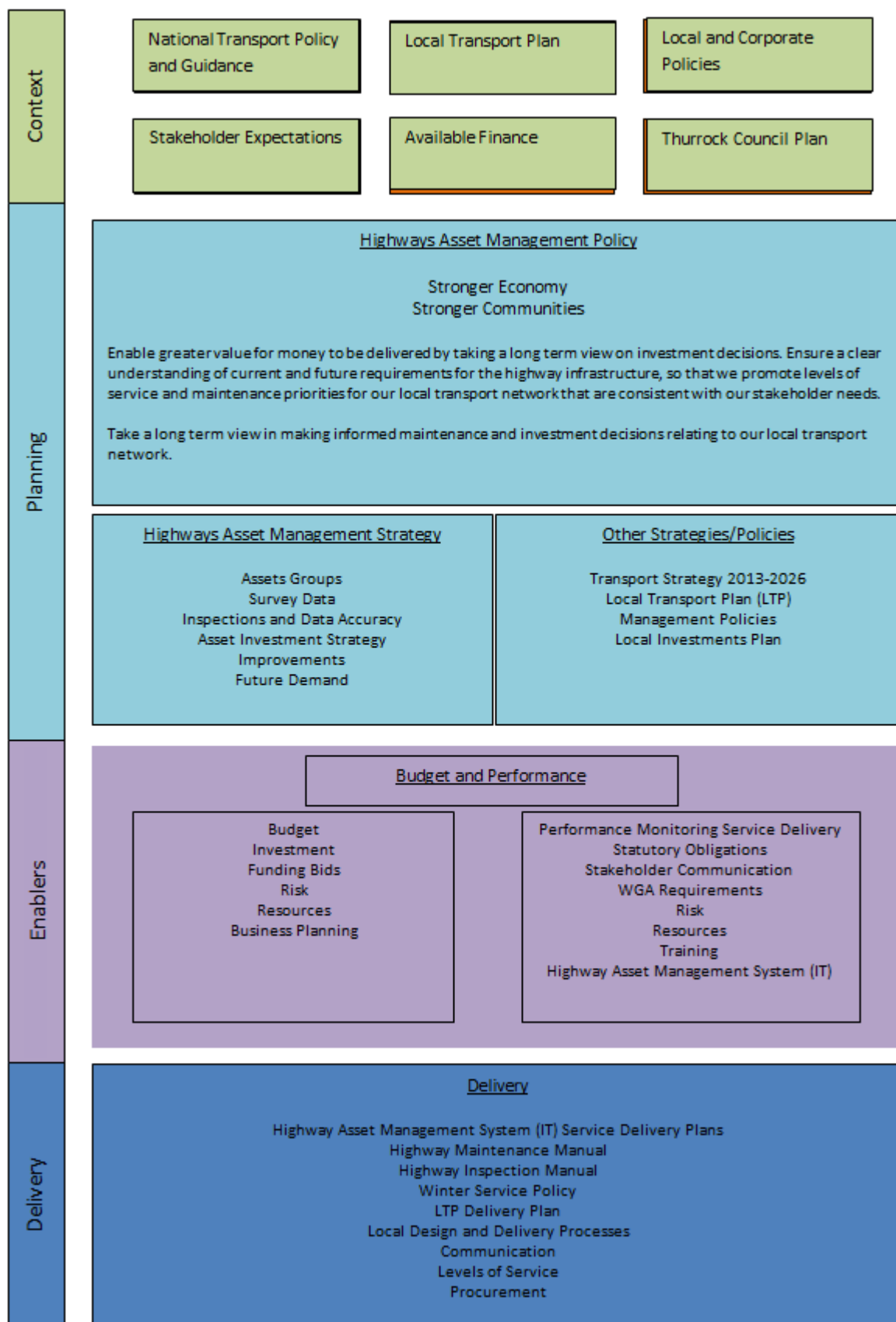
3.2.4. *Accessibility*

Maintenance practice can support accessibility by helping to create good conditions for pedestrians and cyclists, and taking into account the needs of people with disabilities.

3.2.5. *Regeneration*

Maintenance practice can support environmental regeneration, including through: recycling materials and so reducing the need for land take, reducing street clutter, protecting and enhancing habitats and biodiversity such as in verges, using appropriate materials in areas of cultural heritage, and helping to avoid noise and water pollution.

4. Asset Management Framework



5. Strategy for Individual Assets

As part of the asset management framework, and in accordance with other national guidance, the highway asset has been divided into asset groups. Each group is then broken down into asset components. The asset groups and components are described below in section 6.1.

A key function of the asset management process is to understand the funding needs of each asset group and component against performance, aims and objectives. This means understanding funding requirements, which will meet the following:

- LTP objectives;
- Delivery Planning;
- Performance Targets.

Key to this process is a need to understand the impact of financial decisions on customer satisfaction and the delivery of the corporate priorities. The impact that investing in one asset component may have on the overall performance of other asset components as well as the whole asset, is considered during the assessment process.

For the delivery of the highway service, Thurrock Council undertake all highway operations including all routine and operational functions along with planned maintenance and regeneration schemes.

In line with national guidance and good practice, Thurrock Council is developing a whole lifecycle approach to managing its highway maintenance activities. Understanding how long specific maintenance treatments last, the relative cost of these treatments and the Levels of Service (LoS) provided are essential pre-requisites to good asset management. Thurrock Council's goal is to continue to provide a safe and effective highway network, demonstrating value for money and efficient service delivery, in line with Council priorities.

6. Assets

6.1. Asset Groups

Asset	Quantity	Asset Component
Carriageway	560km	Carriageways including road markings, traffic calming features
Footway	1,000km	Footways, cycle ways, pedestrianised areas
Structures	133	Bridges, culverts, embankments, retaining walls, vehicle restraint systems
Drainage	20,000 gullies	Gullies and linear drainage channels, highway drains (including pipework, manholes and outfalls), pumping stations and telemetry, land drainage ditches and watercourses, roadside ditches
Street Lighting	1,500 lighting columns 3,500 illuminated signs	Lighting columns, lamps, cabling ducts, illuminated signs and bollards, subway lighting

	1,500 illuminated bollards	
Traffic Signals	50 signalised junctions	Signalised junctions, pedestrian and cycle crossings, urban transport control (UTC) system, detection equipment, cabling and ducting, CCTV equipment in the highway
Street Furniture	30,000 signs	Signs (advance direction, warning, regulatory, local direction/information), sign posts, non-illuminated bollards, information bollards, fences, guardrails, barriers, cycle stands, street name plates, bus stops and shelters, litter bins, benches/seats, cattle grids
Rights of Way	170km	178 Footpaths, 11 bridleways, 1 byway

7. Asset Management Roles

7.1. Senior Decision Makers' Roles

Council / Cabinet Members	Leadership & directions
Chief Exec	Demonstration of Senior Management Commitment
Director	Leadership & directions
Head of Service	Leadership & delivery of asset management benefits
Finance team	Whole of Government Accounting reporting

7.2. Asset Management's Roles

Highways Infrastructure Manager	Development of HAMS
	Development of HAM Plan & assign resources required for its implementation
	Develop any other HAM supporting documents
	Liaise with stakeholders
	Review HAM activities & develop improvements
	Ensure programmes are consistent with level of service
	Work with business and info systems to ensure that they meet asset management needs
Principal Highways Engineer	Implement HAM Plan
	Roads & Footways Management
	Structures Management
	Lighting Management
	Maintenance Management
	Inspection and Condition Measurement
	Info Technology Management
Data Collection & Management	

7.3. Asset Team's Roles

Roads & Footways	Paved areas
	Drainage
	Geotechnical assets
	Fences, walls, screens, environmental barriers
	Rd restraint system
	Marking and studs
	Rd traffic signs
	Landscape
	Signs and bollards
Inspection and Condition	Safety and serviceability inspections
	Condition surveys
Structures	Bridges
	Large culverts
	Small pan structures
	Retaining walls
	Tunnels
	Sign gantries
Lighting	Lighting
	Illuminated signs & bollards
	Energy
Maintenance	Maintenance works
	Procurement associated with maintenance
	Integration and optimisation of planned works
	Minimise impact on the network
Information Technology	Information systems
	Traffic signals
	Variable Message Signs
Data Collection & Management	Inventory
	Condition
	Construction & maintenance records

8. Asset Management Planning

The asset management should aim to develop a process for carriageways, which allows lifecycle aspirations to be considered and compared with condition targets, budget constraints and stakeholder's wishes, offering options for route and treatment strategies. Where suitable data is available this concept can, and will be implemented across other asset groups.

Packages of information are prepared annually, allowing the design team to formulate programmes of work based on the allocations identified in the previous stages. To further support and inform local needs a prioritisation process is being developed for carriageways to formulate programmes of work that relate to the high level aspirations, bringing customer focus and economic influences into the decision process. Where

suitable data is available and where appropriate this concept will be extended to encompass other Asset Groups. This will allow decisions to be made that consider criteria as well as condition and develop work programmes that are not necessarily based upon 'worst condition first'.

8.1. Gross Replacement Cost and Depreciated Replacement Cost

Whole of Government Accounts (WGA) has set new requirements for the way the value of the highway asset is reported to the HM Treasury in the Authority's audited accounts. The new approach has now been fully implemented. Authorities are now required to report the Depreciated Replacement Cost (DRC) of the highway asset. For this to be achieved on a yearly basis there is clear need for accurate and detailed inventory information and performance data. This requirement is supporting asset management by providing an improved understanding of network deterioration and combining it with the levels of service to be achieved.

The strategy will be developed with the Councils Finance team to ensure asset management practices are in place to satisfy the financial reporting requirements defined in the Transport Infrastructure Assets Code, published by CIPFA in May 2010. Thurrock Council embraces this approach and is developing the processes for collating the data needed to meet the WGA requirements, whilst developing good asset management practices that will lead ultimately, to a refinement of the service. This requirement is supporting asset management by providing an improved understanding of network deterioration and combining it with the levels of service to be achieved.

9. Future Demand

9.1. Lower Thames Crossing

The Lower Thames crossing is a proposal brought forward by Highways England (HE) to construct a new Thames Crossing in order to relieve the current crossing and reduce congestion.

This has been strongly opposed by Thurrock Council due to a lack of sufficient data to support the proposal. However, if the proposal is approved this could put considerably more pressure on the current network.

10. Benefits of Asset Management Strategy

The benefits of implementing the asset management strategy are as follows:

- Encourages engagement with other stakeholders, including Elected Members, Senior Officers and the public;
- Readiness to respond to changes resulting from climate change, weather emergencies, contractors, resilience and finance,
- Close working and integration of efforts with other parts of the Council, including

- Corporate aims and objectives;
- Improved delivery within budget constraints – including procurement;
- Efficiencies – better ways of doing things, or improved service, enhancing performance in a challenging environment.
- Improved understanding of customer aspirations and expectations;
- To influence and focus on the better use of resources.

11. Improvement Plan

Theme	Status	Actions	Completion Date
Strategy – investment level	Strategies and options reports need to be developed as part of the budget setting process	1. Develop strategies and options reports – set investment level outcomes.	Dec 2016
	There is a need to review the cost coding structure to enable improved cost control and benchmarking	2. Review and implement revised cost coding structure if required.	Feb 2017
Asset Register	Asset Data is relatively poor. Some Asset Data is stored externally including Traffic Management and Structures. Internal data is patchy with no formal records for Drainage or Street Furniture.	3. Collect condition data for footways 4. Develop strategy for drainage and Street Furniture asset data collection and collect higher priority items	Ongoing Sep 2016
	Data is required regarding gully cleansing operations. The data will be used to devise a more cost effective and efficient gully cleansing regime, visiting higher need gullies more frequently and those that are routinely found to not need cleaning less frequently.	5. Collect gully cleansing data 6. Devise improved gully cleansing regime	Ongoing Sept 2016

Communication Strategy	Future customer contact data and NHT survey results to be reviewed and analysed	7. Customer contact data to be collected and analysed, recorded on lessons learnt register and implemented in future decision making process as appropriate.	Jan 2017
		8. NHT survey results to be reviewed and analysed, recorded on lessons learnt register and implemented in future decision making process as appropriate.	Nov 2016
Carriageway Lifecycle Planning	There is accelerated deterioration of carriageways due to high level of HGVs on specific routes and areas at risk of structural damage due to periods of exceptional weather.	9. Carry out analysis to quantify and determine a response to this damage.	Sep 2016
Information systems	The Council has invested in an asset management system Symology, to support asset management.	10. Review inventory data collection and storage	Jul 2016 - done
		11. Add required inventory data into Symology	Nov 2016
		12. Agree procedures for maintenance of data	Nov 2016
		13. Continue updates of asset data.	Ongoing
Whole Life Cost Planning	Prioritisation processes for key asset groups	14. Budget allocation process between key asset groups requires review and updating.	April 2017

12. Good Practice

Thurrock Council is committed to the development of good practice and benefits from lessons learnt at National, Regional and Local levels. Officers from Thurrock Council regularly contribute to and attend:

- National and regional conferences;
- The CIPFA Highways Asset Management Planning Network;
- South East HAUC

Furthermore, Thurrock Council is committed to the sharing of knowledge and experiences in implementing asset management with other Highway Authorities across the Country. To this end, officers from Thurrock Council should aim to regularly present examples of good practice at national conferences and regularly attend meetings with the following groups:

- Highways Asset Management Financial Information Group (HAMFIG);
- The Chartered Institute of Public Finance and Accountancy CIPFA
- Highway Maintenance Efficiency Programme HMEP
- UK Roads Board
- National and regional conferences
- South East HAUC

13. Risk Management

13.1. *Introduction to risk management*

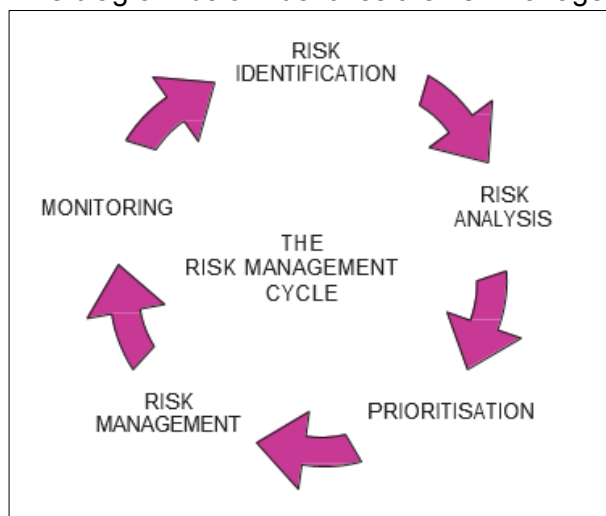
Thurrock Council has established risk management processes across all of its services including its highway infrastructure. These processes continually evolve and are subject to regular review to reflect customer requirements and the changing nature of the council's organisation.

The Accounts and Audit Regulations 2006 require the council to have in place arrangements for the management of risk. Regulation 4(1) states "the relevant body shall be responsible for ensuring that the body has a sound system of internal control which facilitates the effective exercise of the bodies functions and which includes arrangements for the management of risk" placing direct responsibility with all directors for risk management and maintaining sound systems of internal control within their area of service delivery.

Regulation 4(2) states "the relevant body shall conduct a review at least once a year of the effectiveness of its systems of internal control and shall include a statement on the internal control with any financial statements the body is required to publish" and requires the directors to make an annual governance statement on risk management and internal control which is embraced in a single statement made by the leader of the council, the chief executive and the Chief Finance Officer (CFO) as an integral part of the annual statement of accounts.

13.2. The risk management cycle

The diagram below identifies the risk management cycle.



Risk management within the asset management context involves an assessment of comparative risks to assist both options appraisal and options selection, by considering:

- The risks associated in providing different levels of service;
- The risks associated with variation of funding levels;
- The comparative risk of distributing varying funding levels between different asset groups.

As the above diagram shows, the risk management process concentrates overwhelmingly on four main risk issues:

- Recognising and quantifying risk;
- Assessing the nature of risk;
- Managing and controlling risk;
- Reviewing, monitoring and reporting risk.

Further level of details is contained in the reviewed annually Thurrock Council Corporate Risk & Opportunity Policy (December 2015).

13.3. Risk based asset management

Thurrock Council's HAMP builds upon these principles to enable more appropriate targeting of resources, projects to be managed more effectively, and the council's overall exposure to risk to be minimised.

The risk management process is part of the council's broader mainstream objective to bring together in one place the key components of its activities inside an integrated framework, as evidenced through key policy statements such as: corporate plans, capital strategies, business processes, financial and performance monitoring reports, and the budget setting process.

The safety of the highway network is managed under a risk based regime where the frequency and type of safety inspection is determined by the asset type. It is important that reasonable care is taken, based on proper assessment of risk, to ensure that appropriate maintenance steps are taken, while at the same time ensuring that public

money is used efficiently. Routine and scheduled safety inspections are carried out to detect dangerous defects, any necessary reactive work is based upon the likelihood and impact that the defect may have.

Any defects detected through routine inspections are repaired according to risk based protocols aimed at making individual assets safe or improving their serviceability. While the inspections themselves are routine, the repairs are sometimes of a reactive nature, meaning that they occur in response to an unpredictable trigger and are not pre scheduled.

The evaluation of each defect is based upon the risk they pose. Defects are then categorised and prioritised for repair according to appropriate guidance as contained in published Codes of Practice such as 'Well Maintained Highways' and 'Management of Highway Structures' and as outlined in detail in Highways Maintenance Policy (August 2016).

An effective regime of inspection, assessment and recording is a crucial component of highway maintenance. The characteristics of the regime, including frequency of inspection, assessment of the relative risks, items to be recorded and nature of response are set out in the Council's policies and maintenance strategies.

Highway structures are subject to a regime that detects any defects which may cause an unacceptable safety or serviceability risk, or a serious maintenance requirement to be detected in good time. The regime consists of a combination of Acceptance, Routine Surveillance, General and Principal Inspections of the whole structure and more detailed Safety and Special Inspections, as necessary, concentrating on known or suspected areas of deterioration or inadequacy.

Thurrock's highway inspection, assessment and recording regimes address the core objectives of highway maintenance, namely:

- Network safety
- Network serviceability
- Network sustainability

Many of the physical risks on the highway are identified from the surveys and inspection processes, however, the wider risks associated with the highway arise in a variety of different forms as described in the Council's Risk and Opportunity Policy guidance (December 2015 version is published on the Council's website).

Highway inspections generally fall into the following three categories:

13.3.1. Condition Surveys

Condition surveys are intended to identify deficiencies in the condition of the highways asset at a network level, including its long term performance and serviceability. They also support requirements relating to statutory performance measurement and asset valuation.

13.3.2. Service Inspections

The scale and scope of these inspections are determined by the requirements of the particular highway asset. The category includes Engineering Programme Inspections and inspections for regulatory purposes such as NRSWA which are intended to maintain network availability and reliability.

13.3.3. Safety Inspections

Routine Safety Inspections are carried out across the network in order to identify defects that are likely to create danger or serious inconvenience to users of the highway. The risk of danger is assessed on site, and in the case of highway defects they are identified as mainly Category 1 or 2 severity and are dealt with under the appropriate priority response.

The frequency of highway Safety Inspections relate to usage, network hierarchy, speed limits and urban/rural characteristics, whilst giving account to the likelihood of defects and the risk that they might pose if left undetected, and the staff resources available for implementing safety inspection regimes. Inspection frequencies are based around the guidance provided in the RLG Well-maintained highways COP for maintenance management.

Where carriageway and footway hierarchies are different, the authority aims to inspect in accordance with the requirements of the highest category. Further detail on the defects and frequency of inspections is contained in the Highways Maintenance Policy (August 2016).

13.4. Risk management implementation

13.4.1. Risk Identification & Evaluation Meetings, (monthly activity) (Infrastructure manager and team leaders)

- The risk identified is to be evaluated and a risk matrix prepared to establish the severity and probability. A Senior officer should carry out the risk analysis, complete the risk scenario and management action plan as per corporate risk management guidance and enter it on the risk register.
- Any unexpected events/issues which have failed to be identified as a risk but occurred and required resolution would be resolved and recorded on the lessons learnt register.
- A delegated officer shall maintain the lessons learnt and risk register which should be updated monthly.

13.4.2. Management and Review Meetings (quarterly activity) (Head of Service and Managers)

- The Transportation and Highways Management Team monitors agreed corporate actions and assesses additions/deletions to the service and project risk registers.
- Key risks identified in the Action Plans are reviewed and new significant risks or opportunities fed into the corporate risk register on a quarterly basis. The Service key risks are informed by the ongoing service and business change programme/project risk registers.
- The lessons learnt are reviewed on quarterly basis to determine whether any of the recorded issues should have been identified as a risk and mitigated. If so, this is done and it demonstrates the implementation of the lessons learnt in the risk management process.

13.5. Continuous improvement of risk management

Actions	Frequency
<ul style="list-style-type: none"> Risk management training to be included in the staff induction, refresher training and specialist training. 	Ongoing
<ul style="list-style-type: none"> Develop service unit/business unit risk profiles where these do not already exist. 	As and when required
<ul style="list-style-type: none"> Develop programme/project risk profiles, as appropriate, where these do not already exist. 	At programme project initiation and through lifecycle
<ul style="list-style-type: none"> Monitor, update and review the Highway Asset Management Policy (HAMP) and Strategy to include recommendations and actions arising from various inspection outcomes, changes in legislation etc. 	Annually
<ul style="list-style-type: none"> Cabinet receives report on corporate risk management performance 	Annually
<ul style="list-style-type: none"> As part of the approval for the Highways Asset Management Policy and Strategy also endorses risk based asset management approach. 	Every 3 years

13.6. Risk management compliance

To demonstrate compliance with this strategy the following documentation and procedures are in place:

- Corporate Risk Management Strategy;
- Related policy statements and council procedures;
- Business continuity/contingency/emergency plans – including tests and reviews;
- Internal audit reporting;
- Risk management action plans and risk registers;
- Contract/programme/project proposal review and sign-off;
- Corporate risk register;
- Service risk register;
- Programme/project/risk registers;
- Partnership risk registers;
- Contractual/contract risk assessments/registers;
- Reports/minutes: council, cabinet, audit committee, performance boards/management team meetings;
- Risk management training arrangements;
- Strategic policies, plans, financial plans, performance management and project/programme management plans and reports;
- Governance arrangements and plans for significant partnerships including risk management;
- Procedure notes and manuals for business critical systems; and
- Business continuity plans including tests and reviews.

The Transportation & Highways Service Plan contains sections dedicated to risk analysis, risk management action planning and it also holds a risk register. The Service Plan is informed by the engineering professional knowledge of our officers, emerging best practice and findings from inspections and corporate health checks. It also includes the actions to respond to the Key Lines of Enquiries (KLOE). The Service Plan provides assurance to Audit Committee, Cabinet, CMT and other stakeholders that processes continue to be developed and streamlined to meet organisational needs.

The risk based asset management is applied to all 24hrs operational maintenance service areas including street lighting, roads, footways, cycleways, structures, drainage, street furniture, road markings, traffic signs and traffic signals.

14. Performance Measures

In addition to good practices (section 12 above) and risk based asset management approach (section 13 above), the Highways Asset Management team is committed to deliver best performance outcomes which can be clearly measured. The performance measures (PM) are listed in the table below.

DRAFT

PM No	Performance Theme (Outcome)	PI Title	Indicator Outcome	Definitions	Methodology	Reporting Frequency	Unit	Formula	Target 2017 -2018	Target 2018 - 2019	Target 2019 -2020	Target 2020 -2021	Target 2021/22 onwards
1	Public and Workforce kept Safe	Reduction in Injuries	To demonstrate the effectiveness of the Contractor's safety culture and processes by monitoring the AFR, AIR and other safety related metrics.	<p>The following additional definitions support the calculation of this Performance Indicator:</p> <ul style="list-style-type: none"> - RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR). The full definition of what is included with RIDDOR is available from the HSE's website - Recordable Incidents - Any incident that results in injury, ill-health, fatality, damage to property or equipment. - Environmental Incident - Any incident that causes environmental harm. - Service/Utility Strike - Any incident that caused damage or disruption to the provision of a 3rd party service e.g. water, energy, communications etc. - Near Miss - An incident that didn't lead to death, injury, ill-health or damage but which had the potential to do so. - Unsafe Act - An observation of a behaviour or activity of a person that deviates from normal accepted safe practice. - Unsafe Condition - An observation of a physical condition of the workplace which render it unsafe. - Staff - All staff involved in Contract operations. - Road Users - Any third party and/or member of the public who uses the public Highway and its associated structures. - Hours Worked - Total hours worked by staff per month, including breaks and lunch hours. The working hours of third parties and/or Road Users will not be monitored. - Employer Work Sites - Includes any part of the Network where Contract activities are being undertaken including work sites, offices, compounds and depots relating to the Contract. Include specific sites relating to framework and tendered schemes if overseen by Contractor. 	<p>This Performance Indicator will measure the Accident Frequency Rate (AFR) for injuries to Contractors (or Road Users, if known) that take place at sites within the Affected Property at which the Contractor is providing the service over a rolling 12 months compared to a baseline and apply a 5% year over year reduction.</p> <p>AFR - The Accident Frequency Rate is based on the total number of Contractor incidents and injuries at sites within the Affected Property under control and/or supervision of the Contractor per 100,000 hours worked over 12 consecutive reporting months.</p> <p>The baseline information must be provided during the mobilisation period and will be jointly agreed between the Contractor and the Employer prior to service commencement.</p> <p>The Contractor will also be expected to report on, but not be measured against, numbers of Near Misses/Safety Observations and Service/Utility Strikes.</p>	Monthly	%	<p>AFR</p> <p>A = Total Number of Recordable Injuries over 12 months</p> <p>B = Average number of hours worked over 12 months</p> <p>ARF = (A/ B) x 10,000 = Number of injuries per 10,000 hours worked</p>	A 5 % year over year reduction against baseline figure to be determined during mobilisation period.				
2	Reduced Disruption on the Network	Percentage of works complying with the TMA requirements	Ensure the Employer meets their Network Management Duty	<p>The Contractor is responsible for sending all Traffic Management Plans (TMP), Works activity Footprints (WAF's), TMAN Notifications, ETON Notifications (NRSWA and Permit Applications) to the relevant Highway Authority. Highway Authorities have powers under the TMA Act 2004 to issue fixed penalty notices to Promoters who commit offences. Failure to cooperate with the Act or Regulations may lead to charges imposed on the Contractor in line with the fines associated with the relevant legislation.</p>	<p>To measure the Contractor's effectiveness at complying with the TMA requirements and thereby ensuring the Employer meets their Network Management Duty</p> <p>The full methodology of this indicator will be developed during mobilisation and will not exceed the legislative requirements already in place</p>	Monthly	%	<p>For Example:</p> <p>A = Number of works complying with TMA requirements</p> <p>B = Total number of works undertaken</p> <p>SPI calculation = (A /B) x 100</p>	Target to be set by Strategic Board after obtaining baseline data during the first year				

3	Preventative Maintenance is Effective	Percentage Reactive Works completed on time	To demonstrate effective planning and programming of works.	Reactive Works - All Tasks instructed by the Employer through the Reactive Works contract.	This indicator will review the number of Tasks under the contract that fall into the Reactive Works category and assess in terms of a percentage how many were completed on time. Extension of time will be permissible on this indicator if agreed by the Employer prior to the current agreed due date being exceeded.	Monthly	%	A = Total number of Reactive Works that were completed within agreed timescales in the reporting month. B = Total number of Revenue Works that were due to be completed in the reporting month. SPI Calculation = (A / B) x 100	95% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.
4	Preventative Maintenance is Effective	Average number of days to repair Lighting Defects.	Well maintained lighting	The following definitions support the calculation of this Performance Indicator: Contractual Timescales - The Contractor is required to rectify outages of road and sign lighting units caused by any defect(s) as described within the Contract references within 3 calendar days or 7 calendar days if a permit is required; unless otherwise specified or agreed by the Employer. Average number of days - The average number of days is calculated by using the following two elements: 1. The total number of calendar days (attributable to the Contractor) for which all outages rectified in the reporting year were open (for each fault, number of days open should be calculated from point the fault was identified, irrespective of contract year). 2. The total number of calendar days that all lighting outages remaining open at the end of the reporting month have been open for (from point of fault identification to end of reporting month). The sum of both the above is divided by the sum of the total of number of outages that were rectified year to date and the total number of lighting faults that remain open at the end of the reporting period. Permissible Exclusions - The Contractor will be allowed to put forward a request to exclude one or more open faults from the indicator where it is deemed that reasons beyond the Contractors control prevent rectification in a timely manner. DNO - Distribution Network Operator, the licensed operator of the electricity supply network in the area. Outages attributable to the DNO will be excluded (DNO - Distribution Network Operator, the licensed operator of the electricity supply network in the area). Included lights - The following should be included: highway lights, street lights mounted on other structures, e.g. buildings, utilities	At the end of each reporting period, the contractor will calculate the total number of calendar days that all outages were open for (addition of outages repaired duration and outages open duration for all faults) and divide by the total number of outages rectified and remaining open in the reporting month. The SPI will be calculated on a cumulative year to date basis. All outages agreed as 'Excluded' will not be included in the SPI calculation.	Monthly	No	For both Targets $N = (a + b) / c =$ Number of days a = total number of calendar days taken to rectify faults, contract start to date (applicable to all faults rectified year to date) b = total number of calendar days for faults remaining open, contract start to end of reporting month c = total number of faults rectified year to date and remaining open at the end of the reporting month.	SPI10a = 3 days SPI10b = 7 days

				<p>poles etc. where the purpose of the light is to illuminate the street, lights in pedestrian subways, illuminated traffic signs, illuminated bollards, pedestrian crossing signs and school crossing beacons. The following should not be included: Tunnel and underpass lighting (specified assets), High mast lighting, Special event/celebrations/festive decorations.</p> <p>'Outage' - An outage means a included light that is not illuminated as planned, e.g. out of light, flickering, inadequate light output, late or early switch on etc. All outages should be included, even those as a result of vandalism, accidental damage, or failure of electricity supply including those owned and operated by the authority.</p> <p>Outages repaired duration - For lighting outages rectified during the period: From the time the Contractor detects the outage or is notified of the outage, whichever is the sooner, to the time the Contractor repairs the outage (i.e. put back into working order) or refers it to the DNO for rectification. Therefore, lights which are reported as out but are subsequently found to be out due to a DNO fault, their duration should be counted up until the outage is referred to DNO.</p> <p>Outages open duration - For lighting faults that remain open at the end of the reporting month: From the time the Contractor detects the outage or is notified of the outage, whichever is the sooner, to the of the end of the relevant reporting month, or to the time the Contractor referred it to the DNO for rectification.</p>					
5	Responsible Procurement	Percentage Construction and Demolition waste reused or recycled	Successful management of construction and demolition waste in order to reduce the use of raw materials, encourage recycling and reuse and minimise the waste taken to landfill sites to offer both environmental and economic benefits.	<p>The full definition and terminology used in this indicator is defined in Vol.2 Service Information (Common) Annex A 164AR. The following additional definitions support the calculation of this Performance Indicator:</p> <p>Construction & Demolition waste - Own waste generated from the construction, repair, maintenance & demolition of buildings, structures & roads.</p> <p>Recycle - Involves using waste to manufacture other products. Initiating material entering into a process where some or all of its properties can be reclaimed, reused, reconditioned, refurbished and/or manufactured. [Ref: Mayor's Responsible Procurement Code]</p> <p>Reuse - Involves multiple use of a product in its original form, with or without reconditioning, for its original or alternative purpose e.g. refilling plastic bottles or recharging batteries [Ref: Mayor's Responsible Procurement Code]</p>	<p>Percentage of tonnage of Construction and Demolition waste material reused and recycled based on the overall tonnage of waste material generated. (excavated and non - excavated materials). (See Clause 164AR Environmental Management of Series 100).</p> <p>The inverse value of this SPI is assumed to be the amount of construction and demolition excavated waste material sent to landfill.</p>	Quarterly	%	<p>A = Tonnage of Construction & Demolition waste material recycled</p> <p>B = Tonnage of Construction & Demolition waste material reused</p> <p>C = Total tonnage of Construction & Demolition waste material generated</p> <p>SPI Calculation = $(A+B) / C \times 100$</p>	95% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.

6	Responsible Procurement	Percentage recycled and/or green products procured	Reduce consumption of new resources by procuring recycled and green construction materials and following the principles of sustainable procurement	<p>The full definition and terminology used in this indicator is defined in Vol.2 Service Information (Common) Annex A 164AR. The following additional definitions support the calculation of this Performance Indicator:</p> <p>Green product - A product that is certified for its sustainable life-cycle properties, for example wood certified by Forest Stewardship Council (FSC)</p> <p>Recycled product - Product either consisting of 100% recycled material or that has recycled content</p>	<p>Total tonnage of recycled and/or green construction products procured expressed as a percentage of the total tonnage of construction material procured.</p> <p>The Contractor is expected to report the volume and value of material purchased, split by virgin and recycled/green totals per 'product' purchased.</p> <p>The Contractor should update and submit the SPI submission worksheet for SPI 14 on a quarterly basis.</p>	Quarterly	%	<p>A = Tonnage of Construction Material procured that is recycled or green in nature.</p> <p>B = Total tonnage of Construction Material procured</p> <p>SPI Calculation = $(A / B) \times 100$</p>	14% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.
7	Responsible Procurement	Percentage of Contractor vehicles which meet the required Euro Standards	Reducing the environmental impact of the vehicle fleet.	<p>The full definition and terminology used in this indicator is defined in Vol.2 Service Information (Common) Annex A 164AR. The following additional definitions support the calculation of this Performance Indicator:</p> <p>none</p>	<p>Total number of newly purchased or leased core fleet vehicles meeting specified Euro Emission standards and CO2 Emission Limits expressed as a percentage of the total number of core fleet vehicles.</p> <p>There are two elements to this indicator:</p> <p>SPI 15a: Euro Standards The total number of newly purchased or leased core fleet vehicles meeting specified Euro Emission standards expressed as a percentage of the total number of core fleet vehicles.</p> <p>SPI 15b: CO2 Emission Limits The total number of newly purchased or leased core fleet vehicles meeting specified CO2 Emission Limits expressed as a percentage of the total number of core fleet vehicles subject to CO2 Emission Limits.</p> <p>The final SPI is calculate as the mean average of SPI 15a and SPI15b.</p>	Quarterly	%	<p>A = Number of vehicles owned or leased which comply with the required Euro Standard</p> <p>B = Total number of vehicles owned or leased</p> <p>SPI Calculation = $(A / B) \times 100$</p>	100%

8	Scheme Delivery is Effective	Percentage Capital Works completed on time	To demonstrate effective planning and programming of works.	The full definition and terminology used in this indicator is defined in Vol.1 Schedule 7 Conformed Call-Off Conditions of Contract, sections 11 and 29 and in Vol.2 Service Information (Common) section 2 Services. The following additional definitions support the calculation of this Performance Indicator: Capital Works - All Tasks instructed by the Employer from their Capital budget This does not include works under Lump Sum. Physical Completion - When the Contractor has completed all the physical site works or services which the Task Order states and corrected notified Defects which would have prevented the Employer or Others from using the Task and Others from doing their work. For the purposes of the PPI this is taken as the Task Completion Date minus 14 days. Completion timescales - Revenue works, unless otherwise agreed by the Employer, have a default duration of 28 days to complete , starting from the date of instruction. On time - Any revenue works that has been completed before or on the agreed Task Completion date is deemed to be 'on time'.	This indicator will review the number of Tasks under the contract that fall into the Capital Works category and assess in terms of a percentage how many were completed on time. Extension of time will be permissible on this indicator if agreed by the Employer prior to the current agreed due date being exceeded.	Monthly	%	A = Total number of Scheme Task Orders completed on or before the programmed completion date over the last 12 months (or YTD in Year 1) B = Total number of Scheme Task Orders that were expected to have been completed over the last 12 months (or YTD in Year 1) PPI Calculation = (A / B) x 100	95%	96%	97%	98%	99%
9	Scheme Delivery is Effective	Percentage of Capital Works where defects were rectified within required time	Minimum impact on the customer after scheme completion.	The full definition and terminology used in this indicator is defined in Vol.1 Schedule 7 Conformed Call-Off Conditions of Contract, sections 11, 29, 40-43 and in Vol.2 Service Information (Common) section 2.4.5 Reactive works and schemes - general. The following additional definitions support the calculation of this Performance Indicator: Completion on time - Achievement of rectifying notified defects on or before the Defect Correction Period.	Report the percentage of Scheme Task Orders where any Defects identified prior to or at Completion have been corrected within the Defect Correction Period, this should also include Scheme Task Orders where zero defects were notified.	Monthly	%	A = Total number of capital works YTD where all Defects notified before or at Completion have been rectified within the Defect Correction Period or are agreed Defect free at Completion B = Total number of capital works YTD that have passed their Defect Correction Period, or are agreed Defect free at Completion. SPI Calculation = (A / B) x 100	98% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.				

10	Scheme Delivery is Effective	Percentage of acceptable H&S files received within 14 days of physical completion of a Notifiable Scheme Task.	Enable the Employer to fulfil its legislative requirement under CDM Regulations 2007.	<p>The full definition and terminology used in this indicator is defined in Vol.2 Service Information (Common) Annex A 124AR. The following additional definitions support the calculation of this Performance Indicator:</p> <p>Health & Safety File - The health and safety file contains the information needed to allow future construction work, including cleaning, maintenance, alterations, refurbishment and demolition to be carried out safely. Information in the file should alert those carrying out such work to risks, and should help them to decide how to work safely. Information on duties, file content and storage requirements are found within the CDM ACOP.</p> <p>Health & Safety File submission timeframe - The LoHAC Framework allows the Contractor 14 days from the Task Completion Date to update the H&S File.</p> <p>Notifiable - Any Scheme Task lasting more than 30 days or involving more than 500 person days of construction work.</p> <p>Acceptable Quality - The Contractor must update the H&S File information that is of acceptable quality. Acceptance or rejection of the H&S file information will be confirmed back to the LoHAC by TfL's CDM-C within 2 weeks of receipt.</p> <p>Additional Legislative References: - Construction (Design and Management) Regulations 2007 (CDM) - Managing health and safety in construction Approved Code of Practice (CDM ACOP)</p>	<p>To report the number of schemes where the H&S file information of acceptable quality is submitted within 14 days of the Task Completion Date.</p> <p>This will be monitored as the number of notifiable schemes where the H&S file information was received within 14 days and subsequently accepted, as a percentage of the total number of H&S files due to be submitted in the reporting month.</p> <p>Note: If the H&S file is submitted within 14 days and confirmation of acceptance / rejection is not provided by TfL within the 2 week period following submission, for purposes of the SPI the H&S file will be deemed to have been accepted. However it may later be rejected and require re-submission – this will not affect future SPI scores.</p>	Monthly	%	<p>A = Total No. of Schemes where the H&S file submission has fallen due and the subsequent TfL acceptance / rejection period has lapsed (i.e. Scheme Task Completion Date + 28 days) and falls within current reporting year</p> <p>B = Total No. of Schemes where the H&S file information was submitted within 14 days of the Task Completion Date and was accepted within further 2 weeks (accepted)</p> <p>C = Total No. of Schemes where the H&S file information was submitted within 14 days of the Task Completion Date and acceptance / rejection was not communicated to LoHAC within the further 2 weeks (deemed as accepted for purposes of SPI) = 5</p> <p>∴ SPI 17 = $((B+C)/A)*100$</p>	100% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.
----	-------------------------------------	--	---	--	---	---------	---	--	---

11	Satisfied Residents	Customer Satisfaction	To demonstrate the satisfaction of the residents with the service	<p>The Transportation & Highways service will commission the National Highways and Transportation (NHT) resident survey on annual basis in order to understand the requirements of the local residents and to drive the improvement of the service by implementation of the residents' feedback. The survey will assess the satisfaction with:</p> <ul style="list-style-type: none"> - Pre-start information about the works - Did the work start on time - The quality of the work carried out 	<p>A postal survey, run annually; Uses standard questions to allow comparison between participating authorities; Controlled by a Steering Group of authorities, co-ordinated by the NHT Administrator, measure2improve (m2i), and conducted by leading market research company Ipsos MORI; Covers all Highway & Transport services; Sent to a random sample of residents, selected by Ipsos MORI, in each Authority area; Public responses processed by Ipsos MORI and loaded into the NHT Survey web site for analysis by m2i; Results published via this web site – including authority specific dashboards, maps, graphs and tabular reports</p>	Annually	%	Ipsos MORI and measure2improve analysis (http://www.nhtnet.work.org/nht-public-satisfaction-survey)	80%	85%	90%	93%	95%
11	Contract Requirements fulfilled	Percentage of Task Orders where the final account was submitted on time	Timely and efficient processing of financial payments upon completion of all Task Orders.	<p>The full definition and terminology used in this indicator is defined in Vol.1 Schedule 7 Conformed Call-Off Conditions of Contract, sections 11 and 29 and in Vol.2 Service Information (Common) section 2.0.5 Reactive works and schemes - general. The following additional definitions support the calculation of this Performance Indicator:</p> <p>Physical Completion - When the Contractor has done all the work or services which the Task Order states he is to do and corrected notified Defects which would have prevented the Employer or Others from using the Task and Others from doing their work. For simplicity this is taken as the Task Completion Date minus 14 days.</p> <p>Capital Works - All Tasks instructed by the Employer from their Capital budget . This does not include works under Lump Sum</p> <p>Revenue Works - All Tasks instructed by the Employer from their Revenue budget This does not include works under Lump Sum.</p> <p>Final Account due date - The Final Account due date is 6 weeks after the Task Completion Date (i.e. for simplicity 8 weeks after the Physical Completion Date). The Employer may grant at his absolute discretion, due to exceptional circumstances, an extension of time to submit the final account.</p>	<p>Report the number of Final Accounts for Task Orders that were submitted within 12 weeks of the Task Completion Date or as otherwise agreed vs. the number of Final Accounts for Task Orders that were due to be submitted within 6 weeks of the Task Completion Date or as otherwise agreed within the reporting period.</p> <p>This PPI will be split by Revenue and Capital Tasks and the total PPI score will be an equally weighted average of the two elements.</p>	Monthly	%	<p>A = Total number of On Time Final Account Applications that have been submitted.</p> <p>B = Total number of Task Orders for which Task Completion has been certified.</p> <p>PPI calculation = $A / B \times 100$</p>	95%	96%	97%	98%	99%

12	Contract Requirements fulfilled	Percentage of Task Responses within the required timescales	Ensure timely and efficient processing of instructed works.	<p>The full definition and terminology used in this indicator is defined in Vol.1 Schedule 7 Conformed Call-Off Conditions of Contract, sections 11 and 29 and in Vol.2 Service Information (Common) section 2.0.5 Reactive works and schemes - general. The following additional definitions support the calculation of this Performance Indicator:</p> <p>Accepted - The Service Manager will assess whether they have been provided with all the information required in the Task Request to enable them to make a decision regarding issuing a Task Order. Where the Contractor is instructed to submit a revised Task Response on the terms of the original Task Request, the Task Response is deemed not accepted. If acceptance or rejection is not communicated back to the Contractor by the Service manager then for the purposes of the SPI only the Task Response is deemed Accepted.</p> <p>Number of late Task Responses - The number of Task Responses that have not been delivered or within the Task Response Time or other agreed timeframe.</p> <p>Number of rejected Task Responses - The number of Task Responses that have been delivered but rejected within the Task Response Time or other agreed timeframe.</p> <p>Number of Task Responses Due - The total number of Task Responses that were due to be returned to the Service Manager within the reporting period.</p>	To report the number of Minor or Scheme Task Responses received and accepted within Task Response Time or other agreed date by monitoring Task Responses that were rejected or received and late or are still outstanding as a percentage of the number of Task Responses that are due.	Monthly	%	<p>A = Number of Task Responses submitted to the Employer within the required timescales B = Total number of Task Responses submitted</p> <p>SPI Calculation = $(A / B) \times 100$</p>	95% for first year. Target for future years to be agreed with the Employer and ratified by the Area Board.
----	--	---	---	---	---	---------	---	--	---

15. Supporting Documentation

The Asset Management Strategy refers to, and is linked to a number of key documents, as listed below, that combined allow for the asset management approach to be implemented and support the delivery of the desired level of service. These include documents in the table below:

National	Thurrock Council
UKRLG Codes of Practice	LTP
CIPFA Financial Reporting Code	Council Plan
PAS 55	Corporate Strategy
CSS Framework for Highway Asset Management	Highway Asset Management Policy
Maintaining a Vital Asset	Highway Maintenance Policy
HMEP Highway Infrastructure Asset management- Guidance Document	Winter Service Policy and Plan
HMEP A LEAN Toolkit for Highway Services	

16. Review Process

This strategy will be updated annually with minor amendments and reviewed on a three yearly basis by the Highway Asset Management Team.