

Warrington Borough Council

Highway Asset Management Strategy 2018-2022



WARRINGTON
Borough Council



Foreword

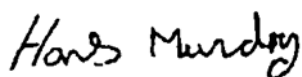
The Warrington Highway Network consists of approximately 948km of roads and has an approximate total highway network asset value of £1.9billion, making it one of the most valuable assets owned by Warrington Borough Council. Almost every resident, worker and visitor to Warrington will use the highway network on a daily basis, whether as a pedestrian, cyclist, or by motorcycle, bus, taxi or by car.

Warrington is at the heart of a highly connected network of Motorways, international airports, mainline rail, and waterways and ports – linkages and connections that are second to none. There are approximately 2.5 million people of working age living within a 30 minute drive of Warrington. The town has the largest catchment area for any town outside the M25 and Warrington imports more workers each day than it exports to the wider region. Our recent economic performance is impressive and we currently have the 8th highest employment rate in the Country at 78.5% (The Centre for Cities' 2017 Cities Outlook report). However, this success creates a significant flow of employment traffic which generates its own challenges in respect of the highway network.

Based on a higher than national average traffic growth figures since 2008, Warrington's road infrastructure is receiving more than its fair share of traffic contributing to accelerated wear and tear to its roads. As a new town many parts of its road infrastructure is now over 40 years old and this includes business areas such as Birchwood. A decline in road condition would have a detrimental impact on the longer term prosperity of the town, which is a negative in the context of future business investment.

Over the last 40 years Warrington has grown from a town with a population of around 70,000 to one which is over 200,000. With 26,000 new homes and 31,000 jobs forecast to be created within Warrington by 2040, it is important that we set long term goals and objectives for the management of our highway network and utilise best practice asset management approach to ensure that we have a highway network fit for the future.

According to recent National Highways and Transport (NHT) surveys, customers reported that road condition is of high concern and in need of improvement as well as quality and speed of repair to roads/pavements. It is critical that Warrington continue to invest in the highway network to encourage new business development and to sustain our expanding network and economic needs, to enable our residents and businesses to continue to prosper in a vibrant town.



Councillor Hans Mundry

Warrington Borough Council

Executive board member for Highways, Transportation and Public Realm



**Executive board member
Cllr Hans Mundry**

Executive Summary

Warrington Borough Council has produced this Highway Asset Management Policy & Strategy to set out how we intend to manage our highway infrastructure assets and to identify how our key objectives are met. In addition, the strategy will outline our statutory obligations and stakeholder needs in relation to the overall performance of highway infrastructure, within funding constraints. Warrington Borough Council is committed to its customers and business growth. As such, the strategy will encompass the Authorities long term goals and objectives.



The strategy will provide the basis for the authority to adopt sound asset management principles to enable us to achieve economic prosperity and growth to the wider community by forming critical links with greater efficiency, collaborative working and value for money.



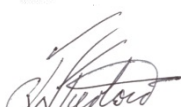
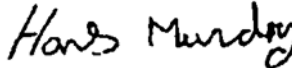
The key to our long-term goals and success will be our continued commitment to maintain our ageing highway network. Due to reducing budgets, Warrington Borough Council have reacted positively by refreshing processes, procedures and governance and have contributed £40M in the form of a Prudential borrowing bid which is currently being delivered over a 5 year programme.

Assessing and managing a highway asset of this size requires significant skill levels and is an extremely difficult task. This strategy is our statement of intent as to how we will manage our Highway Asset in Warrington. We hope it will help you become better informed of everyone's responsibilities, and our commitment to our valued customers.

Revision Schedule

Document Title:	Highway Asset Management Strategy
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Revision	Name	Signature	Position	Date	Stage
Final01: 2015	Jim Turton		Asset Engineering & Manager	February 2015	Originator
	Jim Turton		Asset Engineering & Manager	February 2015	Checked & Reviewed
	Executive Board	N/A	N/A	16 March 2015	Approved

Revision	Name	Signature	Position	Date	Stage
Final02: 2018- 2022	Jim Turton		Engineering & Flood Risk Manager	October 2017	Originator
	Jonathan Dawson-Parry		Asset & Flood Risk Engineer	October 2017	Originator
	Jim Turton		Engineering & Flood Risk Manager	January 2018	Checked & Reviewed
	David Boyer		Assistant Director Transport & Operations		Approved
	Councillor Hans Mundry		Executive board member for Highways, Transportation and Public Realm	January 2018	Approved

Notes:	
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1.0 Introduction

Warrington Borough Council recognises the importance of its highway infrastructure and how an effectively maintained and managed network contributes to the achievement of its corporate goals. It understands that effective Asset Management is a platform to deliver clarity around standards and levels of service, and to make best use of its available resources.

Warrington's roads and footpaths are key social spaces. Those walking from place to place or using shopping centres, walking children to school or using outdoor amenities such as parks, are all classed as 'stakeholders' of the highway network. The highway network is therefore fundamental to the economic, social and environmental wellbeing of the community. It helps to shape the character and quality of the local areas that it services and makes an important contribution to the wider local authority priorities, including regeneration, social inclusion, community safety, education and health. Maintenance of this network affects the lives of everyone and is considered to be a high priority for Warrington Borough Council.

"Living Environment" and creating "Stronger and Safer Communities" are two key Council priorities. Addressing the current level of dereliction of our highway asset is an integral part of these priorities and it has been recognised that the Highways Asset Management Plan needs to become embedded within our processes to help us in our commitment to deliver these priorities. In order to fulfil its potential, to maintain highway safety and to ensure continued future development and growth, it is crucial that the local highway network is adequately maintained. This must include not just carriageways and footways, but also bridges, traffic light systems, street lighting and other key assets.

Although a welcome problem, continuing growth in housing and industry will result in increased traffic volumes which will in turn result in additional deterioration of the highway network. Public concern is increasing about the failure to invest adequately and effectively in highway maintenance and the implications of this for safety and journey reliability. The lack of investment and inadequate maintenance will result in greater issues for many years to come.

This Highway Asset Management Framework, Policy and Strategy sets out how Warrington Borough Council will best manage the Highway Network taking into consideration customer needs, local priorities, asset condition and best use of available resources.

This document presents the Council's Strategy for the management of the Council's highway assets as at December 2017 and considers planning for the longer term.

The Policy and Strategy has been produced following the assessment of customer needs, local priorities and asset condition. It also ensures that both short and long-term needs are appropriately considered, whilst delivering a minimum whole life cost approach to our Highway Assets.

The Strategy will be used to inform the highway maintenance schemes programme to be implemented within the Councils Transport Delivery Plan. Whilst a selection of these schemes will be driven predominantly by condition data, the involvement and role of local Councillors to challenge the process is vital to ensure that local priorities are incorporated into delivery plans.

This Strategy covers all highway maintenance activities funded by revenue and capital streams. The Strategy does not directly relate to capital improvements but where linkages exist these are identified. It will be used to inform priorities in the Business Planning Process and will support the continuous improvement of Highway Asset Management and Life Cycle Planning.

2.0 Asset Management Policy and Framework

The Asset Management Policy is a high-level document that confirms Warrington Borough Council's commitment to Highway Asset Management and demonstrates how an Asset Management approach aligns with the authority's corporate vision, goals and LTP objectives. It establishes sound rules and principles against which the highways will be managed. The Asset Management Strategy translates these principles and high-level commitments into strategic objectives and sets a long-term direction of travel for the service to adopt.

It will be critical to ensure Best Value and maximum return on future investment which minimise risk to highway users, extends the serviceable life of highway assets and to enhance network resilience, which meet the needs of residents and businesses.

By providing a clear asset management strategy and investment now, we will make a difference to future economic growth and regeneration over the next fifteen years.

2.1 Asset Management Policy

Warrington Borough Council is committed to adopting an asset management approach for its highway network in order to support the Council's vision that states:

We will work together with our residents, businesses and partners to make Warrington a place where everyone can thrive.

The Council places a high significance on its transport network, its most valuable asset. The network is vital to the economic wellbeing of our residents and businesses.

As a highway authority, Warrington Borough Council has a statutory duty to maintain, operate and improve the highway network on behalf of all its customers. We aim to do this through providing high value services in a legally and environmentally compliant and sustainable manner.

Our focus will be on achieving the following outcomes:

A safe network

- Complying with our obligations to maintain safety.
- Helping users to feel safe.

A serviceable network

- Ensuring the highways network remains available for users.
- Achieving and maintaining desired degree of integrity.
- Maintaining appropriate levels of reliability and journey times.
- Achieving and maintaining a target condition of all major assets.

A sustainable network

- Minimising cost over time.
- Maximising value to the community through sustainable economic development.
- Maximising environmental contribution.
- Efficient use of natural resources.

Informed and Satisfied Customers

- Providing accurate information in a timely manner.
- Seeking and utilising feedback.

We will achieve these by developing strategies, plans and processes that will:

- define desired levels of service for highway assets, in consultation with stakeholders.
- adopt a life-cycle approach to planning asset investment and management decisions.
- balance competing needs across the highway network and select options that best meet desired outcomes.
- monitor, evaluate and, where required, improve service delivery.
- manage the risks of asset ownership and operation to ensure continuity of service.
- provide for present needs whilst sustaining natural resources for future generations.
- adopt a continuous improvement approach to asset management policies and practices.
- empower and motivate the entire workforce involved in the operation and maintenance of the highway network.
- adopting collaborative and joint working initiatives to deliver effective and efficient services.

This policy will be kept under review and subject to change in the light of significant external or internal organisational changes.

2.2 Asset Management Framework

The Highway Infrastructure Asset Management Guidance published by UK Roads Liaison Group (UKRLG) sets out a framework which describes all asset management activities and processes that are necessary to develop, document, implement and continually improve asset management practices. These activities and the approach to their delivery should be clearly documented and accessible to relevant stakeholders, but the guidance recognises that individual authorities need to be flexible in the application of the framework to accommodate their own requirements.

The guidance recommends that the framework is developed by individual highway authorities to meet their needs, aspirations and their starting point on the asset management journey.

Organisational context: This establishes the context for highways asset management in Warrington. The context links the Council's vision and priorities with the asset management mission and objectives.

Asset Management Planning: Sets out the strategic planning of the policy and the strategy, but is also where the Tactical planning and decisions are made which affect the outcome of the process and determine whether the strategic objectives are met. This planning function links the strategic

objectives with the detailed lifecycle planning for specific asset groups to develop delivery programmes for the network.

Service Delivery & Operations: Operations and service delivery is where work is done, this stage sees the implementation of the strategic and tactical planning processes, producing tangible and measurable outputs for the network and users of the highways network. This is manifest in aspects such as Capital Programmes, routine and cyclical maintenance activities, safety and serviceability inspections and surveys, council-funded programmes of work, reactive maintenance and emergency response works.

Asset Management Enablers: These are the supporting functions and processes undertaken by our highways service that 'enable' the key functions of planning and delivery to occur to achieve our strategic objectives. Activities within this element of the Framework would typically include areas such as resource management, training and competence, budget/cost/financial management, performance management, data and information management, customer and stakeholder engagement, and management of the system controls that govern the overall asset management approach (e.g. Risk Management, non-conformances).

HIGHWAY ASSET MANAGEMENT FRAMEWORK



3.0 Our Council’s Pledges and LTP Objectives

3.1 Our Council Pledges

- **To Protect the Vulnerable.**
- **To Grow a Strong Economy.**
- **Build Strong, Active and Resilient Communities.**
- **Create a Place to be Proud of.**

The HIAM (Highway Infrastructure Asset Management) Strategy supports this vision and reflects the challenges we face as a Borough.

3.2 Local Transport Plan Objectives

Our highways asset management approach will also make a direct contribution towards helping achieve the national shared priorities for transport identified in the Local Transport Plan (LTP). In particular, the Plan will help the Council achieve delivery of accessibility, tackling congestion, providing safer roads and contributing towards improvements in air quality. The linkages are summarised in table below.

Shared priorities	Key LTP 3 Objectives for Warrington to build and manage a transport network that:
Delivering accessibility	<ul style="list-style-type: none"> • Is integrated and customer focused and reduces the need to travel by car. • Improves everyone’s access to health, employment, education, culture, leisure and the natural environment. • Improves everyone’s access to the town centre by all modes of travel. • Enhances accessibility for those in disadvantaged communities or groups. • Integrates with transport networks outside Warrington to enhance the sustainability of cross boundary travel.
Tackling congestion	<ul style="list-style-type: none"> • Is integrated and customer focused and reduces the need to travel by car. • Maintains the highway, minimises congestion for all modes of travel and enables Warrington’s ‘smart growth’. • Enables the regeneration of the Borough and supports economic growth.
Safer Roads	<ul style="list-style-type: none"> • Improves safety and security for all modes of travel. • Makes Warrington safer, sustainable and healthier.
Better Air Quality	<ul style="list-style-type: none"> • Improves everyone’s access to health, employment, education, culture, leisure and the natural environment. • Improves the quality of public space making Warrington more welcoming. • Protects and enhances the natural environment. • Reduces the impact of traffic on air quality in Warrington and helps to reduce carbon emissions and tackle climate change. • Makes Warrington safer, sustainable and healthier.

4.0 Our Strategic Objectives

The Asset Management Strategy sets out how the Asset Management Policy will be achieved, and is one of the key strategic documents relating to Warrington Borough Council’s Highway Services. The Asset Management Framework described in Section 2 encompasses these key documents and illustrates the local and national influences and dependencies that are in place to deliver these services. Warrington Borough Council will ensure that good highway asset management processes and procedures are developed and embedded to ensure maintenance of the highway network.

This document focuses on a methodology and means of maintaining the network to meet our objectives as described in Asset Management Policy of Safety, Serviceability, Sustainability and Customer Service, in order to provide best value for the Council and local community with the funding and resources available. This is most simply set out as:

Safety	Network Serviceability	Network Sustainability	Customer Service
<ul style="list-style-type: none"> ✓ Complying with statutory obligations ✓ Meeting users’ needs for safety 	<ul style="list-style-type: none"> ✓ Ensuring availability ✓ Achieving Asset integrity ✓ Maintaining Asset reliability ✓ Enhancing Asset condition 	<ul style="list-style-type: none"> ✓ Minimising cost over time ✓ Maximising value to the community ✓ Maximising environmental contribution 	<ul style="list-style-type: none"> ✓ Informed & Satisfied Customers

4.1 Setting and Measuring Performance & Levels of Service

Levels of Service are a means of describing the standard of service that is provided or required. These levels link directly back to our corporate aims and objectives, Departmental and Service plans and other strategy documents. Levels of service must take note of statutory duties and the management and mitigation of risk both to the service user and the authority. Levels of service can be described in broad terms which are then expanded to more concise standards. These can then be measured and used to inform decision making processes.

Drawing on our key corporate objectives of:

- A balanced economy, with strong economic growth and high-quality employment.
- A safe place to live where those at risk of harm are well protected.
- Good health and wellbeing, with fewer health inequalities.
- Greater influence, choice and control over decisions that affect communities and services that they use.
- Conservation and enhancement of our environment.

We can frame levels of service for the Highway Asset as follows:

The provision of a network which:

- Is Safe and serviceable in relation to its use.
- Provides accessibility to and from communities for people, goods and services.

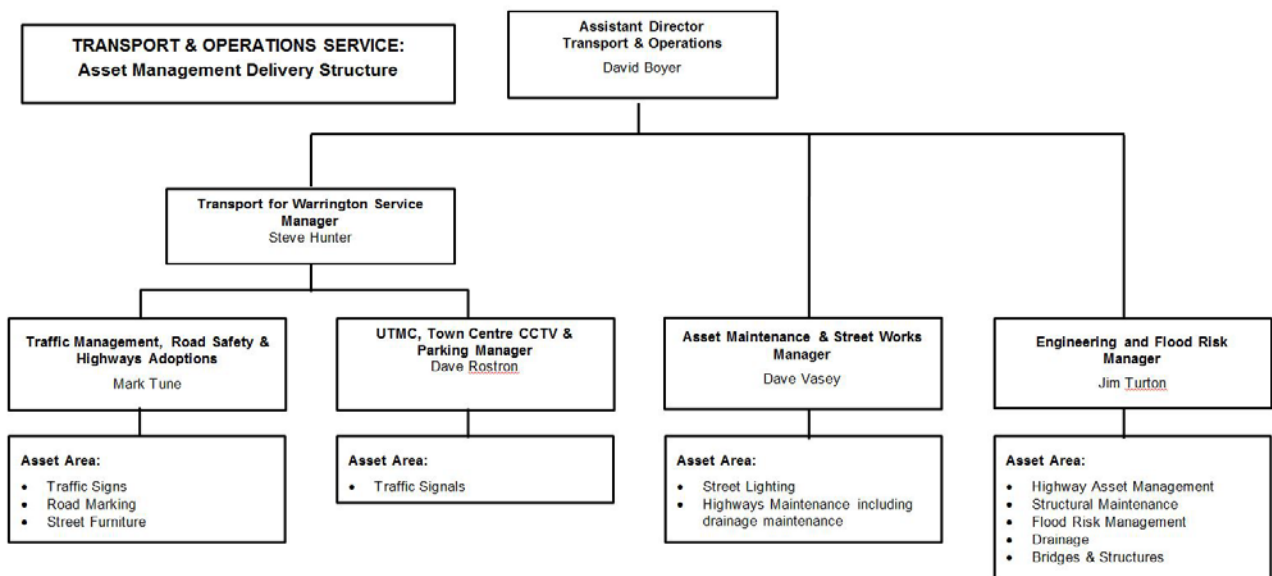
- Enhances the sense of place within our communities and promotes active and healthy lifestyles.
- Promotes the development and maintenance of sustainable communities.
- Contributes to wider economic growth and development.
- Contributes to wider environmental management.
- Makes effective and efficient use of our local resources.
- Appropriately maintained to conserve its value and integrity for current and future service users.

Levels of Service are approved by the Assistant Director and Port Folio Holder as part of the Strategy.

Our highways service has established a Performance Management Framework to ensure measurement of achievement of our strategic objectives is monitored and reported in an appropriate manner.

5.0 Asset Management Leadership and Governance

Management, Governance and Implementation structure of Highway Asset Management is outlined in the Organogram below.



In terms of managing the improvements and implementation of Best Practice Asset Management, an Asset Management Steering Group (AMSG) has been established which will provide overall governance and steering of practices, activities and outcomes associated with our asset management framework. This Group will ensure that targets are established, measured and achieved, along with review and improvements made to consolidate Warrington Borough Council as a Band 3 authority.

5.1 Review Process Monitoring and Performance Reporting

The Strategy will be reviewed regularly to allow informed decisions to be made in order to accommodate any changes in funding and priorities within the longer-term forecasts. The Strategy is

not based purely on current funding levels. This ensures that significant changes to the Strategy will not be required if major changes in available budget occur.

Progress in delivering the Strategy will be monitored at the governance meetings and reported annually at an Annual Strategy and Performance Review to the Assistant Director (Transport and Operations) and Portfolio Holder.

6.0 Our Existing Asset & Asset Condition

6.1 Network Inventory

An accurate inventory will form the basis for an effective asset management approach and is the prime input for the calculation of Warrington’s highway infrastructure asset value. At a more detailed level, it is a pre-requisite for establishing a cost effective and adequate maintenance regime.

Warrington currently has records for the following asset groups, albeit in differing forms, extent and quality;

- Carriageway
- Footway
- Cycleways
- Highway Drainage
- Lighting
- Safety Fences & Barriers
- Street Furniture
- Structures
- Trees
- Verges
- Road Markings
- Public Rights of Way
- Crossings
- Traffic Signals
- Hedges

Our highways team is currently managing a programme developed to update and validate our inventory data. Whilst road and footway inventory data exist in a sufficiently robust form to enable the calculation of a value, and inform the development of effective programmes of work for the coming year, we have little or no reliable inventory for many components of the asset. Many of these deficiencies in inventory will not hinder the delivery of an effective maintenance strategy in the short term. For the principles of longer term lifecycle management of our key asset groups, we have developed Lifecycle Plans for each of the key asset groups.

Details of how we manage these asset groups on a long-term basis is found in their individual lifecycle plans, however a brief description of proposed strategies for each is provided further in Section 8.

The table below provides an overview of the Asset Valuation outputs from the Whole of Government Accounts reporting process undertaken annually. This shows both Gross Replacement Cost (that is, the cost to replace the highways asset to a ‘new’ modern equivalent condition), and Depreciated Replacement Cost (a method of valuation that provides the current cost of replacing an asset with its modern equivalent asset, less deductions for all physical deterioration and impairment).

Asset Group	GRC ‘000s	DRC ‘000s	Date Last Valued
Carriageways	£729,979.00	£669,682.01	30 June 2017
Footways & Cycleways	£140,054.00	£120,002.07	30 June 2017

Asset Group	GRC '000s	DRC '000s	Date Last Valued
Structures	£247,274.00	£186,564.00	30 June 2017
Street Lighting	£34,601.00	£20,034.00	July 2017
Traffic Signals	£5,817.95	£2,007.80	30 June 2017
Street Furniture	£11,388.61	£2,789.27	30 June 2017
Land	£747,485.43	-	30 June 2017
TOTAL	£1,916,599.99	£1,001,079.15	30 June 2017

6.2 Network Hierarchy

Network hierarchies currently serve to inform the frequency and method of safety inspection and are also used as a weighting factor in UKPMS processing. The Council has adopted the hierarchies within the Code of Practice. The hierarchies describe route functionalities and reflect:

- Strategic importance.
- Environment.
- Non-vehicular traffic factors.

Individual hierarchies exist for carriageways, footways, cycle ways and rights of way. In order to take account of local circumstances that have an influence on maintenance needs, this Strategy document allows for the individual routes (other than public rights of way) to have their status in the hierarchy upgraded (or downgraded) from their current level. Such updates can be on a temporary or permanent basis. Alteration of a route's status within the network hierarchy can take place following review, and approval by the Assistant Director. Such alterations reflect changes in use or status of the highway, and will consider the following functional factors and other associated risks:

- Access routes to sites of public importance
- Special environmental considerations
- Special traffic zones
- Winter service routes
- Vulnerable users or with special needs
- HGV routes
- Public transport routes
- Cycle network

Details of network hierarchy are found in individual asset group Lifecycle Plans.

7.0 Highway Network and Asset Data

Warrington Borough Council is committed to good Highway Asset Management and appreciates the value Life Cycle Planning. The highway network is by far the single most valuable asset in the control of the Council, with an estimated replacement value of at least £1.9billion. The extent, and hence value of this asset, is expanding constantly through new development and improvements to the existing infrastructure.

7.1 Condition Surveys

Condition surveys reveal the state of the network and are used to inform decisions on long and short term maintenance funding decisions. Comparing results from consecutive years allows trends to be analysed in respect of the performance of the asset and ensuring that objectives are being achieved and budgets are being spent effectively.

Condition survey data is also used to produce National Indicators and Best Value Performance Indicators (BVPis) which are an integral part of local government's management framework towards continuous improvement in efficiency and effectiveness of services (see Section 10).

Warrington undertakes the surveys outlined as follows:

Carriageway

Survey type	Route category	Survey frequency
SCANNER	A, B & C Class Carriageways	100% both directions annually
Coarse Visual Inspection (CVI)	U Class Carriageways	100% of the network over a 2 year period.
Sideways-Force Coefficient Routine Investigation (SCRIM).	A Class Carriageways	100% annually
	B Class Carriageways	100% annually
	C Class Carriageways	100% annually
	U Class Carriageways carrying more than 5000 vehicles per day in both directions	100% annually

The above surveys are currently being undertaken by nationally accredited company Yotta DCL.

As part of the Highway term maintenance contract awarded in 2014, Warrington had the advantage of an additional independent survey by GAIST. The survey involved a detailed visual inspection (DVI) of the whole of the unclassified road network and was completed in 2014. This provided a direct comparison with other surveys undertaken to validate maintenance need and requirements for its road network. The GAIST road analysis approach is also advocated by HMEP as a best practice approach.

These surveys assess the road condition on an annual basis and allow Officers to develop a programme of maintenance to improve the overall condition of the roads. Survey data is also used to undertake an analysis to determine the backlog of maintenance which provides us with an indication of the treatment type and costs required to bring our road network to an acceptable and manageable condition.

Footway

The above surveys are currently being undertaken by nationally accredited company Yotta DCL.

Category	Category Name	Annual Survey Coverage	Description
1 (a)	Prestige Walking Zones	50%	2 year rolling programme split between West & East Areas
1	Primary Walking Routes		
2	Secondary Walking Routes		
3	Link Footways	25%	4 year rolling programme
4	Local Access Footways		

Structures & Bridges

Survey Type	Survey Frequency
General Inspection	Every 2 years
Principal Inspection	Every 6 years

*Safety inspections / reactive drainage surveys / electrical testing etc. are also undertaken alongside above surveys.

The following systems are currently in operation by the Authority to manage its Highway Data and processes:

- Yotta Horizons (UKPMS)
- WildeGIS and Fdt (Kier) Intercom
- JBA'S Asset Management Tool
- Street Lighting Management Information System (Mayrise/Yotta)
- GIS (MapInfo)
- Mayrise
- Elgin – Licensing and Highway Management System
- Key Terra Firma & AutoCAD Design Software

7.2 United Kingdom Pavement Management System (UKPMS) and Horizons

UKPMS is the national standard for management systems for the assessment of local road network condition and for the planning of investment and maintenance on paved areas of roads, kerbs, footways and cycle routes. UKPMS functionality includes the following:

- Location and referencing of highways (incl. footways and cycle routes).
- Recording and storage of inventory data.
- Recording of condition data (from visual and machine surveys).
- Processing of visual and machine survey data.
- Projection modelling to predict deterioration modes and maintenance profiles.
- Suggested treatment options with costs.
- Management of budgets.
- Scheme prioritisation based on asset condition and/or using economic principles.

SCANNER and Coarse Visual Inspections (CVI) provide condition data that is processed and analysed. A list of potential schemes is then prioritised to produce the 5 year advanced and 12 months programme of schemes.

The data is derived and analysed from the nationally accredited UKPMS surveys; the accreditation of UKPMS surveys is administrated by the Transport Research Laboratory (TRL). The survey data that has been utilised is SCANNER, CVI and FNS; additionally, to supplement the nationally accredited UKPMS surveys, Yotta have applied Accident, Pothole, Completed Works and other survey data provided by Warrington Borough Council to the analysis model.

The Warrington Borough Council road network analysis is undertaken using the Yotta Horizons web-based platform. Others using the same methodology include the Highways Agency, Lancashire, Cheshire West & Chester, Halton, Liverpool, Sefton, St Helens, Trafford, Wigan and Rochdale.

Horizons is a web-based software platform that combines GIS (Geographical Information System), Lifecycle Planning and Scenario Modelling tools. Horizons builds on the work Department of Transport (DfT) funded HMEP (Highways Maintenance Efficiency Programme) completed as part of the Lifecycle Toolkit and expands it. Horizons Analysis module allows the user the flexibility to build simple or complicated analysis of the road condition data that is calibrated to meet Warrington Borough Councils local requirements.

Horizons allows Warrington BC to undertake scenario planning using deterioration modelling and allows the user to specify Budgets, priorities and desired scenarios (e.g. Steady State Analysis or Budget Reduction). Horizons utilises “Asset Sweating” and “Benefit-cost Ratio” algorithms when undertaking Scenario Analysis, to produce the most cost effective Works Programme.

7.3 Skid Resistance

The maintenance of adequate levels of skidding resistance on running surfaces is a critical aspect of highways maintenance, and one that contributes significantly to highway safety.

Our existing strategy to maintaining skid resistance levels has evolved over time to meet the changing needs of our network, in relation to HD28/94.

Skid resistance data is collected using a Sideways Force Coefficient Routine Investigation Machine (SCRIM). It should be noted that prior to 2014, data was gathered via GripTester survey as oppose to SCRIM survey.

The carriageway surface is tested for skid resistance, with extra attention given to more difficult sites which include bends, junctions, steep gradients, pedestrian crossings etc. Data from surveys is used in conjunction with accident statistics to analyse trends and to initiate further investigations to ensure the safety of road users.

A risk based approach is applied to consider how we will continue to fulfil our statutory obligations within budgetary and resources limits to ensure that maintenance works are appropriately applied and prioritised.

7.4 Flood Risk Management

Warrington Borough became Lead Local Flood Authority in 2012. We have been very proactive in the management of this field, and have invested heavily surveys to gather key asset data. This data is critical to identify a forward programme of schemes, to submit funding bids and to coordinate drainage schemes with highway schemes. A Formal Flood Risk Management Strategy was produced in 2014 and subsequently updated in 2017.

8.0 Overall Highways Asset Strategy

The overall objective in targeting maintenance resources is to identify assets that are approaching condition thresholds. Timely intervention at this stage will prove effective at halting the overall deterioration of the network. With the network condition stabilised the ongoing aim will be to deliver sustainable improvements in asset condition and value.

To maintain Warrington's important economic contribution to the UK economy, there is a need for a serious level of investment in its transport network, including Business areas like Birchwood. This is evidenced in the UKPMS performance indicator results. A decline in road condition would have a detrimental impact on this longer term prosperity of the town.

8.1 Priority Investment

A preventative Strategy will be adopted as this will deliver the best value for money. Preventative works will be given budget priority. Investment will recognise the higher levels of deterioration and higher cost of maintenance of roads, footways and other assets throughout Warrington. Investment will recognise;

- The differences in condition between of various road hierarchies.
- Investment in drainage maintenance and improvements will continue.
- Investment in safety fence/Vehicle Restraint Systems maintenance and upgrades will continue.

8.2 Dual Strategy

8.2.1 Conventional Replacement/Resurfacing Schemes

Due to limited funding over the years, asset management has generally resulted in a more reactive approach that focused on assets approaching or already at the end of their life. This involved carrying out more costly resurfacing schemes which is generally unsustainable. As significant investment is required to catch up with the deteriorating asset, structural maintenance resurfacing schemes will still be necessary and form part of the overall strategy.

8.2.2 Preventative Approach

A preventative approach will be adopted where possible. This means investing a greater proportion of the available budget to treat roads in the early stages of deterioration. A preventative approach targets assets that are not currently in need of full structural renewal and proposes to extend the asset's whole life by arresting/delaying deterioration.

It is recognised that the transition to a preventative Strategy may lead to a short-term position in which the perceived network condition is worse. For this reason, resurfacing schemes will still be undertaken where these are deemed to be necessary.

This Strategy is the roads equivalent of painting wooden window frames rather than waiting for them to rot and require expensive replacement. It is estimated that this approach could save the Borough approximately 10%, if fully implemented and managed effectively.

9.0 Strategies for Individual Asset Groups

9.1 Carriageways

Carriageways represent the largest element of the highway asset and account for an estimated 70% of the total asset value. Maintaining their condition and preserving their value is vital to the success of the Council’s maintenance strategy.

The table below shows the length of the carriageway network across Warrington. It does not show lane length (e.g. actual lane length of A class network is 196.210km due to dual carriageway sections):

Classification	Carriageway Asset Length
A Class (DFT 3)	124.371km
B Class (DFT 4)	35.827km
C Class (DFT 5)	80.097km
U Class (DFT 6)	671.875km
Passageways (Known Survey)	30km
Roundabouts (assumed)	Approx 6km
Total	948.17km

9.1.1 Current Challenges

One of our largest challenges with our carriageway network concerns significant sections of our roads built around the same time as part of the New Town development. This inevitably means that the rates of deterioration are largely the same, and as a result, most of these pavement sections are approaching the end of their original design life and require treatment, often structural and extensive.

The increasing level of traffic volumes associated with both a growing population base and also resulting from frequent traffic disruption problems on the adjacent motorway network, has a cumulative effect and impact on the structural integrity of our pavements, with increasing numbers of stop/start movements, leading to more rapid deterioration of pavement surfaces.

We are also challenged with managing our extensive minor work network (some non-principal and all unclassified network) which may have been constructed with minimal pavement layer depth in

older sections. This results in more rapid deterioration and may require more structural repairs than planned.

This challenging environment of deteriorating pavements in our carriageways is magnified with the reduction in revenue funding for maintenance, and places greater emphasis on our ability to deliver more cost-effective capital expenditure.

9.1.2 Desired Outcome

In short, the desired outcomes for the most effective management of our carriageway asset are

- Maintain carriageway network in safe condition
- Maintain carriageway network with minimum whole life cost.
- Maintain steady state
- Undertake more planned preventative maintenance
- Meet statutory duties

9.1.3 Proposed Strategy

The maintenance strategy is founded on the principle that timely treatment presents better value for money, minimises disruption to the travelling public, and effectively maintains the overall condition of the asset. Works programmes are developed to identify and prioritise maintenance schemes using condition data and accident statistics etc. and takes account of impacts on the community.

The future approach is to undertake more preventative maintenance treatments on carriageways in the amber condition band. This will reduce the whole life cost of the carriageways as we will be eliminating lengths which would otherwise have deteriorated to a red condition requiring more expensive treatments to remain in service.

The performance of implemented carriageway programmes of work and using performance information arising to inform treatment calibration within the model will be monitored and help support the development of future approach.

9.2 Footways

The maintenance of a serviceable footway network is essential if we are to achieve wider objectives for modal shift, community health and economic development. Again, the Maintenance Strategy and HIAMP are founded on the principle of timely intervention.

The selection of appropriate maintenance treatments is influenced not only by the existing structural makeup, but also by the desired usage of the footway or pedestrian area. Our Council's approach is to tailor the quality of the materials used to match the wider aspirations for the site. This is particularly evident in town centres, but applies equally to rural environments and surrounding areas.

Warrington Borough Council maintains approx. 1067.7Km of footways, this equates to approx. 2,200,000m². The table below shows the length of the footway network across Warrington broken down by type:

Footway Type	Length	% Length
Bituminous	983Km	92.1
Flagged	38Km	3.6
Concrete	1.6Km	0.1
Block Paved	15.4Km	1.4
Other	29.7Km	2.8
Total Footway Length	1067.7Km	

The table below shows the length of the footway network across Warrington broken down by footway hierarchy:

Category	Category Name	Description	Length	% Length
1 (a)	Prestige Walking Zones	Very busy areas of towns and cities with high public space and streetscene contribution.	N/A	N/A
1	Primary Walking Routes	Busy urban shopping and business areas and main pedestrian routes.	12.662km	1.2
2	Secondary Walking Routes	Medium usage routes through local areas feeding into primary routes, local shopping centres etc.	86.354km	8.1
3	Link Footways	Linking local access footways through urban areas and busy rural footways.	268.256km	25.1
4	Local Access Footways	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs.	675.518km	63.3
N/A	Other	Passageways, Back Alleys	24.910km	2.3

9.2.1 Current Challenges

Due to minimal investment in maintaining and improving our Footway network over many previous years, our challenge is to manage a programme of improvement within a reducing budget envelope. As a result, a significant proportion of our footway network is assessed as structurally unsound (SU) or functionally impaired (FI) and requires immediate redress.

Whilst over 90% of our footway network is constructed of bituminous materials, flags and block pavers make up over 5% of our network and often require more extensive repair and reconstruction, and is often not as cost-effective as alternative solutions. These flagged and paved areas often contribute disproportionately to the level of trips and slips claims received by the Council.

9.2.2 Desired Outcomes

The desired outcomes for the most effective management of our footway asset are

- Maintain footway network in safe condition.
- Maintain footway network with minimum whole life cost.
- Maintain steady state / deteriorating network.
- Meet statutory duties.

9.2.3 Proposed Strategy

The future approach is to undertake more preventative maintenance treatments on footways. This will reduce the whole life cost of the footways as we will be eliminating lengths which would otherwise have deteriorated to a worse condition requiring more expensive treatments to remain in service.

The performance of implemented footway programmes of work and using performance information arising to inform treatment calibration within the model will be monitored and help support the development of future approach.

We will be striving to achieve a Steady State level of asset inventory for the Category 1 & 2 footways – i.e. the Primary & Secondary Walking Routes. This will require additional focus on preventive maintenance measures and may involve some changes to deteriorating flagged surfaces with bituminous surfacing materials which are both cheaper to purchase and place, as well as creating less risks to trips and slips over the longer term.

As funding for footway replacement and repair is limited, we've recognised that we must provide a sustainable approach to managing the deterioration of Category 3 & 4 footways – i.e. Link and Local Access Footways. This approach will need to be addressed in the future where the condition has deteriorated to the extent where it is more cost effective to repair/replace than maintain.

9.3 Bridges

Bridges are an important asset to Warrington and those carrying public roads have a high value.

The processes underpinning the maintenance of the bridge stock follow the Code of Practice for the Management of Highway Structures and a risk based approach. This code will be used to develop specific and detailed processes and procedures for highway structures. Benefits include:

- Reduced life cycle costs.
- Defined service levels.
- An enhanced ability to track performance.
- Increased knowledge of the bridge stock.
- Condition trend data.
- Development of a long-term maintenance programme.

For the purpose of this document road bridges also include culverts with a span 1.5m or more within the roads network and subways within the roads network.

The table below shows the number of structures broken down by type across Warrington.

Structure Type	Quantity
Publically Owned and Maintained Road bridges along the Principal Road network.	112
Publically Owned and Maintained Road bridges along Non-Principal Road network.	144
Footbridges pedestrian/cycle (excluding PROW) which either carry footways adjacent to road bridges or span over roads	1022
Subways within the roads network.	10
Bridge: rail	48
Larger rural footbridges	6
Public Rights of Way Bridges	36
Culverts with a span 1.5m or more within the roads network.	12
Dutch Ford	1
Retaining walls	6
Sign/Signal Gantry	79
Traffic signal mast arm assemblies'	9
Structural Earthworks – reinforced/strengthened soil/fill Structure	Unknown
Service Tunnel	1
Private Road Bridges supporting the public highway	9
Council Owned Structures supporting Private Street/Road	99
Miscellaneous Structure	1
Total Number of Structures:	1595

9.3.1 Current Challenges

With an aging set of bridges and structures, our Council is challenged to continuing a required level of service for our road users and key stakeholders. Our funding requirements are more substantial than our current level of funding, which has remained stable over the recent 3-4 years. Given the expanding and growth agenda undertaken by the Council, we are also required to manage an expanding asset base, with new bridges being constructed in Chester Road and as part of the Western Link Project, these will increase our inventory and place greater pressure on our maintenance spend.

9.3.2 Desired Outcome

The desired outcomes for the most effective management of our bridges and structures asset are

- Meet statutory duties.
- Maintain bridge stock in safe/serviceable condition to required standards.

9.3.3 Proposed Strategy

Our primary strategy is to effectively manage our aging asset profile, by making targeted interventions and preventative maintenance treatments. We have developed a forward works

programme aimed at delivering these strengthening schemes as well as preventive maintenance treatments so that they cause minimal disruption to the travelling public, residents and business operators. We are adopting a whole-of-life approach to management of our assets and, although we recognise that the existing funding does not adequately address all the functional asset management needs, we will optimise any funding we obtain for effective delivery.

9.4 Street Lighting

The Council's objectives for street lighting extend beyond illumination. The provision of lighting can provide a safer, more secure night-time environment and its proper management can produce environmental and customer satisfaction gains.

The repair of faults in the existing street lighting stock is the key activity on which the customer's perception of the service is based. This activity is underpinned by routine lamp changes, cleaning, electrical and structural testing and painting.

While lighting fulfils a number of important purposes, care is taken not to over-light roads, as this can unnecessarily contribute towards light pollution, neighbourhood nuisance and increased energy consumption.

This asset grouping comprises of the following:-

- Columns, brackets, lanterns, lamps, control gear and switching devices,
- Illuminated centre island refuge beacons, posts, lamps and control gear,
- Illuminated signs, posts, lanterns, lamps, control gear and switching devices,
- Illuminated bollards, lamps and control gear,
- Zebra crossing beacons, posts, lamps and control gear,
- Underground cable networks, ducts, inspection chambers, feeder pillars, switching and fuse equipment,
- Subway Lighting, lanterns, lamps and control gear,
- Feeder Pillars,
- WBC owned cables, joints, fuses and other electrical components/connections.

9.4.1 Current Challenges

Increasing Inventory

The street lighting inventory increases by approximately 1% per year as a result of new housing and commercial developments etc. Whilst the rate of increase might have slowed due to the recession there is still an upward trend. In times of growing financial restraint there may come a time when there is simply not enough money available to support the asset.

Energy Costs

This is by far the biggest challenge facing the street lighting service. The cost of energy charged to WBC is made up of a number of different components namely cost of generated energy, cost of transmission and regulatory costs. As a result of increases in all these the cost of energy has almost trebled in the past 10 years.

Ageing Infrastructure

Due to a lack of investment over many years the rate of renewal in previous years has not kept pace with the rate of decay.

9.4.2 Desired Outcomes

The objectives of this asset grouping are:

- To ensure that all equipment is electrically and structurally safe,
- To ensure equipment is installed and maintained safely,
- To provide appropriate lighting in conservation and other areas,
- To minimise the impact of lighting on the environment,
- To minimise and reduce the energy costs associated with this asset group,
- To deliver the street lighting objectives sustainably, economically and effectively,
- To maintain an accurate inventory.

9.4.3 Proposed Strategy

Adopting and managing an Increasing Inventory

To minimise the impact of this growth, design briefs will be continually reviewed to ensure that the street lighting on these developments delivers lowest whole life costs for both maintenance and energy whilst meeting the relevant lighting standards. We will also be reviewing the existing lighting design standards with a view to providing an appropriate level of lighting across Warrington in the most efficiently and effective manner in order to reduce the associated maintenance and energy burden that these developments have on the Council. A commuted maintenance payment will be required where a developer chooses to use materials or lighting installations which, in the opinion of the Council will require premature or more costly replacement or incur additional maintenance costs

Reducing and managing Energy Costs

Whilst WBC does purchase its energy requirements through a consortium and competitive tender to get a good as deal as possible, it is unable to avoid paying these additional costs other than reducing consumption by removing/disposing of lighting, reducing consumption through shorter operating periods or using low energy light sources. Our long term strategy is to reduce consumption where possible whilst maintaining required levels of service, and to utilise developments in technology that require lower energy light sources.

Replacement and preventative maintenance of Ageing Infrastructure

As a result of the increasing age profile of our lighting infrastructure, the lighting stock is being replaced as part of an 'Invest to Save' project, although those not replaced will continue to age and investment will be required to maintain a steady state.

9.5 Traffic Signals

Warrington has a state of the art UTMC (Urban Traffic Management and Control) system where the traffic signals can be monitored by the use of cameras on an ongoing basis. This enables the UTMC team to make adjustments to systems as necessary and to react to issues as they arise on the network.

Whilst the traffic signals asset is not that extensive in Warrington, with around 75 signalised junctions and crossings on non-trunk roads, it does provide a very targeted and essential level of control on traffic movements. Our maintenance strategy is founded on an annual overhaul and 6-month check of all signal equipment and the ability to react quickly to any loss of service.

We recognise the need to develop a more robust renewals programme for this asset group going forward, particularly as the lifespan of much of this equipment (due to advances in technology as well as its physical nature) is considerably less than many other components that make up the highway. Traffic Signals normally require replacement every 20 years.

Warrington Borough Council maintains the following traffic signal assets:

Asset Type	No of Units	Replacement Rate/Unit (£)	Value
Poles	1527	100	£152,700.00
RAG head halogen	879	178	£156,462.00
RAG head LED	569	405	£230,445.00
P Head Halogen	149	237	£35,313.00
W Lamp Tungsten	355	178	£63,190.00
MVD Veh	204	198	£40,392.00
MVD Ped	764	265	£202,460.00
P Indicator LED	877	315	£276,255.00
Road Junction	79	5260	£415,540.00
Puffin Crossing	41	1917	£78,597.00
Toucan Crossing	12	1917	£23,004.00
Pelican Crossing	21	1917	£40,257.00
CCTV (including posts)	21	22000	£462,000.00
VMS	20	30000	£600,000.00
Box Sign Fluorescent	86	123	£10,578.00
2 aspect LED Heads	173	462	£79,926.00
Green Arrow Aspect LED Heads	26	80	£2,080.00
Sign box LED	65	250	£16,250.00
Cycle Apect LED	62	189	£11,718.00

Asset Type	No of Units	Replacement Rate/Unit (£)	Value
IDT Wireless Routers traffic signal comms	62	1450	£89,900.00
IDT Wireless receivers traffic signal comms	95	172	£16,340.00
Westermo Routers traffic signal comms	12	661	£11,237.00
Car Park guidance VMS	25	22000	£550,000.00
Swing Bridge open warning VMS	6	10000	£60,000.00
Car Park counter units and routers	4	2000	£8,000.00
Traffic Counters	59	10000	£590,000.00

9.5.1 Current Challenges

As with most of our other highways infrastructure, our traffic signals inventory is aging, with many of our systems reaching the end of their functional life. Our traffic management systems are also rapidly expanding due to more intelligent transport systems technology, so we also face the challenge of an expanding asset base to support, again, within a reducing funding envelope.

9.5.2 Desired Outcome

The desired outcomes for the most effective management of our traffic management systems are:

- Meet statutory duties.
- Maintain equipment in serviceable condition.
- Operate effectively to reduce traffic congestion.

9.5.3 Proposed Strategy

Network Management

Journey Time Monitoring (JTM) will be used to aid network management by implementation of 'coping' strategies in real time without user intervention.

Network Resilience

UTMC are migrating to 'hosted' systems where possible, thus switching the onus of maintenance to third parties with reliability improvements due to back up systems being available. Communication system improvements are ongoing with the deployment of Wi-Fi technology on-street replacing old and obsolete 'private wire' circuits which were expensive to install and maintain.

10.0 Works Forward Programmes & Programming

Programmed Maintenance is targeted at all works of a scale beyond that achievable through routine means. It further promotes the serviceability and sustainability of the highway network.

10.1 Financial Allocation

The Council receives notification from central government in December of the financial allocation for the financial year commencing in the following April. The following February, the budgets are set for highway maintenance.

10.2 Data for Programming

Warrington has adopted the following sequence of events, which will provide a systematic approach to good Asset Management, Life Cycle Planning and programming and allocation of finance to schemes.

- **April through to September** – SCRIM, SCANNER, CVI and FNS surveys undertaken.
- **September to November** - Survey results analysed along with accident statistics.
- **Early December** – lists of proposed schemes compiled including estimates, initial priority of the scheme, recommendations and the proposed treatment. Schemes are discussed internally for permitting process and to allow for road space booking.
- **Late December** – Proposed list of schemes and a programme including reserve schemes is finalised and reviewed against outcome requirements. Programming is discussed with Term Maintenance Contractor to ensure efficiencies through the programme can be achieved.
- **January** – Programme approval sought from Portfolio Holder.
- **February** – Term Maintenance Contractor notified of final works programme for delivery in following financial year.
- **April** – Works commence.

10.3 Development of Programme

Programmed maintenance is currently carried out on an annual basis. However, the annual programme is initially established as part of a 5 year forward programme. The effect of this is to lower whole life cost compared to reactive and routine maintenance by accurately planning an increasing amount of preventative and timely maintenance. This in turn will help to drive down the cost of the delivery of schemes, to reduce the impact of schemes on the network, maximise value for money and to maximise Best Value, in line with HMEP guidelines.

The programme is established on a needs basis, with priorities within that programme being established on the criteria detailed below, in line with core objectives.

The overall asset management elements and programming are undertaken 'in house' by the Engineering and Flood Risk Team. The Engineering & Flood Risk Manager produces all forward programmes and these are approved in advance by the Portfolio Holder and Assistant Director.

10.3.1 Programme Co-ordination

The annual draft programme is provided to the Highways & TMA Manager in November, several months before the start of the new financial year in April. This is then provided to all Statutory Utilities. In addition, the programme is discussed at monthly scheme coordination meetings with team managers of other internal departments.

All planned works are provided to Highways England to assist in the minimising of risk to the Motorway network, as Warrington is bounded by the M56, M6 and M62 Motorway network. This is

particularly important when traffic is diverted onto the local network following incidents on the adjacent motorway network.

All notified works on the public highway are published via <https://roadworks.org/> for planning and customer information purposes.

10.3.2 Early Contractor Involvement

The programme is provided to the Term Maintenance Contractor to enable resources to be accurately planned to enable guaranteed delivery of the programme and to maximise savings and Best Value to be made. This approach is very successful as it is delivered in a joined up way.

This allows Service Delivery Partners, to enable inherent efficiencies and interdependencies between all work streams to be identified, understood and then managed. This process extends well beyond maintenance activities alone and this allows for any efficiency to be exploited to the full.

10.3.3 Optimisation of Programmes

Warrington advocates a holistic approach to asset management concept which promotes the inclusion of works on all elements of the highway asset, within a site when undertaking programmed works. This allows the inclusion of works that have the potential to add community value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings and tree trimming etc.

A valuable element is the inclusion of ducting for future traffic signal or street lighting replacement schemes to prevent the premature replacement of the new road surfacing. If possible the traffic signal and lighting replacements will be undertaken at the same time. The scope for inclusion of such works within each scheme depends upon the key aims of the scheme and available resources.

11.0 Communications

Warrington Borough Council has developed a Highway Communications Strategy to engage with customers.

The Communications Strategy recognises that the Highway Network is one of our largest and most valuable assets and is very important to our residential and business customers. The Communications Strategy will aim to raise the awareness and to provide an understanding of the Councils approach to highway maintenance. This will provide information about how complex the role of asset management is and the work that is involved in maintaining and improving roads, footways, street lighting and structures. The key element is that all communications will be accessible, accurate, informative and timely.

We will engage with residents, businesses and other stakeholders to better understand their needs and expectations during the undertaking of projects and to encourage them to provide positive or negative feedback as to how our projects have actually been delivered. This will enable us to better shape and continue to improve our services.

11.1 Aims of the Communications Strategy

The Council's aim through communication is to:

- Raise awareness of the services provided by the highway service.
- Increase stakeholder satisfaction with the services provided.
- Improve the level of trust and confidence in the decisions made.
- Support elected members in their role as community representatives.
- Use modern technology to reach as many people as possible.

11.2 Objectives of the Communications Strategy

To inform stakeholders of the services the Council provides and the quality of service they can expect.

- To help stakeholders understand how to get involved with or influence our work.
- To gain commitment and support for effective and efficient asset management.
- To inform how the council spends highway maintenance money wisely, using the most appropriate treatments.
- To engage and listen to customer concerns about the network and feedback our progress on a regular and timely basis.
- To demonstrate the positive work being carried out to maintain and improve the highway network.
- To communicate with businesses, partners, community groups and other organisations – as well as with residents.

11.3 Customer Relationship Management (CRM) Process

Warrington Borough Council is committed to our customers and will follow up complaints received into the Contact Centre. Our CRM process enables us to receive and distribute the complaints to the appropriate team and for them to action and close the complaint in good time.

This provides customers with a level of confidence that their complaint has been registered, considered and actioned.

11.4 Adverse Weather Warnings

We strive to communicate with our customers during the onset of any adverse weather conditions brought on by freezing, flooding and high temperature related issues during the summer. We will do this by social media, posting information on our web site, twitter, newspaper advertisements where appropriate and other outlets available to us.

11.5 Customer Satisfaction Surveys

Warrington subscribes to the NHT surveys. Feedback from customers is assessed and the survey results help us to focus our strategies towards the needs of our customers.

Following individual schemes, feedback is sought from those affected via a simple questionnaire.

12.0 Monitoring, Evaluation and Benefits Realisation

12.1 Performance Indicators and Management Framework

Warrington Borough Council has implemented a Performance Management Framework in order to provide objective evidence of achievement of our strategic objectives as defined in Section 4.0. The Performance Management Framework is shown as Appendix A of this document.

Performance indicators and targets are reported and tracked to measure performance and improvement. Performance is reviewed regularly with the Assistance Director and Portfolio Holder (as part of the Asset Management Steering Group Meeting). Each review adopts a risk management approach and introduces those changes that are necessary to ensure that the Health and Safety, Environmental, Political and Financial risks both to users and the Authority are managed effectively.

In addition to our PMF, we are also required to report on other performance aspects, both corporately and contractually.

Delivery and budget targets are reviewed monthly between the Assistant Director and Engineering & Flood Risk Manager and as necessary at the Asset Management Steering Group.

12.2 Benchmarking

We use benchmarking as a tool to measure performance and to identify where we can do things in a different way to achieve better outcomes.

Council representatives meet regularly with other Highway representatives including HAMFIG and GMADE etc. where benchmarking and Highway Asset Management knowledge, good practice and experience is shared.

13.0 Existing Strategy Progression

As this document represents a revised Asset Management Strategy for the Borough's Highways Service, a progress check is referring to the previous strategy in place from early 2015. As part of our overall asset management of review and improve, we've learned valuable lessons in applying asset management principles across our wider asset base, and now include lifecycle plans for each of our major asset groups: Carriageways, Footways, Bridges & Structures, Street Lighting and Traffic Management Systems, with additional lifecycle plans to be developed in the future to address Signs and Road marking and other ancillary highways assets such as drainage units and public rights of way (PROW).

The overriding theme developed under the previous Asset Management Strategy was the targeted increase in investment in our road network, most notably our Strategic Road Network (A, B & C roads). Through building a strong investment case founded on strong asset management and highway engineering information and principles, we were successful in securing an additional £40 Million to be spent as follows from 2013-2021:

- £27.5m – strategic road network (A,B and C roads)
- £10m – side streets and unclassified roads improvement programme
- £2.5m – footway improvement programme

of which our spend-to-date is currently @£15M, with the remainder to be delivered in the next three years, and is set out in our published programme on our Council website.

Whilst this investment is likely to take several years to reflect increased overall structural integrity in our pavements across the borough (through our condition surveys), we have received significant support and positive feedback from our Members and other key stakeholders of the Council that this strategy is having a strong impact and will lead to even further improvement across the Borough.

Our strategic role in Flood Risk Management as Lead Local Flood Authority (LLFA) and chair of the Strategic and Tactical meetings of the Cheshire Mid-Mersey Partnership is also founded on strong asset management principles and we continue to provide a lead role across the region. Collaboration in this field extends as far afield as Staffordshire.

As one of our strategic objectives is about providing a Serviceable and Sustainable highways network, we value collaboration with our supply chain partners and neighbouring authorities and have demonstrated this through closer working with our neighbours in Liverpool City Region, Greater Manchester as well as Cheshire West & Chester and Chester Easter Councils.

With the implementation of our Performance Management Framework (Section 12), we will be working to objectively demonstrate achievement of our strategic objectives on an annual basis, allowing a regular review of our strategy to ensure we address our Council's requirements.

14.0 Strategy Review

This document will be reviewed on an ongoing basis to ensure its content remains valid; it will be fully revised at the end of the Strategy period as a minimum.

Appendix A: Performance Management Framework

SERVICE LEVEL		PERFORMANCE MEASURE	METHOD OF MEASUREMENT	FREQUENCY OF MEASUREMENT	TARGET	PERFORMANCE STANDARD			
						POOR	AVERAGE	GOOD	V GOOD
CUSTOMER	Provide a high level of Customer Satisfaction with accurate, timely information and feedback mechanisms to/from our Key Stakeholders	Customer Satisfaction with Overall Highways Maintenance Services	Use of NHT Customer Satisfaction Survey	Annual					
		Response to Customer Enquiries through our Customer Management System in line with required deadlines	No. of Customer Enquiries closed out in accordance with required timeframes	Monthly					
SAFE & RESPONSIVE SERVICE	To undertake Safety Inspections to the required quality and frequency in line with Highway Safety Inspection Manual & Well-Maintained Highways Codes of Practice	Safety Inspections of Carriageways	% of Inspections completed on time	Monthly					
		Safety Inspections of Footways							
		Bridge Inspections – General and Principal Inspections							
		Structural Inspections and Testing as required							
		Annual inspection regime for all traffic signals and pedestrian crossings.							
	To reduce our legal exposure and liability for Insurance Claims for outstanding safety defects	Number and Value of Insurance Claims for Safety Defect Resolution	% of Repudiated Claims vs Total Claims (No & Value)	Annual					

	To provide a safe and effective response service	Emergency and Urgent Repair Response for Maintenance works	% of Category 1 Defects repaired within required timeframes	Monthly						
	To provide a winter service of precautionary salting and snow clearance on routes as laid out in our Winter Service Plan	Undertaking precautionary treatments on gritting routes	% of routes started within the agreed start time (+/- 15 mins)	Monthly during Winter Months						
SEERVICEABLE & SUSTAINABLE NETWORK	By adopting an asset management 'whole life' approach to scheme prioritisation to ensure effective and efficient management of the asset.	The backlog value of the highway asset reported to Government is being maintained or decreasing	The accumulated depreciation as a percentage of Gross Replacement cost	Annual						
	Delivering an efficient, continually improving Highways Service	Efficiency Gains and Savings generated through review and improved business processes	% Savings captured and agreed as	Annual						
	Using Condition Data and other related empirical data, develop and deliver a program of planned works across major asset groups	Carriageways	The condition of the road network is nationally recognised as good	% of Carriageway network where structural maintenance should be considered (Principal, Non-Principal, Unclassified)	Annual					
			The Skid Resistance of carriageway surfaces is surveyed and assessed in line with Skid Resistance Policy	% of A Roads in Average or better condition	Annual					

		Footways	The Prestige & Primary Walking Routes are in sound-good condition (as determined by nationally recognized inspection assessment)	% of the surveyed length of Prestige & Primary Walking Routes at Condition Level 3 (Functionally Impaired).	Annual						
		Structures	To maintain the weighted Bridge Stock Condition Indicator (BSCI _{AV}) scores for HGV and non-HGV Networks	Bridge Stock Condition Indicator - average BSCI _{AV} : a measure of the physical condition of the highway structure stock	Annual	HGV: 93					
		Street Lighting	To carry out inspections and repairs to maintain street lighting columns at an acceptable condition	No of Columns in Risk Classes 1-4 (as defined within TR22 Guidance)	Annual						
		UTMC Systems	To ensure an adequate level of repair and replacement of Traffic Signal assets	% Traffic Signals age beyond prescribed Design Life (i.e.15 Years)	Annual						