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## **Highway Infrastructure Asset Management Plan 2017 - 2026**

Trafford Council HIAMP 2017 -2026

October 2017

# Trafford Council - Highway Infrastructure Asset Management Plan

## Sign Off Sheet

This sign off sheet verifies that relevant stakeholders have been made aware of the Highways Infrastructure Asset Management Plan, and all responsibilities within.

It is their responsibility to make sure the HIAMP is circulated to all relevant stakeholders, and is updated annually keeping the document live.

Title	Signature	Date
Corporate Director, Economic Growth, Environment and Infrastructure, Trafford Council		2017
Executive Member for Highways, Parks and Environmental Services, Trafford Council		2017
Highway Manager, One Trafford Partnership, Trafford Council		2017
Principal Engineering Manager, One Trafford Partnership, Amey		2017

Title	Signature	Date
Corporate Director, Economic Growth, Environment and Infrastructure, Trafford Council		2018
Executive Member for Highways, Parks and Environmental Services, Trafford Council		2018
Highway Manager, One Trafford Partnership, Trafford Council		2018
Principal Engineering Manager, One Trafford Partnership, Amey		2018

Title	Signature	Date
Corporate Director, Economic Growth, Environment and Infrastructure, Trafford Council		2019
Executive Member for Highways, Parks and Environmental Services, Trafford Council		2019
Highway Manager, One Trafford Partnership, Trafford Council		2019
Principal Engineering Manager, One Trafford Partnership, Amey		2019

## Contents

<b>Executive Summary .....</b>	<b>7</b>
<b>Foreword .....</b>	<b>8</b>
Success of Trafford Council’s Previous Asset Management Approach and TAMP to Date .....	8
Trafford’s Asset Management Approach in the HIAMP .....	8
Implementation .....	9
<b>Background .....</b>	<b>11</b>
UKRLG HMEP Summary of the Recommendations .....	12
<b>Part A – Asset Management Context .....</b>	<b>14</b>
<b>UKRLG Recommendation 1. Asset Management Framework .....</b>	<b>14</b>
Our Approach - Asset Management Framework.....	14
Legal, Policy and Codes .....	15
Financial.....	15
Our Approach - Asset Management Planning.....	15
Our Approach - Asset Management Enablers.....	16
Our Approach - Delivery .....	16
One Trafford.....	16
<b>UKRLG Recommendation 2. Communication.....</b>	<b>17</b>
Our Approach - Communication .....	17
Stakeholders.....	17
Elected Members.....	18
Public.....	18
National Highways & Transportation Survey (NHT).....	18
Asset Valuation .....	19
<b>Part B - Asset Management Policy, Strategy and Plan .....</b>	<b>20</b>
<b>UKRLG Recommendation 3. Asset Management Policy and Strategy .....</b>	<b>20</b>
Our Approach - Asset Management Policy and Strategy .....	20
Policy .....	20
Strategy .....	20
Plan .....	20
Asset Management Strategy Process .....	22
<b>UKRLG Recommendation 4. Performance Management Framework .....</b>	<b>23</b>
Our Approach - Performance Management Framework .....	23
Levels of Service .....	23
Developing Our Levels of Service .....	23
Trafford Council HIAMP Levels of Service.....	24
<b>UKRLG Recommendation 5. Data Management.....</b>	<b>25</b>
Our Approach - Data Management .....	25
Highway Asset Management Systems (HAMS).....	25
Data Management Strategy .....	25
Asset Maintenance .....	25
Pavement Management .....	26

# Trafford Council - Highway Infrastructure Asset Management Plan

National Street Gazetteer (NSG).....	26
Performance Management .....	26
Street Works.....	26
Street Works Co-ordination.....	26
Works Management .....	27
Customer Service .....	27
<b>UKRLG Recommendation 6. Lifecycle Plans .....</b>	<b>28</b>
Our Approach - Lifecycle Planning .....	28
Asset Creation / Inventory Capture .....	29
Routine Maintenance.....	29
Renewal or Replacement .....	29
Decommissioning .....	29
Service Life / Performance Level .....	29
Deterioration Modelling.....	29
Whole Life Costing .....	30
Scenario Modelling .....	30
<b>UKRLG Recommendation 7. Works Programme .....</b>	<b>31</b>
Our Approach - Works Programme.....	31
Reactive Maintenance – Highway Inspection Regime.....	31
Technical Survey Strategy.....	31
Forward Works Programme .....	32
Optimisation .....	32
Key Route Network .....	33
<b>Part C – Enablers.....</b>	<b>34</b>
<b>UKRLG Recommendation 8. Leadership and Commitment.....</b>	<b>34</b>
Our Approach - Leadership and Commitment.....	34
<b>UKRLG Recommendation 9. The Case for Asset Management.....</b>	<b>35</b>
Our Approach - The Case for Asset Management .....	35
Department for Transport Incentive Fund .....	35
<b>UKRLG Recommendation 10. Competencies and Training .....</b>	<b>36</b>
Organisational Considerations .....	36
Strategic.....	36
Tactical.....	36
Operational.....	37
Our Approach - Competencies and Training .....	37
<b>UKRLG Recommendation 11. Risk Management .....</b>	<b>39</b>
Our Approach - Risk Management.....	39
Management of Risk.....	39
Resilient Network .....	41
Critical Assets .....	42
Potholes Review.....	42
Drainage Assets .....	42
<b>UKRLG Recommendation 12. Highway Asset Management Systems (HAMS).....</b>	<b>43</b>
Our Approach - Highway Asset Management Systems (HAMS) .....	43

# Trafford Council - Highway Infrastructure Asset Management Plan

Asset Database Confirm.....	43
Asset Valuation .....	44
Horizons .....	44
Map Info.....	44
<b>UKRLG Recommendation 13. Performance Monitoring .....</b>	<b>45</b>
Our Approach - Performance Monitoring .....	45
<b>UKRLG Recommendation 14. Benchmarking .....</b>	<b>47</b>
Our Approach - Benchmarking .....	47
TfGM and GMCA.....	47
National Highways & Transportation Survey .....	47
CQC (Cost, Quality, Customer) Benchmarking Club.....	47
Department for Transport Submissions .....	47
Highways Maintenance Efficiency Programme (HMEP) .....	47
Asset Management Standards .....	47
<b>15. Our Future Actions Moving Forward .....</b>	<b>48</b>
Asset Management Group.....	48
<b>A. Appendix A - Asset Management Plan for Carriageways .....</b>	<b>49</b>
Survey Strategy and Data Collection.....	49
SCANNER Survey .....	49
Coarse Visual Inspection (CVI).....	49
SCRIM Survey .....	49
Maintenance Strategy.....	49
Works Programme / Life Cycle Planning .....	50
Material Life Cycle .....	50
Hot Rolled Asphalt.....	50
Concrete Speed Cushions .....	50
Reactive Maintenance.....	50
<b>B. Appendix B - Asset Management Plan for Footways and Cycletracks .....</b>	<b>51</b>
Survey Strategy and Data Collection.....	51
Maintenance Strategy.....	51
Works Programme / Life Cycle Planning .....	51
Cycleways.....	52
<b>C. Appendix C - Asset Management Plan for Structures .....</b>	<b>53</b>
Survey Strategy and Data Collection.....	53
Maintenance Strategy.....	54
Works Programme / Life Cycle Planning .....	54
Structures Future Asset Management .....	55
<b>D. Appendix D - Asset Management Plan for Highway Lighting.....</b>	<b>56</b>
Strategy .....	56
Maintenance Strategy.....	56
Works Programme / Life Cycle Planning .....	56
<b>E. Appendix E - Asset Management Plan for Drainage.....</b>	<b>57</b>
Strategy .....	57

# Trafford Council - Highway Infrastructure Asset Management Plan

Maintenance Strategy.....	57
<b>F. Appendix F - Asset Inventory .....</b>	<b>58</b>
<b>G. Appendix G – Communication Strategy .....</b>	<b>60</b>

## Executive Summary

Asset management has been widely accepted by central and local government as a means to deliver a more efficient and effective approach to management of highway infrastructure assets through longer term planning, ensuring that standards are defined and achievable for available budgets. It also supports making the case for funding and better communication with stakeholders, facilitating a greater understanding of the contribution highway infrastructure assets make to economic growth and the needs of local communities.

This new Highway Infrastructure Asset Management Plan (HIAMP) document for Trafford Council has been constructed around the most up to date guidance on asset management and follows the UK Roads Liaison Group (UKRLG) Highways Efficiency Maintenance Programme's (HMEP) Highway Infrastructure Asset Management Guidance, which has been developed by the Department for Transport (DfT) in partnership with the Local Government Association (LGA), on what should be included in a highways asset management plan. It also recognises the most up to date standards set out in the highway codes of practice and recent national and international guidance documents on asset management and asset valuation, as well as taking into account local needs.

By managing our infrastructure asset in accordance with asset management principles, we can better understand the impact of our investment strategies and help prolong and protect the life of our entire transport infrastructure. Over time, through managed and timely intervention, we will succeed reducing the need for unplanned maintenance and instead, see resource re-focused in to careful and considered interventions that protect and preserve a high-quality network.

Trafford's highway network comprises just over 834 km of carriageway, approximately 174km being in an urban environment. The unclassified network accounts for around 653km of the asset which is approximately 78% of the whole network. The footway and cycleway network is approximately 1,196 km. The asset also includes, over 11,900 traffic signs and approximately 27,900 lighting columns. Trafford Council is responsible for 297 highway structures including road bridges, footbridges, underpasses, subways, culverts, and retaining walls. The highway asset also includes safety fences, drainage, street furniture and road markings.

Trafford Council has calculated the asset value in accordance with the requirements for Whole of Government Accounts. All highway assets have been valued at £1.916 Billion<sup>1</sup>; this makes them the most valuable asset owned by Trafford Council. The highway asset provides a universal service to every single resident young or old across Trafford and is central to a place where business can grow and prosper.

During the development of the framework for Trafford's HIAMP, it was decided to link the plan directly to the 14 recommendations in the UK Roads Liaison Group guidance document as these were seen as the cornerstone to good asset management practice.

Also key, was the principle of Policy, Strategy & Plan, whereby the HIAMP follows a clear line of sight from the local and national policies that shape the future direction of the Council, via the strategies we will employ to meet these policies and what this means for specific assets and their corresponding performance data.

- **Policy** - Local policies such as Greater Manchester 2040 Transport Strategy, Trafford's Corporate Strategy, Service Plans, and Trafford's highway policies, plus national legislation and policies such as The Highways Act 1980 and Code of Practice documents such as the Well-managed Highway Infrastructure.
- **Strategy** - This is the bulk of the document and demonstrates the steps being taken in Trafford to meet the 14 recommendations in the Highway Infrastructure Asset Management Guidance Document. This HIAMP is structured so that the recommendations are the Chapter headings, with an extract from the guidance document, followed by Our Approach which outlines what we are doing to meet them.
- **Plan** – Appendix A-E contain the Asset Management Plans for specific assets namely: Carriageways, Footways, Structures, Highway Lighting and Drainage. These final chapters show in greater detail how we will manage these assets to not only meet the 14 recommendations in the UKRLG HMEP guidance but also to make best use of the resources available to provide a safe and efficient working highway network for those who travel within or through Trafford.

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<sup>1</sup> Based on Gross Replacement Cost (GRC)

## Foreword

As time goes by roads that are currently in good condition will deteriorate, just like any physical asset such as a house or a vehicle. To keep on top of the deterioration of our asset we must invest continually in maintenance. Local authorities are unlikely to ever be in the position where there is enough money to maintain every road that needs work in a single year, it is essential therefore to make the best use of the available resources to get the best investment results for our customers.

In a climate where budgets and resources are tightening, Trafford is facing significant challenges in deciding how to manage our assets effectively.

Trafford Council has been applying the principals of asset management for some time; since 2001/02, which is evidenced within the 2007 Transport Asset Management Plan (TAMP), updated in 2012 and subsequently 2015 following the review by Trafford Council to outsource asset management activities to Amey through the One Trafford Partnership.

## Success of Trafford Council's Previous Asset Management Approach and TAMP to Date

The asset management approach to date in the TAMP highlighted the size and value of the Trafford transport asset to elected members, other Council officers and residents. It determined the cost per year to stop further deterioration of the carriageway asset known as the 'steady state' cost, currently determined as £4.31M, and the cost to improve the network over and above the steady state cost. It also contained an improvement action plan to support continuous improvement in the management of Trafford's highways asset.

NI	06/7	07/8	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
130-1	11	9	8	6	7	9	6	8	5	4	6
130-2	13	8	7	5	5	8	5	7	5	4	5
224b	11	9	7	9	9	7	7	8	7	6	5

130-1 - % of Trafford's A Class roads requiring maintenance within a year , 130-2 -% of Trafford's B & C Class roads requiring maintenance within a year , BV224b – % length of Trafford's Unclassified roads requiring maintenance within a year

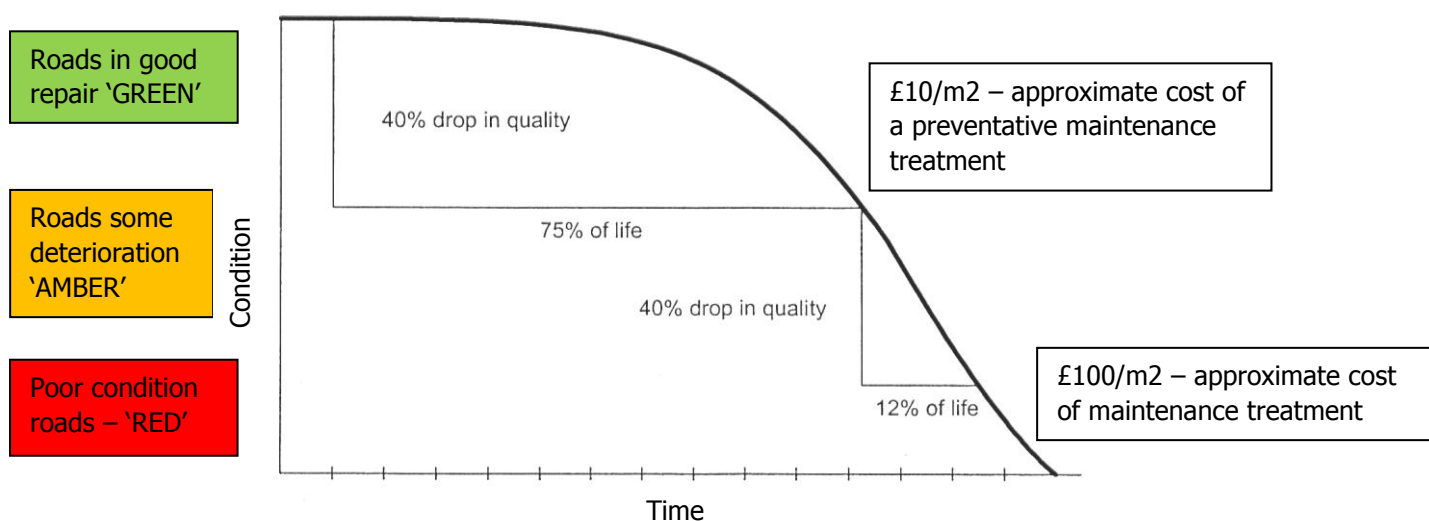
## Trafford's Asset Management Approach in the new HIAMP 2017

Although asset management principals have been adopted in Trafford, years of underinvestment nationally, an increase in climatic impact, coupled with the importance of maintaining our network in a safe and serviceable condition has led to a very high maintenance backlog. Trafford has therefore reviewed the current asset management principals and identified a required change in approach to asset management where expenditure should be targeted based on limited budget, asset management principals and sound data, engineering analysis; hence this new HIAMP. It is apparent that without an increase in annual funding on the highway network to the 'steady state' cost, currently £4.31M, the network carriageway condition will continue to deteriorate. The new approach in the HIAMP will however better target the limited resources available to maximum effect and build in resilience for the future network condition.

We will introduce and implement an extended indicative 5 Year Capital Maintenance Programme, with a view to further extending that programme as we start to develop a more comprehensive and refined picture of our asset condition. In considering the whole lifecycle of an asset we will use a process known as 'Deterioration Modelling' to predict the relative condition of the highway network over the coming years and this will help us to decide where we should be channelling resources at the optimum time to treat our roads in the most cost-effective way, providing the greatest benefit. In considering the whole lifecycle of the highway asset and predicted future condition, a more efficient longer term works programme can now be developed to better balance the needs of 'worst-first' with a greater emphasis on preventative maintenance treatments. This approach can reduce the demands of a 'worst-first' programme over time. See typical highway asset deterioration curve below which shows the benefits of a preventative approach against the higher cost of a worst first approach.



## Typical highway asset lifecycle deterioration curve



*A 'worst first' approach – maintenance treatments in 'RED' condition are ten times the cost of treatment in 'AMBER' condition where preventative treatments can be carried out.*

A key question is how we will decide which roads should have preventative maintenance treatment and which we need to undertake major resurfacing works on. It's a matter of picking the right point on the 'Deterioration Curve', the right treatment at the right time. Whilst the 'rolling programme' for years 2 to 5 remains 'indicative', we will still be confirming the programme for year 1, annually.

The new HIAMP approach will be communicated clearly and effectively through appropriate channels to ensure engagement at a strategic level. Asset Management following lifecycle planning principles and methodology will only be successful if key decision makers are on board and can visualise the long term benefits and savings to be made from this approach, based upon sound engineering and accurate costing. Whilst the process focuses on road condition the same process holds true for all asset types including footways, street lighting, structures, drainage, etc.

## Implementation

The implementation of asset management is a more challenging and long term task than just the production of the plan. Implementation will require continued focus on:

- **People** – ensuring that the people tasked with implementing and further developing the plan have the time, resources and skills to do so.
- **Data** – ensuring that data management becomes an integral part of the relevant business processes.
- **Processes** – changing existing business processes (where necessary) to enable asset management information to influence key decisions about funding.
- **Systems** – most highway systems are not complete asset management systems. Over time existing systems need to be developed into decision support tools.

An asset management culture, with appropriate behaviours, will only be successful by a consistent approach across Trafford Council for the long term management of the highway network. Behaviour of teams and individuals need to be aligned to common objectives rather than to individual priorities that may encourage short term actions that will not meet the longer term vision and strategy.

An asset management culture should avoid conflicting priorities and messages, lack of understanding, or lack of a collaborative approach, all of which can lead to inefficient and ineffective working.

Adoption of a preventative approach to maintenance is an example of where a common culture in delivering asset management is important. There may be a less immediate gain in terms of responding to stakeholder pressure and satisfaction compared to repair of some obvious defects, but timely intervention is known to preserve the asset, to be good value for money, and is supported. If a common approach to asset management is not shared,

## Trafford Council - Highway Infrastructure Asset Management Plan

preventative work may be delayed or omitted in favour of more apparently pressing activities, deterioration occurs, and higher long term costs result.

This HIAMP will deliver better value for money through adoption of a sensible and forward thinking maintenance plan. Our customers will have greater visibility as to the relative status of their roads and we'll aim to deliver more on the ground and help to meet our corporate and strategic transport objectives by doing so.

It is the delivery of agreed improvement actions, changes in practice and process, a desire to achieve continuous improvement and a commitment at all levels that will ensure that Trafford Council can prove that it is committed to a total asset management approach and achieving best value for the people of Trafford.

Using this HIAMP as an overarching document and basing all decisions on an asset management approach will ensure that the Plan will become ***a live and working document and encourage an asset management approach to become embedded as normal practice.***

## Background

Trafford Council is the Highway Authority responsible for the highway network in Trafford, including the Key Route Network (KRN). Since devolution however, Transport for Greater Manchester (TFGM) have the strategic management responsibilities for the KRN<sup>2</sup>. TFGM also carry out a highway maintenance function for Trafford and all the Greater Manchester authorities; for traffic signals and the associated urban traffic control systems on the network together with the traffic control centre. It is essential that the safety, availability and long-term integrity of the assets that make up the publically maintainable highway is well managed.

The demand for a more efficient approach to the management of highway infrastructure assets has come to prominence in the light of the fiscal challenges faced by both by central and local government as well as the devolved administrations. Recent developments include:

- **The Incentive Fund** The purpose of the incentive funding is to promote the adoption of good practice across all local authorities to ensure value for money.

Time has been given to allow highway authorities to adopt efficiency measures, to gain buy-in from their senior leaders and to make the necessary transformational changes to the full adoption of '**Asset Management Principles**'.

Local highway authorities is categorised based upon where they are on the efficiency curve:

**Band 1:** Early stage authority - Has a basic understanding of key areas and is in the process of taking it forward.

**Band 2:** Mid stage authority - Can demonstrate that outputs have been produced that support the implementation of key areas that will lead towards improvement.

**Band 3:** Final stage authority - Can demonstrate that outcomes have been achieved in key areas as part of a continuous improvement process.

A local authority's category is based on the responses to a self-assessment exercise on efficiency. The self-assessment questionnaire has 22 questions in total, divided into five categories:

- Asset Management
- Resilience
- Customer
- Benchmarking & Efficiency
- Operational Delivery

A local authority's Band will be based on its score in this self-assessment questionnaire:

- **Band 1:** Does not reach Level 2 or Level 3 in at least 15 of the 22 questions.
- **Band 2:** Must reach Level 2 or Level 3 in at least 15 of the 22 questions.
- **Band 3:** Must reach Level 3 in at least 18 of the 22 questions.

The table below shows the part of the incentive funding allocation which will be awarded to authorities in Bands 1, 2 and 3 each year. Only authorities who have Band 3 will be awarded 100% of the available funding from 2017 onwards.

Year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
<b>Band 1</b>	100%	90%	60%	30%	10%	0%
<b>Band 2</b>	100%	100%	90%	70%	50%	30%
<b>Band 3</b>	100%	100%	100%	100%	100%	100%

<sup>2</sup> Transport policies that affect the ten districts of Greater Manchester are set by the new Greater Manchester Combined Authority and its Transport for Greater Manchester Committee. TFGM is the delivery arm for the elected body, responsible for investing in improving transport services and facilities.

## Trafford Council - Highway Infrastructure Asset Management Plan

- **The CIPFA Code for Transport Infrastructure Assets** provides advice on how asset management should be implemented for local highway authorities to meet **Whole of Government Accounts** requirements.
- **The Audit Commission Report Going the Distance** recommends that local highway authorities in England adopt the principles of asset management when making investment decisions in order to optimise the use of available resources.
- **The Potholes Review, Prevention and a Better Cure** found that asset management has not been embraced consistently across all authorities in England although it is clearly understood that a more preventative approach to maintenance and long term planning is likely to reduce the occurrence of potholes.
- **Well-managed Highway Infrastructure Code of Practice 2016.** This document replaces Well-maintained Highways, Management of Highway Structures and Well-lit Highways. Production has been overseen by the UK Roads Liaison Group (UKRLG) and its Roads, Bridges and Lighting Boards. The Code is designed to promote the adoption of an integrated asset management approach to highway infrastructure based on the establishment of local levels of service through risk-based assessment.
- **ISO 55000 Asset Management** suite of documents provides a common platform and reference point for asset management internationally, across all sectors and industries, and is aimed at all assets, including those in public and private ownership.

These developments provide a greater focus on asset management. Although the principles of asset management have been generally accepted, highway authorities throughout the UK have adopted a wide ranging approach to its implementation. Where asset management has been successfully adopted, demonstration of leadership and commitment from senior decision makers in supporting an asset management approach has been fundamental.

In May 2013 the 'Highways Infrastructure Asset Management Guidance' Document was published by the UK Roads Liaison Group (UKRLG). This set out the 14 recommendations that are presented as the minimum requirement to achieve a reasonable level of benefits from asset management. Below is a summary of the recommendations;

### UKRLG HMEP Summary of the Recommendations

1. **Asset Management Framework**- An Asset Management Framework should be developed and endorsed by senior decision makers. All activities outlined in the Framework should be documented.
2. **Communications** - Relevant information associated with asset management should be actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance.
3. **Asset Management Policy and Strategy** - An asset management policy and a strategy should be developed and published. These should align with the corporate vision and demonstrate the contribution asset management makes towards achieving this vision.
4. **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.
5. **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.
6. **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.
7. **Works Programme** - A prioritised forward works programme for a rolling period of three to five years should be developed and updated regularly.
8. **Leadership and Commitment** - Senior decision makers should demonstrate leadership and commitment to enable the implementation of asset management.
9. **Making the Case for Asset Management** - The case for implementing the Asset Management Framework should be made by clearly explaining the funding required and the wider benefits to be achieved.
10. **Competencies and Training** - The appropriate competency required for asset management should be identified, and training should be provided where necessary.
11. **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.

## Trafford Council - Highway Infrastructure Asset Management Plan

12. **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.
13. **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.
14. **Benchmarking** - Local and national benchmarking should be used to compare performance of the Asset Management Framework and to share information that supports continuous improvement.

This HIAMP will directly link to the 14 recommendations in the UKRLG guidance document as these were seen as the cornerstone to good asset management practice.

Also key, was the principle of an asset management **Policy, Strategy & Plan**, whereby the HIAMP follows a clear line of sight from the local and national policies that shape the future direction of Trafford Council, via the strategies we will employ to meet these policies and what this means for specific assets and their corresponding performance data.

- **Policy** - Local policies such as Greater Manchester 2040 Transport Strategy, Trafford's Corporate Strategy, Service Plans, and Trafford's highway policies, plus national legislation and policies such as The Highways Act 1980 and Code of Practice documents such as the Well-managed Highway Infrastructure.
- **Strategy** - This is the bulk of the document and demonstrates the steps being taken in Trafford Council to meet the 14 recommendations in the Highway Infrastructure Asset Management Guidance Document produced by the UK Roads Liaison Group. This HIAMP is structured so that the recommendations reflect the UKRLG HMEP Chapter headings followed by Our Approach which outlines what we are doing to meet them.
- **Plan** – Separate Appendices for Asset Management Plans for specific assets namely: Carriageways, Footways, Structures, Highway Lighting and Drainage are also included. These final chapters show in greater detail how we will manage these assets to not only meet the 14 recommendations in the UKRLG HMEP guidance but also to make best use of the resources available to provide a safe and efficient working highway network for those who travel within or through Trafford.

## Part A – Asset Management Context

Part A of this HIAMP sets the context for Trafford Council highway infrastructure asset management by describing the structure and the environment within which the highways service is delivered.

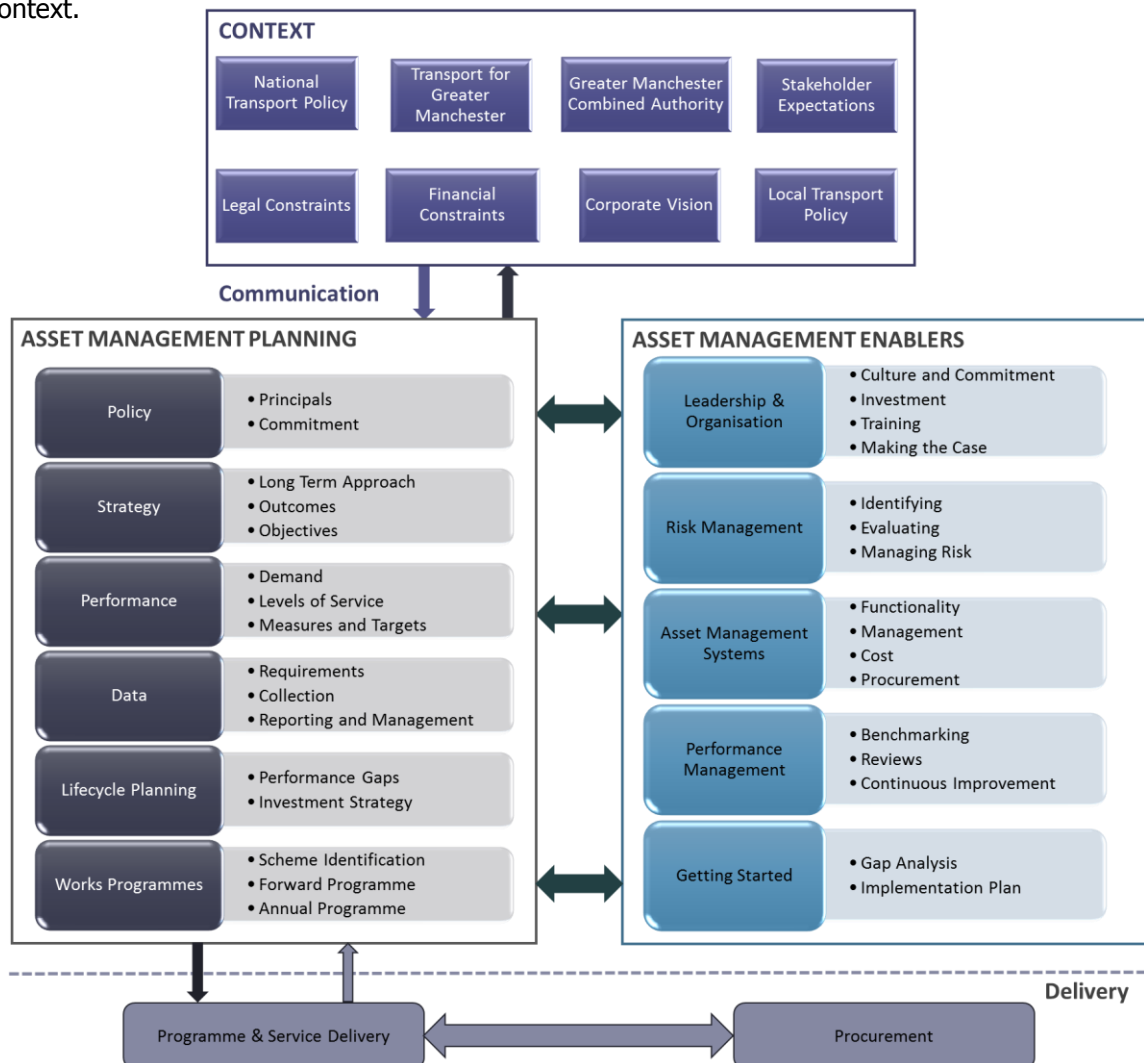
Delivering highway infrastructure asset management is not a stand-alone activity. It is linked with the Trafford Council policies and service delivery. It supports the interface with all stakeholders, including elected members, road users, the public and local communities.

### UKRLG Recommendation 1. Asset Management Framework

*An Asset Management Framework comprises the activities and processes that are necessary to develop, document, implement and continually improve asset management. These activities and the approach to their delivery should be clearly documented and accessible to relevant stakeholders.*

#### Our Approach - Asset Management Framework

The table below shows the communication links required to support Asset Management between the policy makers, planners, enablers and deliverers of Asset Management within Trafford Council set in the local and national context.



#### Asset Management Framework

# Trafford Council - Highway Infrastructure Asset Management Plan

The Framework is presented in three parts:

1. **Context** – Describes the context for highway infrastructure asset management, the organisation and the environment within which the local highway service is delivered, and is covered in Part A of the HIAMP.
2. **Asset Management Planning** – Describes the key activities and processes for asset management planning and shows how these are to be applied to Trafford Council highway infrastructure assets, as covered in Part B of the HIAMP.
3. **Asset Management Enablers** – Describes the enablers that support the implementation of the Asset Management Framework and is covered in Part C of the HIAMP.

## Legal, Policy and Codes

The direction of Trafford's highway asset management strategy is determined by a number of factors – national codes of practice / policies, legal and financial parameters. *Action Plan Item 1.1.*

**The Highways Act 1980** places duties upon and bestows powers to Trafford as the local Highway Authority. Chief among these is our duty to maintain the highway in a safe and serviceable condition.

**National Transport Policy** sets targets for local authority achievement and we will continue to keep abreast of these via direct communication with the Department for Transport and updates.

We are also driven by policies in **The Greater Manchester 2040 Transport Strategy**, the key transport policy document for the conurbation prepared jointly by all 10 Greater Manchester Authorities and Transport for Greater Manchester. The 2040 Transport Strategy sets out the collective long-term commitment of the 10 authorities to the development of a sustainable, environmentally sensitive, integrated transport system for the conurbation and an initial 5 year programme of construction projects to begin to put this commitment into effect, with the Vision being;

***World Class connections that support long-term, sustainable economic growth and access to opportunity for all.***

The Vision for Trafford is:

***Trafford is a place where our residents achieve their aspirations, and our communities are thriving.***

The **Corporate Strategy** for all services can be found within Trafford's Corporate Strategy on the website - <http://www.trafford.gov.uk/>

Trafford Council recognises that transport systems play a huge part in facilitating a high quality of life by meeting the needs of the individual whilst remaining responsive to the changing needs of business.

**Well-managed Highway Infrastructure** published in October 2016. This document is the first edition of 'Well-managed Highway Infrastructure'. It replaces Well-maintained Highways, Management of Highway Structures and Well-lit Highways. It provides local authorities with guidance on highways management in an ever changing environment, creating a strong foundation for a positive and lasting maintenance policy. Adoption of the recommendations in this code (together with the **UKRLG HMEP Recommendations**) will help the delivery of effective Asset Management.

Performance expectations are placed upon our highway network by all stakeholders which include the travelling public, businesses and the emergency services that rely on its efficiency and availability to carry out their own travel requirements.

## Our Approach - Asset Management Planning

Trafford will develop an investment strategy for highway infrastructure maintenance which is led by the principles of Asset Management. This will take the form of lifecycle planning for all our assets based upon historical data, current and future usage and design specifications, aligned to anticipated index-linked cost estimates to produce a long term strategic approach.

Trafford will demonstrate through this document and supporting processes and software what the historic, current and future demand on our highway network is likely to be, set out levels of service and performance targets and how these will be measured.

## Trafford Council - Highway Infrastructure Asset Management Plan

We will continue to expand our asset register to include as much information as possible, both physical and non-physical to ensure we have a future-proof database. This will involve, as it does now, technical surveys and drawing on data in hard copy formats and transferring it into digital spatial data.

Other data, such as customer enquiries, condition survey information and maintenance records will also be held within our Highway Asset Management Systems and these are gathered by either call centre staff, Highway Inspectors, external survey suppliers or directly via Trafford's Council public website and social media.

This evolution will continue and intensify in the coming years as we put together an indicative 5 year works programme based upon predicting the deterioration rates of numerous assets and carrying out the right treatment at the right time to ensure maximum benefit for minimum outlay.

### Our Approach - Asset Management Enablers

The principles of Asset Management require buy-in at the highest levels within Trafford in order for them to be effectively applied. Securing this buy-in from senior decision makers and elected members will pay dividends in the long term as the purpose, objectives and responsibilities for the implementation and delivery of asset management will need to be clearly established and supported.

We will ensure the systems and processes we employ in Asset Management are, and will remain through targeted development and investment, fit for purpose both now and in the future. The functionality, management, cost and procurement of such systems will fall within existing Trafford, National and European frameworks and we will ensure full accreditation and calibration is maintained for data validity and auditing purposes.

We are confident that Trafford Council is building upon a solid foundation and much of the development work already done in recent years has been based upon Asset Management principles but, we cannot not sit back as future funding and the safety and usability of our highway network will depend upon this work continuing.

### Our Approach - Delivery

#### One Trafford

Amey and Trafford Council are working in partnership, "One Trafford" to deliver environmental and infrastructure services for Trafford.

Contracting these services will help to reduce costs whilst maintaining high-quality and value-for-money services to residents and businesses. The business model also allows for greater sustainability and the potential for growth.

With an overarching asset management framework, this contract will aim to produce a leaner delivery model, efficient and optimised programmes of work and introduce, innovative and new technologies across the services to deliver a more efficient approach for the Council and the residents of Trafford.

This leaner delivery model will continue to be developed and will evolve as required to meet the maintenance demands of a dynamic highway network. *Action Plan Item 1.2.*

We will work to create an indicative rolling 5 year capital maintenance programme from which Year 1 will be extensively developed and presented to Trafford's Members for approval as part of an annual cycle. This rolling programme will remain a live entity and will evolve dependent upon external factors such as utility works, other departmental highway works and changes to funding.

This will allow our operational colleagues to feed into the process at an even earlier stage than is currently the case, plus it allows for better planning of works on the ground and organising the supply chain of services and materials.



## UKRLG Recommendation 2. Communication

*Relevant information associated with asset management should be actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance.*

### Our Approach - Communication

A Communications Strategy is a way of describing how the asset management approach is actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance. Trafford's Highway Infrastructure Asset Management Communication Strategy is developed and included in Appendix G of this HIAMP.

In keeping with asset management philosophy, user and community involvement will be a high priority within and for Trafford Council.

### Stakeholders

People, groups of people, or organisations that can affect or be affected by the policies and actions of Trafford Council are all stakeholders of the highway network. Managing stakeholder expectations and addressing their needs is a key aspect of asset management.

In the context of the highway service, stakeholders are many and diverse and will be considered in different ways. They are likely to include:

- Government - through HM Treasury, DfT and other Departments, that have an interest through legislation, provision of funding.
- Trafford locally elected members.
- Trafford residents.
- Trafford businesses.
- Representative groups e.g. Parish Councils, the disabled groups.
- Other interest groups e.g. cycling, walking, conservation, equestrian groups etc.
- Hard to reach or involve groups such as young people, the disadvantaged and elderly.
- Emergency services.
- Utility services.
- Neighbouring authorities and TfGM (traffic signals, passenger transport, cycling), Taxi Trade etc.
- Highways England

Effective engagement with stakeholders is a key in managing expectations and therefore satisfaction with Trafford Council services. Stakeholders need to be engaged at various stages in the asset management process so that they can appreciate the challenges and issues that Trafford Council faces. People cannot be expected to understand or accept the level of service provided if they have not been involved in its development or it is not published and transparent.

We will engage with and involve key stakeholder groups such as local communities, local businesses and services; as per the list above, in a variety of different ways to achieve effective stakeholder engagement. [Action Plan Item 2.1.](#)

# Trafford Council - Highway Infrastructure Asset Management Plan

## Elected Members

We will ensure clear and accurate information is made available to help with the decision making process and to demonstrate the cost benefits of lifecycle planning and an Asset Management approach.

Trafford is developing an indicative, rolling multi-year works programme. This programme effectively remains live and an annual 'snapshot' of this programme will be passed to Trafford Council for consideration and approval. The benefit of an 'organic' rolling programme means all parties will be able to analyse and feed into this programme, such that views can be considered where appropriate, at an earlier stage than was previously possible.

We will aim to produce annual reports to elected members for consideration on predicted network condition based upon anticipated funding availability. This is a 'scenario' based method whereby we can demonstrate, using sound engineering data, what the future condition of Trafford's network will be based upon certain budget levels plus, we will be able to demonstrate the level of funding required to achieve performance targets, from steady-state to measured improvement. [Action Plan Item 2.2.](#)

## Public

We aim to publish the 5 Year Maintenance Programme on our public website so that all stakeholders can see an indication of future maintenance plans. We anticipate this will help those who do not share detailed engineering knowledge to be able to see the decisions we are making and the reasons for them, and no stakeholders are excluded from the process. [Action Plan Item 2.3.](#)

Trafford's Council public website is regularly reviewed to make the user experience more beneficial. This will cover all areas of service including highways and we are working with our web developers to ensure highway maintenance is properly represented in these changes. [Action Plan Item 2.4.](#)

Along with our maintenance activities, we plan to publish information on the work we are doing with regard to funding bids, policies and this Highway Infrastructure Asset Management Plan to provide openness to our customers. [Action Plan Item 2.5.](#)

We will also use customer feedback to inform maintenance programmes and will publish details of the measures taken to respond to feedback and to publish the feedback on service delivery performance on our website. [Action Plan Item 2.6.](#)

With the current proliferation of smart phones and the rise of social media, we are developing the capability for stakeholders to interact with the local authority on highway related matters, and other services using a variety of platforms. [Action Plan Item 2.7.](#)

We will ensure engagement with stakeholders is included as a primary element when reviewing a revised highway classification hierarchy for the possible inclusion of a 'D' Class network. [Action Plan Item 2.8.](#)

A highway classification hierarchy review is to assess a revised carriageway hierarchy and corresponding inspection frequency, to facilitate the review of levels of service and the corresponding prioritisation of funding in a manner deemed more appropriate for Trafford within an environment of reduced government funding.

## National Highways & Transportation Survey (NHT)

In 2016 Trafford contributed to the annual NHT Survey for the purposes of both benchmarking alongside similar authorities and for seeking stakeholder feedback on our services. The feedback is very informative for seeking stakeholder priorities and for gauging the level of stakeholder satisfaction with our services. We will continue this survey going forward. [Action Plan Item 2.9.](#)

We will also review the performance of customer satisfaction surveys and identify potential for improvement with our action plan. [Action Plan Item 2.10.](#)

# Trafford Council - Highway Infrastructure Asset Management Plan

## Asset Valuation

This information is provided to the Department for Transport on an annual basis and provides both the Gross Replacement Cost of the authority's assets (what it would cost to rebuild from scratch) and the Depreciated Replacement Cost (what it would cost to return our assets to new from their current condition).

This data not only gives the government a detailed overview of the country as a whole but it is also a useful benchmarking measure between ourselves and neighbouring or similar sized authorities. [Action Plan Item 2.11](#).

## **Part B - Asset Management Policy, Strategy and Plan**

Part B explains the key activities for asset management planning and how these are applied to Trafford Council. It shows the contents of asset management policy and strategy, explains Trafford's approach to performance management, asset data, and provides information on lifecycle planning and work programming.

### **UKRLG Recommendation 3. Asset Management Policy and Strategy**

*An asset management policy and a strategy should be developed and published. These should align with the corporate vision and demonstrate the contribution asset management makes towards achieving this vision.*

*The asset management policy sets out the commitment by senior decision makers to highway infrastructure asset management. The asset management strategy sets out the long term objectives for the highway asset and how they are met, including statutory obligations, stakeholder needs and the overall performance of highway infrastructure within the context of any constraints such as funding.*

#### **Our Approach - Asset Management Policy and Strategy**

This Trafford's HIAMP is set around the clear principles of Policy, Strategy & Plan, whereby the HIAMP follows a clear line of sight from the existing local and national policies that shape the future direction of Trafford, via the strategies we will employ to meet these policies and what this means for specific assets and their corresponding performance data.

#### **Policy**

Trafford Council Asset Management Policy is a high level document which establishes the Council's commitment to Highway Infrastructure Asset Management and demonstrates how this approach aligns with the Council Plan. The Policy is a stand-alone document and will be published alongside this strategy on the Council's website but is also included within this HIAMP on the following page.

#### **Strategy**

This actual document is the Highway Infrastructure Asset Management Strategy for Trafford. In line with the authority's Asset Management Policy and closely tied to the recommendations in the UKRLG HMEP guidance document (2013) it shows the steps we will take to effectively manage our highway assets in the coming years. [Action Plan Item 3.1.](#)

#### **Plan**

The Appendices of this document contain Trafford's Highway Infrastructure Asset Management Plans for specific Highway Asset categories. This is where we set out our performance targets and the methods we will employ to achieve them. [Action Plan Item 3.2.](#)

## Trafford Council



### Policy for Highways Asset Management

Trafford Council is committed to adopting an asset management approach for the highway network in order to support the Council's vision for:

***Trafford is a place where our residents achieve their aspirations, and our communities are thriving.***

Together with **Positive Environmental Impact (Priority Outcome PE4) Better maintained highways**, Trafford Council recognises that transport systems play a huge part in facilitating a high quality of life by meeting the needs of the individual whilst remaining responsive to the changing needs of business.

In order for all Trafford's people and communities to enjoy the highest quality of life in a safe, clean, attractive, healthy and sustainable environment Trafford Council's Asset Management Policy will seek to:

- **Maintain roads in a safe and serviceable condition.** To provide a safe, well managed, maintained and more resilient highway network for all who use it. In order to deliver this we will continue to understand our community's needs, promote levels of service and maintenance priorities for our highways.
- **Deliver a road and transport infrastructure that seeks to meet the needs of Trafford's residents, visitors and businesses.** To provide long term maintenance planning to help with co-ordination of expenditure, resources and third party network access whilst being flexible enough to respond to dynamic changes in the needs of businesses and the local economy.
- **To provide our road users with a reasonable level of confidence that their journeys on the highway will be predictable and timely.** To efficiently manage the maintenance of highway infrastructure to reduce disruption to the network where possible.
- **To ensure that the highway network is available and accessible, as far as possible.** To efficiently maintain the highway infrastructure asset to meet the needs of the travelling public where possible.
- **To progressively reduce the environmental impact of the highway asset for the benefit of all our road users.** To review materials and maintenance techniques used in managing the highway infrastructure asset reducing its environmental impact for improved sustainability.

*Our adoption of an asset management approach will take a long term view in making informed maintenance and investment decisions.*

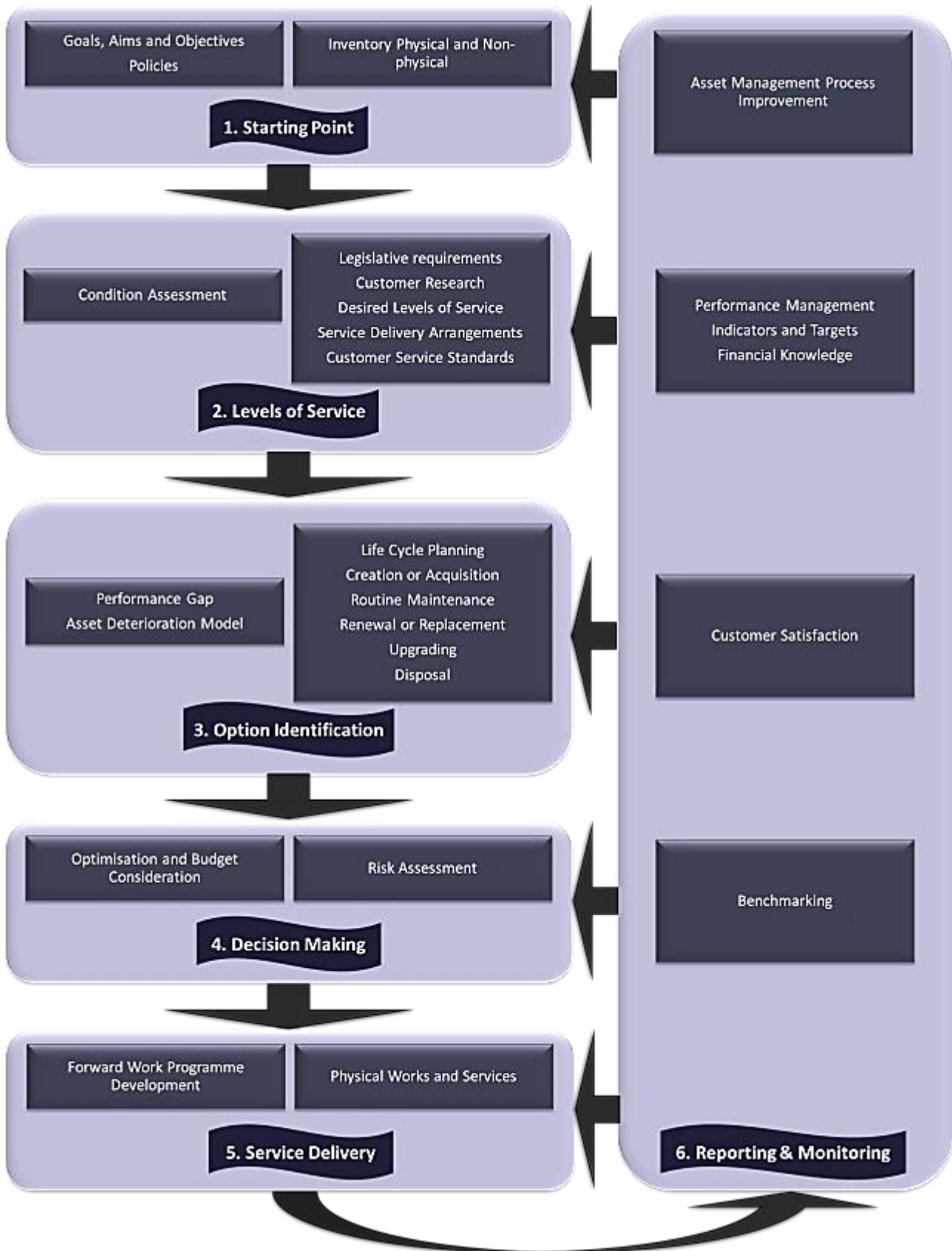
Trafford Council is committed to the continued implementation of Asset Management principles in the maintenance of Trafford's highway network, delivering the greatest amount of community and business benefit with the funds available. These principles are directly linked to the 14 recommendations in the Highway Maintenance Efficiency Programme (HMEP) and promoted by the DfT in its Capital Maintenance Funding Programme 2015 - 2021.

#### ***Asset Management Policy***

# Trafford Council - Highway Infrastructure Asset Management Plan

## Asset Management Strategy Process

Our Asset Management Process is set out in the diagram below. This approach will also be utilised by Trafford when undertaking the completion of lifecycle plans for individual assets.



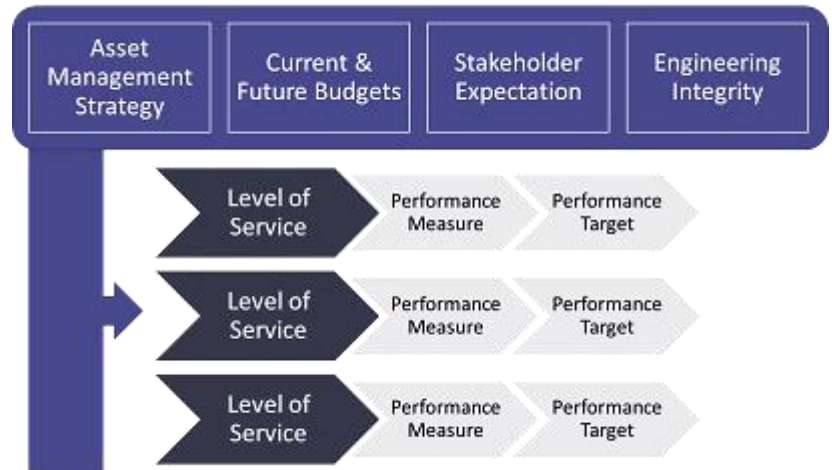
*Asset Management Strategy Process*

## UKRLG Recommendation 4. 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.*

*The levels of service, performance measures and targets will form the performance management framework.*

*Once performance measures are developed and linked with levels of service, the levels of service and individual measures can be banded and described in qualitative terms such as excellent / good / fair / poor. Alternative bandings can be adopted to align with the overall approach to performance management in the authority. This allows performance to be described in a way that is easily understood by all stakeholders.*



### Our Approach - Performance Management Framework

#### Levels of Service

Levels of service refer to a measure of the service quality achieved from highways assets. The level of service reflects the way our service is delivered and how it is perceived by our customers. Levels of service include the performance and condition of the asset itself, the quality of the service that the asset provides and the performance of Trafford Council in delivering that service.

Levels of service are broad statements that describe the performance of highway infrastructure assets in terms that our stakeholders can understand. They will relate to outcomes and cover key aspects of asset performance such as **safety**, **serviceability** and **sustainability**. They will consider the performance of the whole network rather than that of individual assets.

#### Developing Our Levels of Service

Our Levels of Service correspond with the broad Objectives, Strategy and Values of:

- The TfGM Transport Vision 2040, a document for the conurbation prepared jointly by all 10 Greater Manchester district Councils and the Greater Manchester Passenger Transport Authority.
- Trafford's Corporate Strategy
- Trafford's Values, which are:
  - Engaging the people of Trafford
  - Always improving
  - Leading the way
  - Acting with integrity
  - Valuing our people
  - Using time and money wisely
- The people of Trafford. The National Highways & Transport Public survey (NHT) undertaken in Trafford for the first time in 2016, reveals public priorities for Highways and Transport. Priorities were awarded a percentage value for 'importance'. The top 6 priorities out of 12 options given the greatest '% importance' were: Safer Roads 95.9%, Highway Condition 95.7%, Pavements 93.3%, Street Lighting 89.1% and Reducing Traffic 87.3% and Traffic Pollution 86.1%.



# Trafford Council - Highway Infrastructure Asset Management Plan

## Trafford Council HIAMP Levels of Service

They are:

- Maintain roads in a safe and serviceable condition.
- Deliver a road and transport infrastructure that seeks to meet the needs of Trafford's residents, visitors and businesses
- To provide our road users with a reasonable level of confidence that their journeys on the highway will be predictable and timely
- To ensure that the highway network is available and accessible, as far as possible
- To progressively reduce the environmental impact of the highway asset for the benefit of all our road users

Each level of service is supported by a framework of performance measures; Performance and Customer Care Indicators (PI's & CCPI's) which are reported to senior management for regular review. These enable both individual aspects of performance to be measured as well as the overall level of service. These performance measures include both engineering and non-engineering considerations and form the HIAMP's supporting Performance Management Framework. [Action Plan Item 4.1.](#)

This performance approach results in a more holistic approach to performance as Trafford Council can monitor, record and report delivery of the highway service, the asset management strategy, levels of service and our overall approach to asset management linking strategy, corporate vision and objectives. [Action Plan Item 4.2.](#)



## UKRLG Recommendation 5. 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.*

### Our Approach - Data Management

Asset data describes what highway infrastructure assets an authority has, where they are and how they perform. It is used to support the requirements of the asset management strategy and in determination of the approach to deliver the strategy, including performance management, lifecycle planning, forward programming and risk management.



### Highway Asset Management Systems (HAMS)

One Trafford is developing its use of the Confirm system in conjunction with Amey Asset Manager – Horizons as its main Highway Asset Management Systems providing a robust tool for holding and reporting on Asset Data. Confirm is a modular piece of software which allows us to develop the system to our requirements.

Amey Asset Manager – Horizons provides a visualised pavement management system for visual display of carriageway condition and provides carriageway lifecycle scenarios with deterioration modelling to help determine future investment priorities. (UKRLG Recommendation 6 – pg. 27)

### Data Management Strategy

The highway network is surveyed routinely using a variety of different methods. Asset data is collected and verified through these methods and new details are identified as part of an on-going process. For new asset sets that have not previously been collated a specific means of surveying is identified and implemented accordingly. This method allows the quality and integrity of the data to be regularly reviewed and any inaccuracies amended ensuring the overall data quality. This data is further reviewed by maintenance operations that identify assets changes at a component level which are not necessarily easily seen.

Trafford Council will review and develop its asset data in line with the recommendations of the **Code of Practice on Transport Infrastructure Assets** which adopts a three layer approach for selecting and grouping assets. This approach is the one currently recommended for authorities undertaking their returns for Whole of Government Accounts. [Action Plan Item 5.1.](#)

### Asset Maintenance

One Trafford uses Confirm to manage our highway inspection regime. We have a whole area access approach which provides flexibility, allowing Inspectors to work outside of their defined areas when the need arises. Inspections are carried out on a monthly, three-monthly, six-monthly or annual basis dependent upon the hierarchy of our asset network, in accordance with the current Highway Inspection Manual; which is in review and will be further developed in accordance with National Guidelines. [Action Plan Item 5.2.](#)

The current inspection regime is made up of three key elements:

- **Inspection Route:** This refers to monthly and three-monthly inspections, generally on classified roads and unclassified distributor roads. These are designed as a single inspection route along a single numbered road.
- **Inspection Area:** This is reserved for all annual inspections and bi-annual link footway inspections. They are worked out to provide as even a distribution of workload as is feasible.
- **Enquiry Area:** These are specific geographical areas where enquiries such as those from the general public either via Customer Services or the website, are allocated to particular Inspectors or other relevant action officers. In general, the Enquiry Areas broadly match the Inspection Areas but some sections of an Inspection route may be in different enquiry areas.

Inspections are managed through Confirm and defects and ordered works are maintained from creation to closure.

# Trafford Council - Highway Infrastructure Asset Management Plan

## Pavement Management

Trafford's Technical Survey Strategy is detailed in Appendix A. The highways asset condition data; collected through highways SCANNER and Course Visual Inspection, is updated annually (including any inventory updates) and loaded onto Horizons. Horizons has a facility to visualise highway condition along a road and can combine other data sets to help determine most appropriate planned maintenance approach for Trafford. It can also plot future condition scenarios of the highway taking into account future budgets or the desired service levels.

## National Street Gazetteer (NSG)

The Street Gazetteer module holds a complete record of the network in Trafford, from the Unique Street Reference Number (USRN) and naming convention, through to links with the hierarchy, which is then used to populate and update the network within the Horizon software.

## Performance Management

Performance Management data can be reported via the use of the reporting tools contained in Confirm and Horizons. To assist this, bespoke dashboards will be created to monitor performance through the interrogation and display of live data. All the data stored in Confirm and Horizons will be reported on and hence this results in a very robust performance management tool. This supports Trafford Council's approach to Performance Management through the provision and reporting of performance data for national and local indicators. [Action Plan Item 5.3](#).

Trafford Council have a funding strategy in place for inventory collection for data gaps which had been initially identified. However, in reviewing the asset management Performance Management Framework, we will review the information strategy for the collection of data to support the performance management framework. [Action Plan Item 5.4](#).

## Street Works

The Street Works module of Symology, which provides comprehensive functionality for both service utilities, Trafford Council maintenance and improvement works and traffic managers is utilised within Trafford. Works are initiated and progressed through a programmed life cycle which accommodates the functions of permission and co-ordination, aimed at minimising traffic disruption. This includes validation to conform to established noticing or permit rules.

Electronic communication of information between participants, map-based representation of work, and public accessibility services via the internet are all provided.

## Street Works Co-ordination

To work in a more holistic and efficient manner Trafford will continue to conduct street works co-ordination meetings in line with the New Roads and Street Works Act Section 59 which is for the street authority to co-ordinate works in the street with the active co-operation of all parties concerned.

Forward planning information on long-term programmes from all works promoters will help Trafford to co-ordinate works. It will also help works promoters to identify opportunities for joint working and to co-ordinate the timing of resurfacing. This might include mains replacement programmes or reconstruction of main roads, which will be planned several years ahead.

The meetings will be concerned primarily with direct co-ordination of individual schemes and dissemination of information. The meetings will be held quarterly or more frequently if the need arises, but a discussion should always take place whenever proposed major works are likely to conflict with other activities, especially in a street or streets known to be prone to congestion. These meetings will cover:

- specific major works with, wherever possible, fully-costed and assessed alternative routes for works proposals and a full assessment of the preferred route;
- medium-term and annual works programmes for all works promoters, submitted at least 21 days before the meeting, and showing a six month rolling programme of work. This will allow Trafford to compile a co-ordinated schedule of works;
- planned road closures for the next quarter and rolling year ahead, to allow all street and road works to be planned within such closures as far as possible; and

## Trafford Council - Highway Infrastructure Asset Management Plan

- other significant events.

### Works Management

Jobs raised through Enquiries and Inspections are managed through an optimised delivery model underpinned by an end-to-end IT platform integrating works management systems with Confirm to give full visibility of work status at all stages.

Our inspectors and works teams operate a mobile IT solution to enable accurate and timely data capture while out on the network. Inspectors use Confirm Connect on mobile devices to record defect information directly into the asset management system. All works are programmed and scheduled by the team in the Operational Control Room using Work Manager and Masternaut, and issued to works teams' handheld devices.

The capture of accurate information when works are identified is critical to intelligent works programming and subsequent delivery of 'right-first-time' repairs. Working closely with the operations team, the Operational Controllers programme works to ensure maximum resource productivity and compliance with required response levels. Additionally, Operational Controllers can use the Visual Planning Manager function within Works Manager to identify batches of related work and group by geographical location; this assists in the planning and scheduling of teams' workload, reducing mileage and emissions while maximising productivity. Once works are prioritised and scheduled they appear on the works teams handheld devices in the required completion order.

The works teams follow standard operating processes to deliver works 'right-first-time' reducing the need for repeat visits to a location essential for efficient asset management.

### Customer Service

The Customer Service module links with the authority's Environmental Customer Service centre who utilise Confirm to manage the service enquiries received.

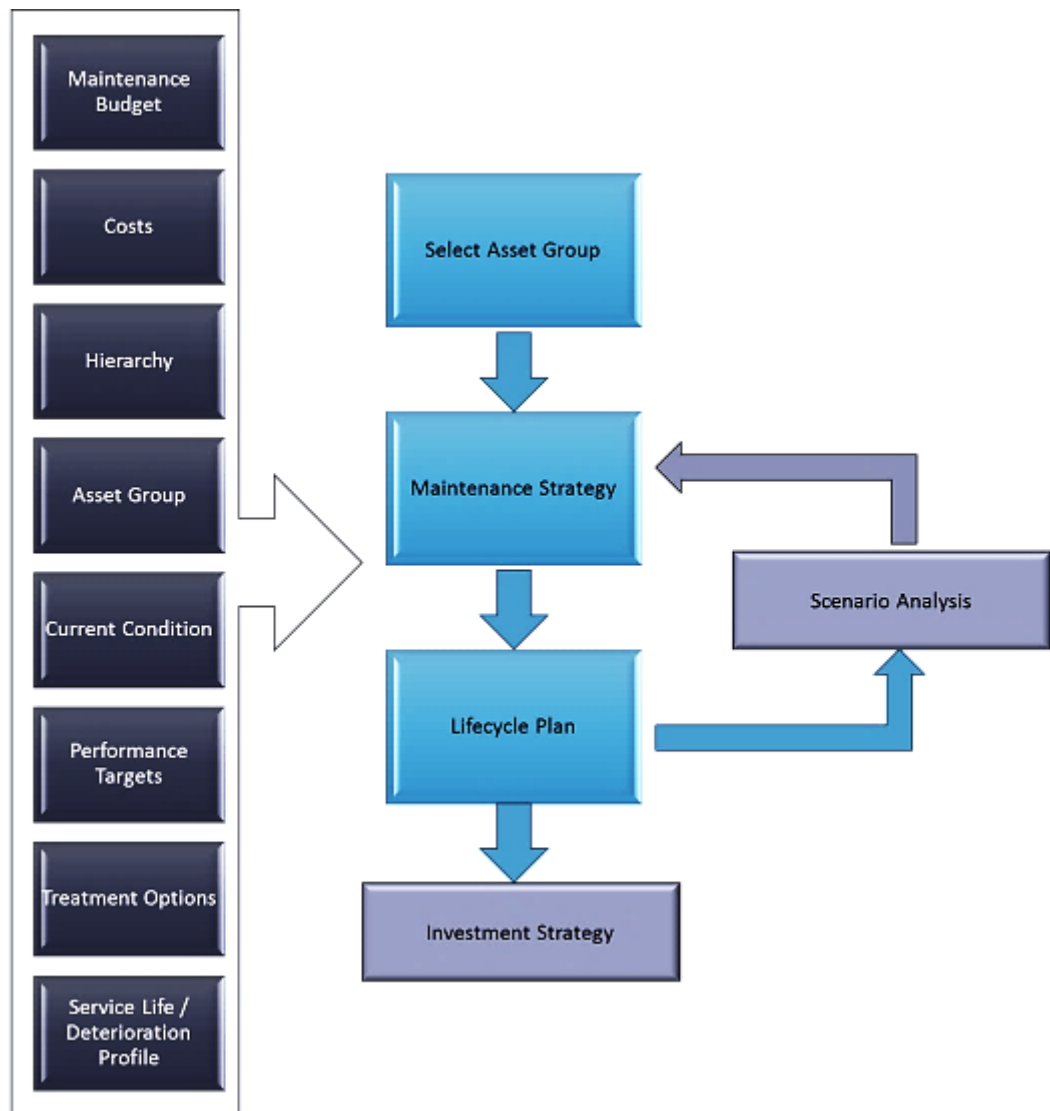
## UKRLG Recommendation 6. Lifecycle Plans

*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.*

### Our Approach - Lifecycle Planning

Lifecycle planning comprises of the approach to the provision and maintenance of an asset. It is the prediction of future performance of an asset, or a group of assets and or components, based on investment scenarios and maintenance strategies. The lifecycle plan is the documented output from this process.

Development and use of lifecycle plans will demonstrate how our funding and performance requirements are achieved through appropriate intervention and investment strategies, with the objective of minimising expenditure while providing the required performance and maintaining levels of service.



### *Lifecycle Planning Process*

# Trafford Council - Highway Infrastructure Asset Management Plan

## Asset Creation / Inventory Capture

Our HAMS contains asset inventory on Trafford's carriageways, footways, lighting columns, and structures that are highway maintainable at the public expense.

Work is continuing to keep updated our asset information. [Action Plan Item 6.1](#).

## Routine Maintenance

Our highway inspection regime ensures that all Trafford's roads and footways are inspected at various frequencies dependent upon their hierarchy and in accordance with our Highway Inspection Manual.

Works ordered as a result of these inspections are determined based upon the category of the defect and its associated response time plus other information such as indicative forward works programmes and major utility works. We will aim to carry out effective reactive repairs in order to potentially prolong asset life where possible.

## Renewal or Replacement

With effective forward works planning and deterioration profiling, we will aim to carry out both proactive treatments (such as surface dressing or micro-asphalting) and major renewal or replacement (resurfacing) at the right time for the right cost, ensuring we get the maximum benefit for the cost outlay. This will be determined by design life and calculated deterioration.

## Decommissioning

It is rare for highway assets to be decommissioned. This usually only occurs when roads are 'stopped up' as a result of major highway improvements or realignments. As a result of this, it is possible that sections of highway may fall into disuse, or be returned to the landowner of the subsoil beneath the highway. Some drainage assets may be decommissioned if they are replaced by larger projects as a result of increased flooding. Other assets such as signs or street lighting columns may be deemed to be decommissioned when they have in fact been relocated as a result of improvement works.

We will ensure that our asset inventory is kept up to date as much as possible, taking into account these changes which can be both frequent and varied.

## Service Life / Performance Level

The type of asset in question will determine the method of measuring its level of performance and its service life. Highway gullies, for example, have three elements: the ironwork above, the structure below and its ability to drain water effectively (silting, blocked pipework etc). Each of these elements can be measured in varying ways and each element will have different expectations as to its service life and its whole life costing.

With regard to carriageways and footways, our performance levels will be determined by Road Condition Indices which are gathered using a mixture of SCANNER surveys, CVI (Coarse Visual Inspection) FNS (Footway Network Survey) and Safety Inspections. This data, coupled with deterioration profiling will enable us to predict the condition of our roads and footways along a timeline, thus allowing us to target the right treatment for the right cost, at the right time.

## Deterioration Modelling

Our deterioration modelling software Horizons<sup>3</sup>, takes condition data from roads of the same class, hierarchy and similar commercial vehicle (CV) usage over several years, monitors the change in condition over this period of time and uses this information to predict the future status of defects. This is how we will aim to produce a rolling indicative 3 to 5 years works programme based upon the predicted condition of Trafford's roads. [Action Plan Item 6.2](#).

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<sup>3</sup> See Recommendation 12. Highway Asset Management Systems (HAMS) for detail of Horizons

# Trafford Council - Highway Infrastructure Asset Management Plan

## Whole Life Costing

This will be the result of deterioration modelling. Using accurate figures for treatment costs and factoring likely increases in costs over time, we will aim to produce whole life costs for many of our assets such as carriageways and footways.

In the case of other indeterminate life assets such as road gullies, it may be more difficult to predict an entire lifespan as assets such as these are rarely decommissioned and some are in place for decades, only being replaced upon sudden failure due to single events (flooding, accidents etc)

This will lead to us producing scenarios based upon the following drivers:

- The funding required to meet the performance targets.
- The expected performance of the asset if the available funding is insufficient to meet performance targets.
- The funding required to maintain the asset in a steady state or any other desired condition.
- The lifecycle plan that delivers the minimum whole life cost.

## Scenario Modelling

This involves the predicted outcome of taking a variety of options to the maintenance of our highway network. By running such reports through the Horizons 'Analysis' software we will be able to predict the future condition of the network, and indeed individual streets, based upon the anticipated budget availability over a given number of years. Conversely, we can predict the likely cost of maintaining the network to an agreed level of serviceability. The most likely scenario will be to use our maintenance strategy to maximise the serviceability of the network based upon the predicted budget availability. [Action Plan Item 6.3.](#)

## UKRLG Recommendation 7. Works Programme

*A prioritised forward works programme for a rolling period of 3 to 5 years should be developed and updated regularly. Delivery of the works programme is the tangible outcome of the asset management planning process.*

### Our Approach - Works Programme

The process to develop a works programme for maintenance and renewal of highway infrastructure assets comprises the identification, prioritisation, optimisation, programming and delivery of individual schemes.

### Reactive Maintenance – Highway Inspection Regime

The Highway Inspection Regime is in accordance with National Guidelines but is currently under review however in collaboration with the 10 Greater Manchester authorities following the publication of new guidance. This document is intended as a procedural guide for all employees involved in the inspection of Trafford's highway network. It covers only highway safety and service inspections (a service inspection is an enhanced safety inspection with additional information recorded on overall condition but does not attempt to address structural condition surveys).

This guide is not intended to cover inspections of public rights of way (generally rural footpaths, restricted byways and bridleways) as shown on the definitive map record, detailed street lighting, or full tree inspections. This is dealt with in Trafford Council's Rights of Way Improvement Plan.

The principal aim of inspecting the highway is to identify and take action to remove those hazards causing potential danger to highway users. Additionally the process will support the development of programmes, to maintain the asset and keep the highway in a serviceable condition. This is in line with our overall aim of network safety, serviceability, and sustainability.

Highway Safety and Service Inspections are undertaken to identify defects that are creating or likely to create a danger or serious inconvenience to users of the network or the wider community. Such defects include those that will require urgent attention (within a maximum of 24 hours) as well as those where the reduced level of severity is such that longer periods of response would be acceptable, or confirm that no response is needed.

Trafford has set its own standards for the frequency of its highway safety and service inspections. Again, this is under review taking into account our asset management approach, a Greater Manchester joint approach and National Guidelines.

### Technical Survey Strategy

**SCANNER Survey** - We will review the current approach to carrying out SCANNER surveys on our classified road network at the following frequencies: [Action Plan Item 7.1](#).

- 'A' roads - 100% in one direction, alternating each year. One direction one year, the opposite direction in the following year (2014/15 network = 75km)
- 'B' & 'C' roads - Also 100% in one direction, alternating each year (2014/15 network = 99km)

**CVIs** - We will review the current approach to carrying out CVIs for our unclassified network. [Action Plan Item 7.2](#). Trafford is split into 3 separate areas and one of these areas is surveyed each year with all areas completed over a three year period.

**FNS Survey** – We will undertake enhanced FNS for our footway network. The classified network will be surveyed annually and the unclassified will follow the three yearly cycle to mirror CVI for unclassified roads.

**SCRIM Survey** – We have developed a Trafford Skid Resistance Policy and Survey Strategy for optimum asset management approach; which may also be used for the other authorities within Greater Manchester. [Action Plan Item 7.3](#).



# Trafford Council - Highway Infrastructure Asset Management Plan

## Forward Works Programme

The definitive output from this HIAMP is to have a comprehensive, fully integrated forward works programme in place for all highway assets.

Using the 'Horizons Analysis' software from Yotta, we will look to create a rolling 5 year maintenance programme based upon projected asset condition (Deterioration Modelling) against costs and agreed levels of asset performance.

There will effectively be a two-stage process whereby engineering parameters are applied to the data in the first instance to establish an indicative 5 year programme. The second stage will be to introduce non-engineering parameters such as enquiry records, balancing area allocation and proximity of key services. *Action Plan Item 7.4.*



## Forward Works Programme Process

We will make this information, Works Programmes available either via the public website or regular bulletins or both.

The benefits of this are:

- Firstly, by using the predicted condition of our highway network we can plan a more efficient works programme, balancing the needs of 'worst-first' with a greater emphasis on preventative maintenance treatments which can reduce the demands of a 'worst-first' programme over time. We will be able to predict when the optimum point on the deterioration curve is reached where the allocated treatment at that point provides the greatest cost benefit. **'The right treatment, at the right time, for the right price.'**
- Secondly, having an indicative 5 year works programme in place will help with co-ordination activities both within and outside of Trafford's highway network. We will be able to better plan the timing and extent of utility works as well as fully co-ordinating our own internal multi-disciplinary functions such as street lighting and structures works.
- Thirdly, this approach allows for greater transparency in helping the general public, elected members and other stakeholders to understand what Trafford Council's future maintenance plans are and how we've come to such decisions, which should remain objective and based upon sound engineering criteria. It will allow for a larger amount of self-service and can help, particularly in the case of elected members, parish councillors etc. to field enquiries about particular locations.

## Optimisation

This Optimisation section of the HIAMP takes into consideration decision making and joint prioritisation across asset groups with regard to determining works programmes.

One significant element of the decision making prioritisation process is the potential for schemes to be coordinated across asset groups, for example resurfacing a road in conjunction with replacement of a culvert section or road safety scheme. Such alignment of schemes within the works programme is key to optimising available funding across the Highways Service. The prioritisation lists generated by each of the asset groups will be cross referenced for identification of potential alignment. Locations that appear near to the top of more than one of the priority lists will be considered for engineering judgement as to whether a joined up scheme may be feasible. If elements are funded through different streams, careful planning will be made with regards to aligning year end expenditure restraints.

Consideration will also be given to the order in which schemes are undertaken if they are not to be undertaken jointly. For example a culvert replacement scheme needs to be undertaken prior to a carriageway resurfacing scheme on the same road if the culvert runs under the highway. Similarly, street lights should be replaced before any footway reconstruction to avoid potential damage to footways.



## Trafford Council - Highway Infrastructure Asset Management Plan

Coordination with external bodies will also be important to service optimisation, including coordination with statutory undertakers. Moving forward, this optimised holistic approach will improve cooperation, network disruption and help inform the decision making process.

### Key Route Network

The Greater Manchester Combined Authority (GMCA) has approved proposals for the establishment of a 'Key Route Network' (KRN), the most economically important roads in Greater Manchester, carrying the highest concentrations of commuter and logistics traffic.

Trafford's KRN comprises of approximately 65 kilometres of highway, approximately 7% of the total network length. Establishing a defined KRN will benefit Greater Manchester through improved traffic management across local authority borders, and will support GMCA in prioritising investment to meet the current and future needs of Greater Manchester to boost economic growth, better coordinate roadworks and improve travel information for road users.

Though the day-to-day maintenance of the KRN will stay with local authorities, TfGM are now in the process of developing an Asset Management Plan for the KRN in collaboration with the GM Councils to review and develop investment priorities. There will also be closer working arrangements with Highways England and the Northern Transport Strategy, which will provide a more joined-up approach to improving and managing the region's motorways.

Trafford Council will continue to work and coordinate with TfGM to deliver the KRN Strategy.

### TfGM & GMCA Collaborative Working

There is always a need for collaboration to address public problems or issues through building relationships, shared knowledge, designing innovative solutions, and forging consequential change. When used strategically, collaboration produces positive impacts, stakeholders committed to policy or programme change, and strengthened capacity of individuals and organisations to effectively work together.

Successful collaborations have a common purpose, strong insistence on a whole systems approach, shared power, and use the service user's perspective to stimulate change.

We will continue to aspire to work with the members of the GMCA and TfGM to help understand these joint challenges, and the opportunities of balancing the requirements of working across multiple employers with differing priorities. We will encourage GMCA to work together, to find opportunities where cooperation and even common procurement can cut costs to help reduce the pressures on resources. [Action Plan Item 7.5](#).

### Part C – Enablers

Part C explains the enablers that support the implementation of Trafford Council Asset Management Framework. It highlights the need for engagement with senior stakeholders and leadership, explains the case for asset management, the context for risk management, and summarises the role of asset management systems.

#### UKRLG Recommendation 8. Leadership and Commitment

*Senior decision makers should demonstrate leadership and commitment to enable the implementation of asset management.*

##### Our Approach - Leadership and Commitment

Leadership has a strong influence on the culture and behaviour of all organisations. Our clear direction and priorities will ensure that both significant and apparently relatively minor decisions taken across Trafford all support a consistent approach to delivering asset management.

Ensuring the support of senior decision makers is key to the effective application of Highways Asset Management. Engagement is continuous between all parties involved in the delivery of highway maintenance at all levels within Trafford and a sound system of communication in both directions is in place; via monthly strategic and executive member meetings. Reports are presented to Trafford' Council for performance management (monthly), works programming (tri-annually), and budget setting (annually).

Alongside the Highway Infrastructure Asset Management Guidance Document, the UKRLG produced an abbreviated document called *Highways - Maintaining a vital asset (What should councillors know about asset management?)*. Strong leadership and commitment from elected councillors and their chief officers is vital in maintaining our highways. This leaflet explains how asset management can help Councils to improve highway maintenance, by ensuring best use of available funds and demonstrating need for investment.

We will ensure, through regular communication (committees, regular update bulletins and website publishing) that the investment case for Asset Management is clearly stated and based upon predicted funding and asset condition.  
[Action Plan Item 8.1.](#)

## **UKRLG Recommendation 9. The Case for Asset Management**

*The case for implementing the Asset Management Framework should be made by clearly explaining the funding required and the wider benefits to be achieved.*

### **Our Approach - The Case for Asset Management**

Asset management has been widely accepted by central and local government as a means to deliver a more efficient and effective approach to management of highway infrastructure assets through longer term planning, ensuring that standards are defined and achievable for available budgets. It also supports making the case for funding and better communication with stakeholders, facilitating a greater understanding of the contribution highway infrastructure assets make to economic growth and the needs of local communities.

### **Department for Transport Incentive Fund**

The incentive funding element is about obtaining consistent adoption of good practice across all local authorities to ensure value for money.

Time has been given to allow highway authorities to adopt efficiency measures, to gain buy-in from their senior leaders and to make the necessary transformational changes to the full adoption of Asset Management Principles.

In previous years, each local authority received all of its efficiency funding, both the 'needs' and 'incentive' elements of their initial award. However, for each subsequent future year there is an expectation that continuous improvement is taking place by each highway authority. This level of improvement will be reflected in the funding awarded through the size of the incentive received.

The DfT Incentive Fund places the need for a robust HIAMP at the heart of its selfassessment methodology. We shall ensure that our HIAMP is fit for purpose not only at the time of its publication but for the foreseeable future and able to adapt to the constantly changing landscape of highway maintenance. [\*Action Plan Item 9.1.\*](#)

## UKRLG Recommendation 10. Competencies and Training

*The appropriate competency required for asset management should be identified, and training should be provided where necessary.*

### Organisational Considerations

Asset management within Trafford is considered at three levels, namely strategic, tactical and operational.



**Organisation Hierarchy Chart**

### Strategic

**Strategic** aspects of asset management include:

- Development and endorsement of Trafford’s Asset Management Framework
- Developing and agreeing Trafford’s Asset Management Policy, Strategy and Levels of Service and Performance Targets
- Reviewing achievement of outcomes and benefits

Our Senior decision makers will be supported to enable to have a clear sight of the outcomes they wish to achieve.

### Tactical

At a tactical level decisions will be made on how to meet the performance requirements arising from our asset management strategy. These decisions require Trafford’s knowledge, information and data in the form of asset inventory, condition data and predicted performance of the network.

**Tactical** aspects of asset management include:

- Development of an Implementation and Action Plan
- Preparation of the Highway Infrastructure Asset Management Plan (HIAMP) and/or other supporting documents
- Development of a functional network hierarchy within Trafford
- Preparation of lifecycle plans and financial plans to meet either budgets or performance targets
- Developing the approach for prioritising schemes
- Developing works programmes
- Developing annual programmes

# Trafford Council - Highway Infrastructure Asset Management Plan

## Operational

The operational level is about delivery of maintenance activities that align with our approach to asset management.

**Operational** aspects include:

- Collection of data, including inspections, safety and serviceability defects and asset condition
- Management of our asset data
- Reactive work, including rectification of defects and winter service
- Cyclic maintenance
- Confirmation that works programmes can be implemented to budget and timescale
- Implementation of our works programme
- Co-ordination of works, including utilities, roadspace booking and or permitting requirements
- Reporting on the performance of our assets

## Our Approach - Competencies and Training

We will identify the competencies necessary to meet our requirements for asset management. Where these competencies are not available, training of staff will be implemented. Recruitment, mentoring and collaboration with other authorities will also be considered.

To maintain competency regular training will be made available for staff undertaking roles in asset management, such as the Highway Asset Manager. This will ensure Trafford Council has the continuing ability to efficiently and effectively prepare, implement and review our approach to asset management. Investment in development of staff will support the overall improvement in the implementation and delivery of asset management supporting the subsequent business benefits.

Long term asset management involves many different people over time. As people change and as the approach evolves, it will be necessary to ensure an orderly transfer of knowledge. This can best be achieved where those involved in asset management have clear roles and where due consideration is given to succession planning and the smooth hand-over of responsibilities.

Trafford will continue to ensure suitable competency across staff from all levels, from senior decision makers to frontline operatives.

This will take the form of on-site & off-site training in the use of specific software packages such as Horizons and Confirm as well as training and mentoring in Microsoft Office packages such as Excel, Word, Publisher and Power Point. There will be a mixture of tailored training such as HMEP online toolkits and day to day learning through frequent usage. Details of the training associated with Asset Management are shown in the table at the end of this section. [Action Plan Item 10.1.](#)

It is also important, alongside the sharing of good practice between authorities, that we share knowledge within our own organisation in the form of mentoring and day to day working together. The principles of Asset Management will be communicated to relevant staff, including senior officials and engineers either by one-one desktop study, in presentations and in open forums and workshops. HIAMP meetings/workshops will be routinely held to raise awareness and communicate developments. [Action Plan Item 10.2.](#)

Asset Management is a principle and as such it relies on knowledge, experience & skills from a wide range of individuals and organisations to operate effectively. It will not function without the 'buy in' from senior decision makers / elected members and as such we will make sure Trafford staff and members are made fully aware of the benefits to be had from the proper application of these principles. We will ensure that knowledge is allowed to feed in from both ends of the local authority spectrum.

## Trafford Council - Highway Infrastructure Asset Management Plan

ASSET MANAGEMENT COMPETENCY FRAMEWORK		
Post Title	Required Competencies	Resources
<b>Corporate Director – Trafford Council, &amp; Service Director – One Trafford Partnership (OTP)</b>	An Overall awareness.	UKRLG HMEP Guidelines HAM Policy & HIAMP
<b>Highway Manager - One Trafford Partnership &amp; Principal Engineering Manager</b>	Knowledge of Corporate Policy & Strategy	UKRLG HMEP Guidelines HAM Policy & HIAMP
<b>Programme Director for Highway Asset Management</b>	Detailed knowledge of national & corporate policy, strategy & plan.  Detailed knowledge of Horizons – Explorer, Analyses & Condition modelling, HAMS	UKRLG HMEP Guidelines HAM Policy & HIAMP Horizons Training - Explorer, Analyses & Condition modelling Lifecycle modelling
<b>Highway Asset Team Manager/Principal Engineer</b>	Knowledge of national & corporate policy, strategy & plan.  Detailed knowledge of Horizons – Explorer, Analyses & Condition modelling, HAMS	UKRLG HMEP Guidelines HAM Policy & HIAMP Horizons Training - Explorer, Analyses & Condition modelling Lifecycle modelling
<b>Data Management Lead</b>	Detailed knowledge of Horizons – Explorer, Analyses & Condition modelling, HAMS	UKRLG HMEP Toolkits HAM Policy & HIAMP HAMS Training Horizons Training (Explorer & Analysis) including further Analysis Tools (Excel, Access etc)
<b>Principal Design Engineer</b>	Knowledge of corporate policy, strategy & plan. Horizons - Explorer and knowledge of condition modelling.	UKRLG HMEP Guidelines HAM Policy & HIAMP Horizons Training - Explorer
<b>Design Engineer</b>	Horizons - Explorer and knowledge of condition modelling.	UKRLG HMEP Guidelines HAM Policy & HIAMP Horizons Training - Explorer
<b>All other Highway Staff</b>	An overall awareness	UKRLG HMEP Guidelines HAM Policy & HIAMP

***Asset Management Competency Table***

## UKRLG Recommendation 11. 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.*

### Our Approach - Risk Management

Trafford Council is required to manage a variety of risks at all levels within our remit. The likelihood and consequences of these risks can be used to inform and support the approach to asset management and inform key decisions on performance, investment and implementation of works programmes.

Risk can be defined as an uncertain event which, should it occur will have negative effect on the performance of the asset or the asset directly. The level of risk can be defined as the likelihood of an event occurring, and the magnitude of its impact on the asset which would result from the occurrence. Our Highway Asset is subject to many risks:

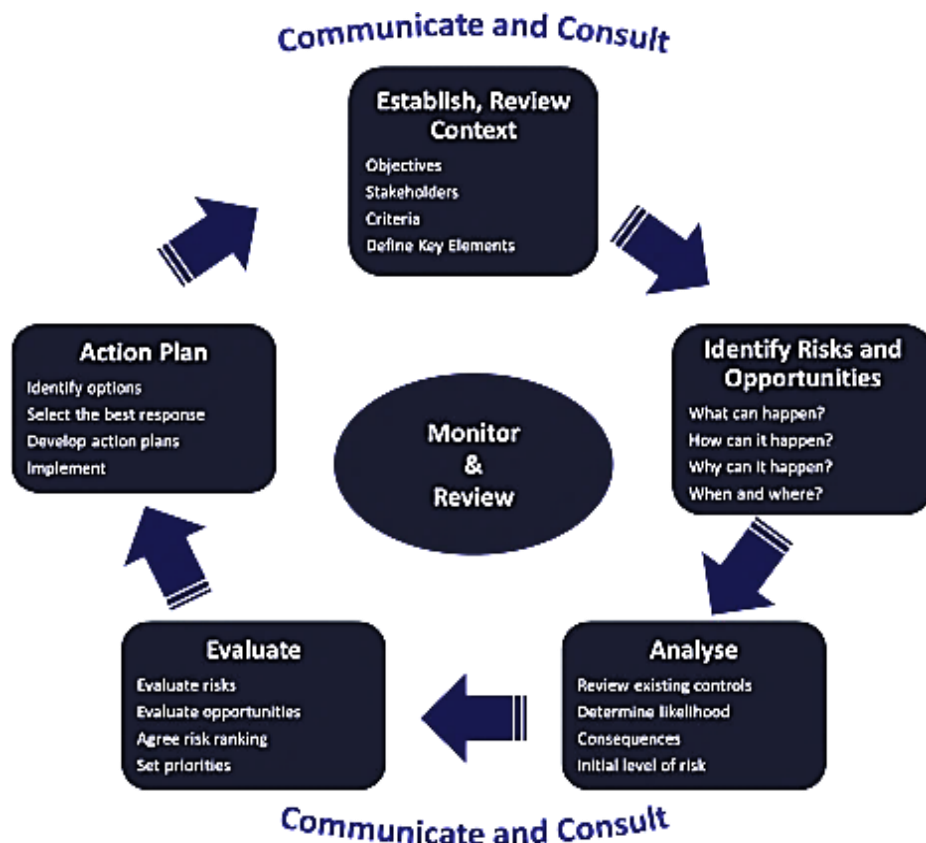
- **Safety** – of staff engaged in works on the highway, or in the much wider remit of highway user safety
- **Risk to Reputation** – Trafford Council itself and those who rely on the asset in the course of their businesses
- **Loss or damage to the asset** – ranging from total destruction in an instant due to an extreme event to the steady deterioration of the asset due to wear and tear.
- **Service reductions or complete failure** – to lose some parts of the Network would potentially directly threaten lives
- **Environmental** – threats both to and from the environment
- **Financial and Contractual Risks** – for Trafford Council and stakeholders
- **And most importantly - combinations of the above!**

Management of these risks is fundamental to effective asset management and Trafford Council manages this risk via the process diagram:

### Management of Risk

Risk can be managed at several levels using a consistent risk framework that enables the comparison of risks across all services.

**Corporate** – High level risks that include reputation, business continuity, health and safety, political and legal and financial risk. Our risk policy and management of these risks is undertaken by our senior decision makers.





## Trafford Council - Highway Infrastructure Asset Management Plan

**Strategic & Tactical** – Risks affecting the management of the highways infrastructure are considered throughout at both strategic and tactical levels.

The level of risk to an asset is generally reflected by its place in the network hierarchy; however this can in many cases be over-ridden by specific local needs. Our asset team are made aware of these needs by close liaison with other colleagues within Trafford Council, and feedback from highway users.

At the strategic and tactical level, risk types are grouped together. The chart below shows the four main risk categories and the separate risk elements within that will be managed effectively in Trafford Council:



### ***Risk Categories***

We will bring together Trafford Council's assessment of risks for Highways infrastructure into risk registers, representing the Categories above, which identifies implemented mitigation actions and includes a lessons learnt register which will be signed off as recorded at all levels of the organisation. [Action Plan Item 11.1.](#)



## Resilient Network

In July 2014 the Department for Transport published the '**Transport Resilience Review – A review of the resilience of the transport network to extreme weather events**'. The Review recognises that an economically rational approach should be taken to spending on resilience, "*ensuring that enough is invested, with the right prioritisation, and avoiding wasteful and economically unjustified expenditure*". The report made various recommendations about climate change, extreme weather events and network resilience that all local authorities must put plans in place to manage such events and provide a transport network which is robust enough to cope when the worst happens.

The new **Code of Practice for Highway Maintenance Management** published in October 2016 contains guidance for the development of a resilient network, allied to a risk-based approach to highway maintenance.

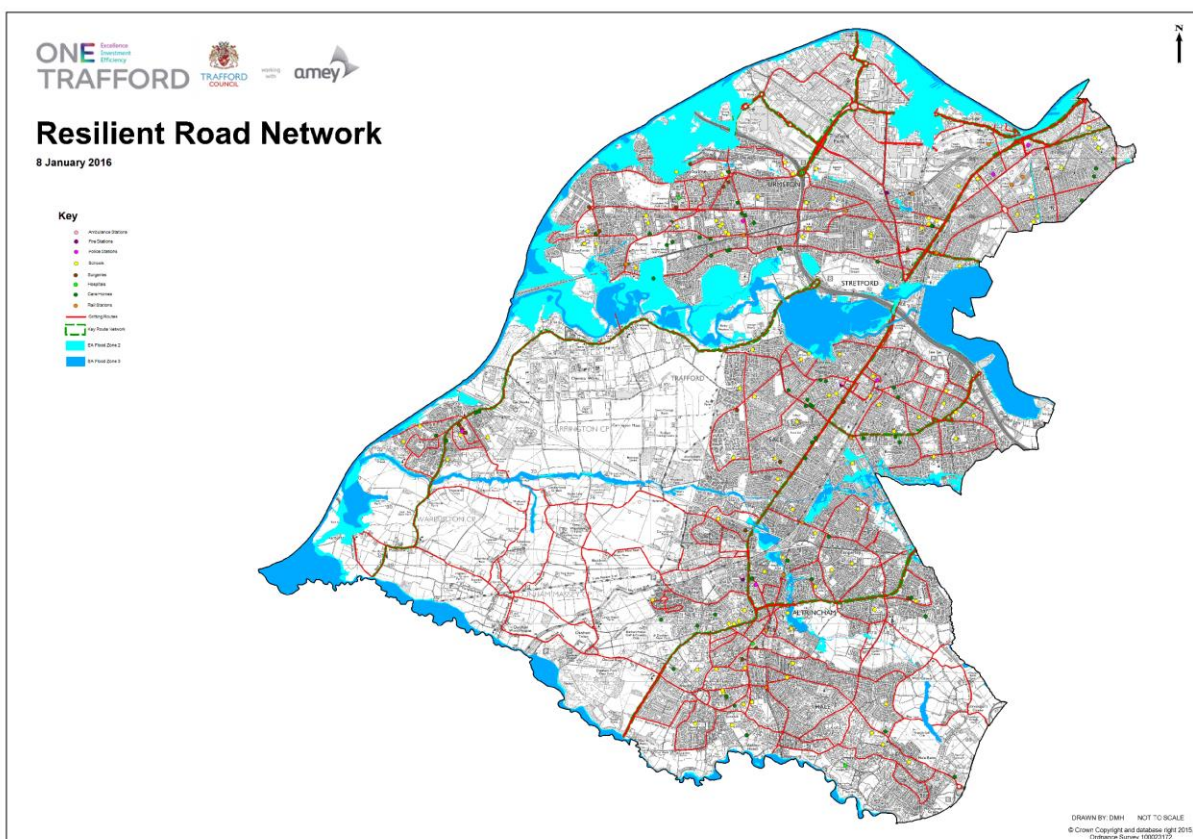
The **National Risk Register of Civil Emergencies** is the source document for risk assessment in the UK and is supported by specific guidance and Local Risk Registers within all Local Resilience Forums. These documents will help frame the risks faced and the threat they present. Interaction with emergency planning teams within all organisations and partners will be key to understanding and aligning response to the risks.

A Resilient Network has been identified throughout Trafford which will receive priority through maintenance and other measures in order to maintain economic activity and access to key services during disruptive events. The process for identifying the Resilient Network considered which routes are absolutely essential and which can be done without for a period of time.

Our Resilient Network includes:

- those routes crucial to the economic and social life of the local or wider Trafford area;
- take account of repeat events, e.g. flooding; and
- local factors.

In order to keep abreast with the current climate, we will review the current resilient network every 2 years, including liaison with key stakeholders, and to also update after any events, based on lessons learnt. This will include not only resilience against snow, ice and flooding it will also cover exceptional heat, industrial action, major incidents and other local risks. [Action Plan Item 11.2](#).



## Trafford Council - Highway Infrastructure Asset Management Plan

Trafford Council already has emergency planning in place for operational response and also protection of the vulnerable and less-abled in times of crisis however, they will remain under review for updates.

Allied to this is a comprehensive understanding by our Flood Risk Management staff of known and potential flooding hotspots based upon recent history events and shared data from other organisations, such as the Environment Agency and Internal Drainage Boards.

### Critical Assets

Critical assets are those that are essential for supporting the social and business needs of Trafford, GMCA, TfGM and national economy. They will have a high consequence of failure, but not necessarily a high likelihood of failure. These assets will be identified separately and assessed in greater detail as part of the asset management planning process.

Trafford will continue to identify 'Critical Assets' such as bridges, junctions and routes that will form the backbone of resilient network planning. [Action Plan Item 11.3.](#)

### Potholes Review

The HMEP Potholes Review was published in April 2012 as a response to the increase in the number of potholes on the highway network.

The Potholes Review identified good practice within the sector and provided local highway authorities with new ideas, case studies and approaches that could be easily transferred to those who wished to adopt a longer-term, preventative approach to maintaining their road network.

The Potholes Review made 17 recommendations aimed at local highway authorities, the broader highways maintenance sector (including suppliers), the UK Roads Liaison Group and the Department for Transport.

The Potholes Review explained that:

- **Prevention is better than cure** – Intervening at the right time will reduce the amount of potholes forming and prevent bigger problems later on.
- **Right first time** – Do it once and get it right, rather than face continuous bills. Guidance, knowledge and workmanship are the enablers to this.
- **Clarity for the public** – Local highway authorities need to communicate to the public what is being done and how it is being done.

Managing Trafford's local highway network is now a critical challenge. We know that maintaining and improving our highways, with less money, is a key priority; and that this has been intensified following the bad weather and continued demand and scrutiny from members of the public and business leaders.

We have reviewed the 17 recommendations within the Potholes Review and aligned our asset management approach to also reflect and include the recommendations therein. This approach will help to work towards a balanced longer-term strategic planning and to keep our local roads safe and serviceable.

### Drainage Assets

*Flood and Water Management Act 2010.* This Act establishes a hierarchy of authorities responsible for managing flood risk, and the local highway authority is one such risk management authority, responsible for ensuring its actions are consistent with the national flood and coastal erosion risk management strategy in England, prepared by the Environment Agency (EA). In order to manage drainage systems cost effectively, it is necessary for local highway authorities to have a robust drainage asset management strategy. The strategy must be able to support and inform decision making that addresses the need to deliver highway maintenance in a way that balances growing service demands with reducing resources.

Trafford Council, in producing this HIAMP shall review the current Flood Risk Management Plan, prepared/funded by AGMA, which is due to be updated in 2017. It is anticipated that future updates of the Flood Risk Management Plan would also be undertaken/funded for Trafford and the 10 GM authorities through AGMA. Under current legislation this exercise is repeated every 6 years. [Action Plan Item 11.4.](#)

The Local Flood Risk Strategy for Trafford was prepared by the Strategic Planning department. It is anticipated that renewal of this strategy in future would again be carried out by them. [Action Plan Item 11.5.](#)

## UKRLG Recommendation 12. Highway Asset Management Systems (HAMS)

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.

### Our Approach - Highway Asset Management Systems (HAMS)

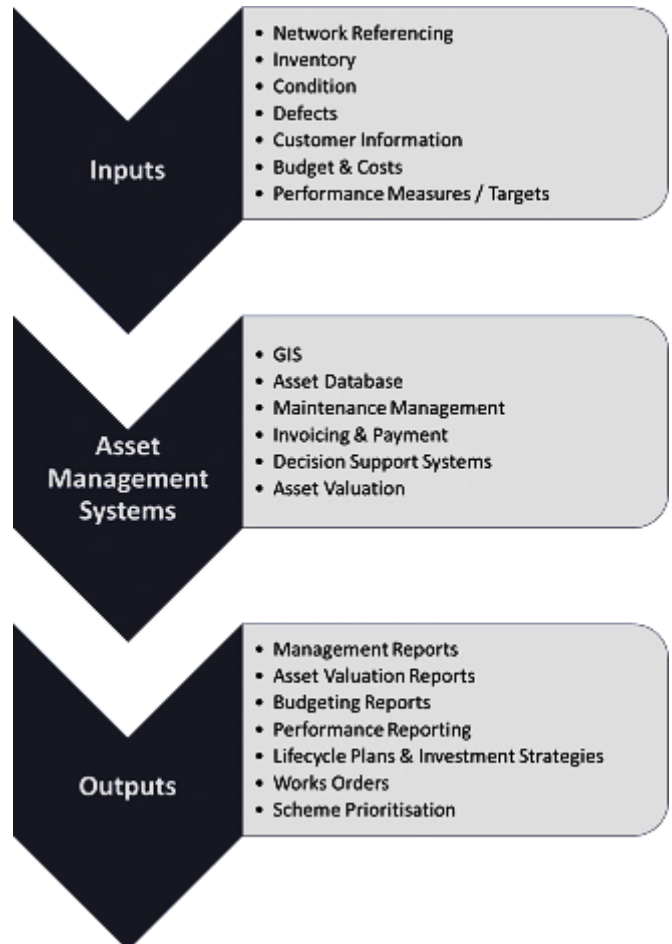
Good asset management needs to be supported by robust processes for implementation and management as well as good quality, repeatable and reliable data. Our asset management system will support decision making through managing information and data to support asset management as well as to record and monitor its implementation.

Trafford Council will utilise software applications and asset management processes to manage our Highway Asset. These systems and applications are detailed in this section to all the inputs and outputs to be achieved as per the diagram.

#### Asset Database Confirm

In 2015 the One Trafford Partnership brought with it the Confirm system which provides Trafford Council with a robust tool for reporting the performance of our systems and working practices. This system can be upgraded to provide greater functionality and to maintain compliance with other protocols, as these become available from the provider. [Action Plan Item 12.1.](#)

**Asset Register** - Spatial and non-spatial data of highway assets and their associated attributes are being added to the Confirm Asset Database.



**HAMS Data Flow**

**Customer / Stakeholder Enquiries** – Trafford’s Customer Services Centre feeds information on enquiries / complaints from the general public and others into Confirm which provides us with information which, when aligned with engineering data from technical surveys, can enhance the overall picture of Trafford’s highway network.

**Pavement Management Data** - Confirm can be utilised to store, process and analyse data from technical condition surveys.

**Highway Inspections** - We will continue to manage our highway inspection regime using Confirm and in accordance with our Highway Inspection Safety Policy.

# Trafford Council - Highway Infrastructure Asset Management Plan

## Asset Valuation

We will continue to use UKRLG Toolkit for the provision of data to the Department for Transport for the Whole of Government Accounts including Depreciated Replacements Costs and Gross Replacement Costs.

## Amey Asset Manager - Horizons

Horizons is a visualised PMS (Pavement Management Software) product from Yotta. Its greatest attribute is its ability to take complicated and vast amounts of road and footway condition data and display it in a visualised format using maps, graphs, pie-charts and video. This enables us to present the information to a wider audience, both engineering and non-engineering. [Action Plan Item 12.2](#).

Horizons uses the 'Red, Amber, Green' (RAG) format to display data on the Road Condition Index (RCI) which is a value given to each sub-section of road based upon a formula which pulls together the severity of each individual defect.

Horizons is used to analyse and display road condition data from technical surveys such as SCANNER for Trafford.



## Map Info

MapInfo is a geographical information system (GIS), designed to interact with Confirm and is primarily used for plotting spatial asset data onto base maps. The co-ordinate data from MapInfo is transferrable between various platforms including Horizons and Microsoft Office programmes such as Excel.

We use MapInfo to plot not only asset locations but also some attributes such as public highway extents, flooding and administration areas.



# UKRLG Recommendation 13. 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.*

## Our Approach - Performance Monitoring

A well-developed approach to performance monitoring provides Trafford with the ability to continuously improve our asset management knowledge, processes and systems to support effective delivery of asset management and to build on lessons learnt to enable them to continuously improve. Our measures are broken down into:

**Strategic Monitoring** – To seek assurance that asset management is being operated as intended. This includes monitoring to ascertain whether our asset management strategy outcomes are being met, including stakeholder requirements, that the approach to asset management has been documented and implemented, and that the supporting processes are effective;

**Performance Measures and Targets** – To assess the effectiveness and efficiency of asset management we monitor using a series of metrics at the strategic, tactical and operational levels. This includes monitoring against levels of service and supporting performance targets and determining whether they have been met;

**System Audits** – We monitor the data in the asset management system in order to determine whether it is fit for purpose, as well as reviewing the output and how it is being used;

**Compliance Monitoring** – We monitor the performance of our maintenance contractors against their contractual obligations.

Trafford Council has a good performance management system in place to measure, monitor, assess and compare performance indicators; performance information is collated in the HIAMP's supporting Performance Management Framework and currently takes the form of:

### 1. Indicators measuring the condition of the asset

Performance Indicators (PIs) on road condition are measured by authorities UK wide and are benchmarked with the 10 GM authorities. The conditions PI's are reported annually.

There are a number of PIs that measure the condition of both the carriageway and footway asset. Condition surveys are carried out following government requirements. 50% of the principal and non-principal classified road network is surveyed each year using a repeatable machine survey and 33% of the unclassified road network by coarse visual inspection survey. The carriageway indicators used are called 130-1, 130-2, and BVPI224b. A programme of FNS footway Network Surveys will be carried out annually with an indicator for condition.

### 2. Indicators measuring the operational performance of the contractor

A range of PI's are used to measure the operational performance of the contractor for network safety and serviceability and reported monthly.

Operational indicators relating to street lighting are also reported to the government. These measure the number of days taken to repair a street lighting fault for both street lighting faults that are under the control of Trafford Council and where the response time is under the control of the electrical supplier. Data is collected and reported on a quarterly basis.

### 3. Indicators measuring customer/stakeholder satisfaction

Customer Care Performance Indicators - CCPI's are developed to measure customer/stakeholder satisfaction. They focus on the highways maintenance elements of the Trafford NHT customer survey where areas for improvement in customer satisfaction are identified. Areas where highway maintenance performance stakeholder satisfaction is high is also recognised.

### 4. Comprehensive Performance Assessment (CPA) Indicators

The performance of Trafford Council in its own right and in comparison with others is assessed in part by a number of highways related performance indicators. The CPA indicators are:

- All those killed or seriously injured in Road Traffic Collisions

## Trafford Council - Highway Infrastructure Asset Management Plan

- People slightly injured in Road Traffic Collisions

### 5. Local Area Agreement (LAA) Indicators

Performance against targets set under Local Area Agreements is assessed using a number of performance indicators that have been agreed with the government. There are currently no LAA indicators or targets directly measuring the condition of the asset but achievement against target may be indirectly affected by asset condition and levels of service set.

### 6. Safety Inspections

Inspectors carry out safety inspections of the network as per the Highway Safety Inspection Policy throughout the year.

We will continue to monitor the performance of our assets against their performance targets to determine whether we are meeting our approach to asset management and if not, why not [Action Plan Item 13.1](#).

This will take the form of an [HIAMP Action Plan](#) which has been referenced to throughout this HIAMP and is included within the HIAMP Packaged Documents. This Action Plan is a live document (as is the HIAMP) and will be managed accordingly.

We will also use a collaborative approach with TfGM, AGMA and other authorities so that lessons may be learnt and shared.

### UKRLG Recommendation 14. Benchmarking

*Local and national benchmarking should be used to compare performance of the Asset Management Framework and to share information that supports continuous improvement.*

#### Our Approach - Benchmarking

Benchmarking is a systematic process of collecting information and data to enable comparisons with the aim of improving performance, both absolutely and relatively to others. It provides a structure to search for better practice in similar authorities that can then be integrated into an asset management approach.

#### TfGM and GMCA

Trafford is fully engaged with GMCA and TfGM in which we share innovation and good practice. The GMCA is made up of the 10 Greater Manchester Councils, who work with other local services, businesses, communities and other partners to improve the city-region. The 10 councils (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford and Wigan) have worked together voluntarily for many years on issues that affects everyone in the region.

We will continue to work with GMCA and TfGM to exchange objective and subjective data on all areas of Asset Management from stakeholder satisfaction through to national road condition data.

#### National Highways & Transportation Survey

We will continue to supply data to the NHT which serves to provide details on levels of customer satisfaction with local authority services and practices. This will help us to target and publish information clearly and effectively to ensure members of the public and other highways stakeholders are as fully informed as possible about the current performance of our services.

#### CQC (Cost, Quality, Customer) Benchmarking Club

After joining the UK wide CQC (Cost, Quality, and Customer) benchmarking group last year Trafford will continue to take part in the group going forward and attending meetings with the other GM authorities also taking part. This group aims to identify efficient practice in the delivery of highway carriageway maintenance, looking at spend and comparing it to condition information. It also has a 'Why Questionnaire' which help authorities understand why highly performing authorities are doing better than others.

#### Department for Transport Submissions

Our annual submissions of condition data to the DFT gives us a clear indication of how we are performing relative to other authorities. We can use this data to identify key areas for improvement.

#### Highways Maintenance Efficiency Programme (HMEP)

The work of the HMEP has been at the cornerstone of all strands of highway maintenance activities. There are several guidance documents which give recommendations on the best way of delivering these services using Asset Management Principles. This document is itself founded on these recommendations which also tie-in very closely with the 2015-2021 DFT funding models (the Incentive Fund in particular) the new over-arching Approved Code of Practice and also the Whole of Government Accounting which calls for greater detail on asset inventory in future submissions.

Ensuring that Trafford Council has the UKRLG guidance at the heart of our approach to highway maintenance now and in the future, we will also ensure we are properly measured against all other local authorities for all development, programming and delivery operations. [Action Plan Item 14.1.](#)

#### Asset Management Standards

We recognise the need to attain and maintain a robust asset management approach and ensure this meets national industry standards. Apart from the UKRLG Guidance (which this HIAMP is aligned to) and the new Well-managed Highway Infrastructure Code of Practice 2016, which has also been referred to, we will consider assessment and accreditation to ISO 55000; the international standard covering the management of physical assets. [Action Plan Item 14.2.](#)

# 15. Our Future Actions Moving Forward

The development of this HIAMP has been a continuation of the good asset management practice in Trafford since its first Highways Asset Management Plan was published in 2007. Trafford is committed to keeping in step with best asset management practice and is keen to make continuous improvement from lessons learned. The HIAMP is taken into account current best practice asset management guidance and will be monitored and maintained as a live document by One Trafford staff members who have responsibility for its further development. The Action Plan which form part of this document identifies individual actions for improvement is central to this process. See [Action Plan](#)

To continually improve, the Action Plan will be further developed and monitored by staff members within Trafford Council, who will have responsibility for and drive the delivery of the improvement actions and further development of the HIAMP.

### Asset Management Group

An Asset Management Group, led by the Team Manager/Principal Engineer for Asset Management which includes all parties involved in the delivery of asset management including contractors, will discuss the action plan on a regular basis and agree on priority actions: [Action Plan Item 15.1](#).

- Progress in delivering the Action Plan
- Progress in improving information on the asset
- Performance of the asset
- Updated lifecycle plans and level of service documents
- An option appraisal report
- Updated risk register
- Updated Gross and Depreciated asset values and Annualised Depreciation Charge
- Financial projections
- Progress on the development of forward programmes of works



# A. Appendix A - Asset Management Plan for Carriageways

## Survey Strategy and Data Collection

Trafford's technical carriageway survey strategy for each year will remain as follows for the foreseeable future:

### SCANNER Survey

- 'A' Roads: 100% in one direction (2014/15 Network Length = 75km)
- 'B' Roads: 100% in one direction (2014/15 Network Length = 56km)
- 'C' Roads: 100% in one direction (2014/15 Network Length = 43km)

As a general rule, Roundabouts & Dual Carriageways are surveyed in alternate years.

### Coarse Visual Inspection (CVI)

Unclassified Roads: Approximately one third of network.

### Skid Resistance Survey

We will develop a Trafford Skid Resistance Policy and Survey Strategy for optimum asset management approach; which may also be used for the other authorities within Greater Manchester. [Action Plan Item A.1.](#)

## Maintenance Strategy

The highway asset is the most valuable asset within Trafford. Due to historically low investment the highway network has been deteriorating faster than it can be repaired resulting in a general decline in condition. In a climate where budgets and resources are tightening, Trafford is facing significant challenges in deciding how to manage our assets effectively.

The key asset performance indicators for carriageway are in the Table below, with a brief description of the carriageway they apply to:

Indicator	Description
130-01 (DfT Class 3)	The conditions of <b>Principal (A) roads</b> . This indicator is calculated from SCANNER outputs, combining 7 core defects together to calculate the RCI (Road Condition Indicator).
130-02	The conditions of <b>Non-Principal Classified (B &amp; C) roads</b> . This indicator is calculated from SCANNER outputs, combining 7 core defects together to calculate the RCI (Road Condition Indicator).
BVPI 224b (DfT Class 6)	The Best Value Performance Indicator 224b is the condition of <b>Unclassified Roads</b> . The indicator is calculated from CVI (Course Visual Inspection), it is a combination of 6 different defects that are collected to give the carriageway an overall score.

## Works Programme / Life Cycle Planning

Trafford will plan to develop a programme to undertake a balanced approach utilising the best bits of a 'worst-first' strategy alongside the feasibility of a more proactive approach, using more preventative treatments. This multi-year programme will be designed to deliver the right treatment, at the right time, for the greatest long-term benefit. [Action Plan Item A.2.](#)

We believe this to be a better method than prescribing specific treatments as it will allow engineers to employ local knowledge when considering treatment types based upon unique site conditions and the overall transport dynamic of the local area.

We will aim to consider factors and assets other than simply road condition data such as programmes of work involving footways, cycleways, structures and street lighting. This will be moulded into an 'Optimised Holistic Approach' as far as possible where we consider carrying out as much asset maintenance as is required, within the same location, thereby reducing the need for repeated traffic management, particularly on critical junctions and primary routes.

An indicative 5 year works programme will not only help the authority to better plan and integrate our own internal works but it will also aid with integrating our works with neighbouring Council's / Boroughs and outside bodies such as public utility companies. We can design works to coincide where possible, reducing disruption, and also ensure projects are carried out in a sensible order to cut down the chances of newly laid surfaces being re-excavated soon after completion.

## Material Life Cycle

### Hot Rolled Asphalt

On heavily trafficked sites within Trafford (A and B roads) we are looking to introduce Hot Rolled Asphalt as an alternative surfacing material to Stone Mastic Asphalt, increasing the life of the network and reducing the maintenance frequency on these routes. [Action Plan Item A.3.](#)

Due to the urban environment and the number of traffic signals and junctions along these routes we have proposed (discussions with Amey Highways) the use of a high stone content HRA (55/10 or 55/14).

### Concrete Speed Cushions

The current bituminous speed cushions have been deforming in many locations due to the difficulty compacting the material during the construction phase and the amount of vehicles travelling over them. We would look to adopt a similar approach to the Sheffield network with the introduction of concrete road cushions to reduce the maintenance frequency and avoid replacing every time carriageway re-surfacing / renewal operations take place.

## Reactive Maintenance

The Highway is routinely inspected as part of a planned inspection regime detailed in The Highway Inspection Manual with inspections being carried out at a set frequency (Monthly, 3 Monthly, 6 Monthly, Annually). This combined with our Customer Relations process results in all inspections being undertaken by the area Highway Inspector. Any defect identified as part of an inspection will be prioritised utilising a risk based approach to prioritise the response (Emergency, Cat 1, Cat 2-High or Cat 2-Low). Where possible, Cat 1 repairs will be undertaken at the time of inspection using a proprietary repair material.

# B. Appendix B - Asset Management Plan for Footways and Cycletracks

## Survey Strategy and Data Collection

It has been approximately 7 years since a UKPMS FNS was undertaken on Trafford footways. Since that time Trafford inspectors have carried out an annual engineering survey to determine footway condition. As from ..... it has been determined that the enhanced FNS (option 3) will re-commence in Trafford with an annual cycle offering condition levels which are defined to ensure broad consistency with CVI.

## Maintenance Strategy

To align footway asset management with our approach to carriageway asset management, we have developed a new model approach within Horizons. Footways are split into 8 condition categories with respect to 5 different CVI defect codes, Structurally Unsound (SU), Functionally Impaired (FI), Aesthetically Impaired (AI), and As New (AN). Each score is now given its own FWCI (Footway Condition Indicator) so the condition can be deteriorated (1 -> 2 is easier than AN-100 -> FI-25). Below is the Trafford network which has been separated by the FWCI.

Severity-Percentage	Length	% of total length	FWCI
SU-100	15239.17	1%	7
SU-50	24879.38	2%	6
SU-25	155753	13%	5
FI-100	14392.07	1%	4
FI-50	47265.86	4%	3
FI-25	458858.6	39%	2
AI-100	144811.5	12%	1
AN-100	317724.6	27%	0

## Works Programme / Life Cycle Planning

As we move forward, we will use the information gathered from the Footway Safety Inspections to feed in to the selection process for footways to be included in future maintenance programmes. [Action Plan Item B.1.](#)

Footway Network Surveys (inc FNS+, a more detailed survey) are undertaken by an external provider which will serve us better in preparing a programme of works for footways network-wide. [Action Plan Item B.2.](#)

In general, footways in a higher hierarchy will generate maintenance schemes on their own, those such as prestige walking areas and shopping centres. This will not always be the case but we will look to raise the priority of footways which meet the criteria for more than a localised repair and are alongside carriageway schemes which are already in the forward works programme. This will form part of an 'Optimised Holistic Approach' to highway maintenance whereby, having an indicative rolling 5 year maintenance programme will help us to consider other works which can be co-ordinated to take place concurrently or in a prescribed order to cut down on traffic management costs and repeat visits to the same site. [Action Plan Item B.3.](#)

This can apply to both internal works such as lighting column replacement or drainage and also external works such as utility plant maintenance or replacement.

We will look to tie this in with the developing multi-year indicative capital works programme for carriageways, lighting and other assets as part of the 'Optimised Holistic Approach' approach to future maintenance, reducing the occurrence of repeated road closures or restrictive traffic management arrangements.

## Cycleways

The DfT will be putting greater emphasis on the asset management of cycleways in the coming years and we are committed to building our existing inventory of both on-street and off-highway Cycletracks using data gathered from highway inspections, technical surveys by third parties and our own in-house improvement programmes.

# C. Appendix C - Asset Management Plan for Structures

## Survey Strategy and Data Collection

All structures, irrespective of their type and structural form deteriorate over time. Each structure is made up of a large number of individual components that deteriorate at different rates and to different extents. It is therefore impractical to consider the deterioration of a structural asset as a whole for asset management purposes, but instead consider specific common components of structures across the Trafford network. If these are then managed and maintained appropriately it will minimise the deterioration of the structure as a whole, as deterioration of these components leads to the vast majority of other maintenance issues either directly or indirectly.

All highway structures are subject to routine inspections in accordance with best practice. These include two main types of inspections, general and principal. General inspections (GIs) are usually undertaken every 2 years for each structure, and principal inspections (PIs) every 6. In addition, special inspections are undertaken when an issue requiring further investigation has been identified.

Over time, the intention is to vary the frequency of inspections for individual structures or groups of structures depending on a number of factors including safety, availability and condition. As with other asset types, cyclical (routine) maintenance and planned inspections fall under revenue maintenance budgets. However, the dividing line between the planning processes for reactive maintenance and capital renewal is somewhat less distinct than it is for carriageway and footway assets. In particular, the same types of routine inspections are used as part of managing both types of investment.

Inspections are carried out by Trafford's own in house Inspectors and Engineers in accordance with **DMRB Standard BD 63/07 'Inspection of Highway Structures'**. The programme of inspections is determined from the inspection frequency cycle which generally follows the recommendations of the **Management of Highway Structures Code of Practice**.

The data produced and information gathered during both general and principal inspections enables completion of inspection pro forma for determination of the Bridge Condition Indices (BCI). An overall score for the whole bridge stock can be determined using this measure and is useful for tracking overall condition and identifying structures in poor condition.

Structure Reviews are carried out in accordance with **BD 101/11 'Structural Review and Assessment of Highway Structures'** and are only carried out if the need arises. Annex A of this Standard includes a flowchart that more clearly illustrates the process of determining whether an assessment is required.

The Inspection data and spatial location data for highway structures is to be stored on Trafford's Highway Asset Management System Confirm (due to also be stored onto TfGM bridge management system in 2017).

Route Classification	Highway Structures					
	Road Bridges (RB)	Subways (S)	Foot Bridges (FB)	Culverts (c)	Retaining Walls	Sign Gantries
Strategic Non Trunk Route	Primary 28	5	-	2	3	-
Regional Primary Route	A 19	-	-	4	1	3
Principal/Urban Distributor	B 54	3	1	7	7	-
Secondary Distributor	C 23	-	1	11	2	-

## Trafford Council - Highway Infrastructure Asset Management Plan

Local	U 10	-	1	5	-	-
Rural Footpaths	2	-	71	7	-	-
Others	19	1	2	2	-	-
<b>Totals</b>	<b>155</b>	<b>9</b>	<b>78</b>	<b>39</b>	<b>13</b>	<b>3</b>
					<b>Total</b>	<b>297</b>

The desired condition of the asset is not currently defined by any specific standard. The BCI rating system implies that the desired bridge stock condition should be somewhere in the categories 'good' to 'very good', scores between 80 -100 (>90 = very good). Trafford is therefore working on the basis that the desired strategy **subject to funding** would be to move bridge stock condition into the 'very good' category for both critical and average indicators and then to maintain it at that level.

There is no condition intervention criteria as such except when there is a risk posed to the public. In this case actions are triggered to make the structure safe and to carry out repair work. This is usually associated with emergency repairs to parapets and safety fencing following traffic accidents.

### Maintenance Strategy

Routine maintenance activities can be classed as cyclic work and tend to be carried out on an annual basis with the timings based on historical experience. Steady state maintenance is carried out to maintain the condition of the structure by protecting it from deterioration or slowing down the rate of deterioration.

Reactive maintenance is usually emergency work and is dealt with urgently on the grounds of safety such as emergency repairs following a bridge strike.

Essential maintenance work can also be reactive and occurs when major repairs are identified and must be carried out quickly before the structure becomes unsafe; such as to prevent defects leading to much more significant defects that would be very costly to repair. For example, if a bridge expansion joint has failed this is not safety critical, but if that failure is likely to lead to water ingress and corrosion of the bearings (which can be very costly to replace), this would class as essential (or at least high priority) reactive maintenance.

A good routine and steady state maintenance programme reduces the likelihood for essential maintenance.

### Works Programme / Life Cycle Planning

The majority of future works are planned up to 3 years ahead with advanced design and planning work undertaken a year ahead. This allows works to be ordered early in the new financial year, taking advantage of the spring, summer and autumn months.

We will look to tie this in with the developing optimised multi-year indicative capital works programme for carriageways, footways, lighting and other assets as part of our holistic approach to future maintenance; reducing the occurrence of repeated road closures or restrictive traffic management arrangements. [Action Plan Item C.1.](#)

# Trafford Council - Highway Infrastructure Asset Management Plan

## Structures Future Asset Management

Our future approach will be to bring bridges Structural Reviews up-to-date and produce a specific Bridges Asset Management Plan as follows:

- Review current industry best practice for prioritisation of bridges maintenance work.
- Recommend and agree the most suitable approach for prioritising One Trafford bridges maintenance work.
- Review existing record information held by One Trafford / Trafford Council, and produce a priority list of all Trafford Council's bridges.
- Identify which bridges require Structural Reviews in accordance with BD 101/11, and complete the required Structural Reviews.
- Develop outline bridges schemes (likely scope and cost of required works).
- Recommend priority schemes, and, within Trafford Council's expected bridges maintenance budget, propose a programme of bridges maintenance works for the each of the next 3 financial years (2018/19, 2019/20 and 2020/21).

The above will enable Trafford Council to demonstrate that the bridges maintenance budget is being used to optimal effect, and that risk is being managed effectively.

The completed Bridges Asset Management Plan would be an example of good practice with the potential to collaborate with TfGM and other Greater Manchester local authorities, to assist with management of their bridges maintenance work.



# D. Appendix D - Asset Management Plan for Highway Lighting

## Strategy

There are approximately 27,900 street lights in Trafford at the present time. There is an ongoing replacement programme for the entire stock of sodium (SOX and SON) lighting, to change them to new LED lanterns. This programme is expected to be complete by the end of October 2017, and will result in approx. 23,000 new lanterns being fitted. The new LED lanterns will be monitored via a Central Management System (CMS) and dimmed between the hours of 10pm and 7am. With the LED's operating at a much lower wattage than the sodium lamps, together with being dimmed, this means that the sodium replacement programme will result in substantially lower energy charges and carbon output.

The LED lanterns have an expected lifespan of some 25 years, as opposed to the sodium lamps, which last about 4 years therefore, a much reduced number of maintenance visits will be required.

## Maintenance Strategy

Trafford runs an annual Column Replacement Programme (CRP), which replaces life expired columns, based on their condition. This programme is put together using the knowledge of dedicated Lighting Maintenance Engineers. The CRP not only targets columns in the poorest condition but also dovetails with the sodium replacement programme. In this way, columns are also targeted on their ability to be fitted with LED lanterns. Non-standard column types such as cast iron are not conducive for refitting. If these types of column are replaced in conjunction with the sodium replacement programme then the whole area can effectively be changed, leaving no small pockets that are out of sync with the rest of the area.

An electrical test and visual condition check is carried out at the same time as the lantern refit.

## Works Programme / Life Cycle Planning

As the LED stock increases, the number of lighting faults will steadily fall. Over this period the funding normally associated with reactive repairs may be redirected towards column replacement where much of Trafford's stock is already over 20 years old.

Trafford has an aging column stock which will continue to deteriorate over the lantern replacement period. As new LED lanterns will have been fitted to virtually all of the Trafford's stock, column replacement will then involve refitting the existing LED lanterns back onto the new columns.

With the LED lanterns, the equipment has a much longer 'lifespan' than the traditional lanterns. This, combined with the new columns that have a 40/50 year design life, means the replacement and testing regimes will be co-ordinated to require less visits. The electrical testing is undertaken every 6 years, whereas the driver is replaced after 12 years use and the lantern replaced every 24 years. This rolling 6 year cycle results in a programmed testing and replacement regime. This co-ordination of routine but necessary tasks will be much more efficient than at present, will save money and better maintain the asset. *Action Plan Item D.1.*

# E. Appendix E - Asset Management Plan for Drainage

## Strategy

This plan is aligned with the recommendations set out in the HMEP document 'Guidance on the Management of Highway Drainage Assets'.

Trafford will be adopting a 'Risk-Based Approach' to management of our drainage assets in line with the recommendations in the over-arching Code of Practice for Highway Infrastructure. This method provides the most effective way for all local authorities to make the most of limited budgets. We will utilise condition data from a network wide inspection and cleansing programme to form a maintenance regime which takes account of how drainage assets perform over a period of time in respect of their capacity, location and any other localised conditions. Assets such as road gullies will be placed on a matrix based upon the severity and the frequency with which their condition changes ie: how often and at what rate the silt level rises within the gully chamber. This will ultimately lead to a regime where some assets are inspected and maintained more or less frequently than others based upon the relative risk of there becoming a hazard to road / footway / cycleway users or residents.

Trafford uses an approved drainage survey & maintenance contractor sourced through our ongoing partnership arrangement with Amey LG. The information data on drainage asset condition and performance is on-going and will be gathered in such a way that it is easily transferred into our existing Confirm asset management system.

Work is ongoing to gather gully assets and possibly map other drainage assets such as manholes, catch-pits, soakaways, pipes and outfalls using information from hard copy plans and as-built drawing from historic works and investigations. The intention will be to digitise this data as a layer of nodes and lines with associated attributes attached to them where known. This will continue to build over time into a comprehensive database. [Action Plan Item E.1.](#)

This data will then be linked directly to our highway network via Confirm. Drainage assets will be tied to specific streets where possible using the unique street reference number (USRN) as this will enable us to connect enquiries, inspections and defects to particular assets and build up a picture of the performance of our whole drainage systems.

The costs of surveying pipework using CCTV can be very expensive and our current practice is to carry out such surveys at known hotspots where significant flooding events have occurred to help us understand the causes and identify potential solutions. It is important for us to have detailed knowledge of the size and condition of our surface water network, taking in the whole catchment as the solution to a specific problem is more often than not in a different location to the site of the flooding itself, usually an upstream / downstream blockage caused by collapse, tree root ingress or third party works causing damage.

It can also be the case, in a fully functioning system that its capacity is insufficient to cope with sustained periods of heavy rain. Understanding and modelling the capacity of our drainage systems against predicted future rainfall is essential to directing funding and technical expertise in the right areas.

## Maintenance Strategy

We carry out gully emptying, jetting, survey and GIS plotting work on Trafford's drainage assets. Assets are plotted and given a unique ID. This data gives us a focal point for the continuing work of plotting our entire highway drainage network and also gives a reference for decision making on ownership and maintenance responsibilities and future design modelling to reduce the likelihood and / or scale of flooding events.

## F. Appendix F - Asset Inventory

<b>Asset Group</b>	<b>Number/length</b>
<b>Roads (all classifications):</b>	<b>834 km</b>
A roads	75km
B & C roads	56km (B) 43km (C)
Unclassified roads	653km
<b>Footways (all classifications):</b>	<b>1,196km</b>
Category 1	18.4km
Category 2	11.4km
Category 3	1152.6km
Category 4	13.6km
<b>Kerb</b>	<b>1,379.62km</b>
<b>Verge</b>	<b>21km</b>
<b>Road bridges and Culverts</b>	<b>148 no.</b>
<b>Streetlights</b>	<b>27,998 no.</b>
Street Light 5&6m	19,319 no.
Street Light 8m	3,467 no.
Street Light 10m	4,259 no.
Street Light 12m	936 no.
Street Light Mast High	17 no.
<b>Illuminated Bollards</b>	<b>1,132 no.</b>
<b>Non-Illuminated Signs</b>	<b>11,910 no.</b>
<b>Street Name Plates</b>	<b>12,000 no.</b>
<b>Litter Bins</b>	<b>1,000 no.</b>
<b>Bollards</b>	<b>1,700 no.</b>
<b>Public Seats</b>	<b>500 no.</b>
<b>Pedestrian Guard Rail</b>	<b>10,550 (metres)</b>
<b>Life Buoys</b>	<b>4 no.</b>
<b>Armco Barriers</b>	<b>50,000 (metres)</b>
<b>Structures</b>	<b>297 no.</b>
<b>Lit signs</b>	<b>3,288</b>
<b>Public Rights of Way (all RoW):</b>	<b>TBC</b>
<b>Footpaths</b>	<b>94km</b>
<b>Bridleway</b>	<b>2km</b>
<b>Byway</b>	<b>11km</b>
<b>Vehicle restraints (safety fences)</b>	<b>TBC</b>
<b>Drainage systems</b>	<b>TBC</b>
<b>Cycleways (all cycleways):</b>	<b>TBC</b>
Off road cycleways	TBC
On road cycleways	TBC

## Trafford Council - Highway Infrastructure Asset Management Plan

Route Classification	Highway Structures					
	Road Bridges (RB)	Subways (S)	Foot Bridges (FB)	Culverts (c)	Retaining Walls	Sign Gantries
Strategic Non Trunk Route	Primary 28	5	-	2	3	-
Regional Primary Route	A 19	-	-	4	1	3
Principal/Urban Distributor	B 54	3	1	7	7	-
Secondary Distributor	C 23	-	1	11	2	-
Local	U 10	-	1	5	-	-
Rural Footpaths	2	-	71	7	-	-
Others	19	1	2	2	-	-
<b>Totals</b>	<b>155</b>	<b>9</b>	<b>78</b>	<b>39</b>	<b>13</b>	<b>3</b>
					<b>Total</b>	<b>297</b>

