



Worcestershire County Council

Highways Infrastructure Asset Management Plan

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Team: Highways, Economy and Infrastructure Directorate

Executive Overview

Worcestershire County Council continues to strive to be in the top Quartile of road condition for all classes of roads in the highway network.

This plan, together with the Highway Infrastructure Asset Management Policy, the Highways Funded Information Strategy and the Highways Asset Management Communication Strategy sets out how this target will be achieved in how Worcestershire County Council:

- Identifies outcomes from investment in the highway network to develop the level of service required.
- Measures and understands the performance of its major assets and uses lifecycle optimisation planning principles to model management and funding options to provide value for money.
- Collects information to value each highway asset and determine the risks associated with the assets to support investment decisions and manage risk.
- Implements an asset management and risk approach in service delivery and continuous improvement.
- Uses a complete performance management framework which is in place which links performance targets to investment levels and are aligned with financial requirements and funding arrangements over a three-year period in a forward programme.
- Involves its senior decision-makers in providing direction to asset management.
- Informs staff and stakeholders through the Performance Management Framework including regular asset management briefings.
- Implements and monitors communications with lessons learnt, including stakeholder consultation information to help develop levels of service.

The suite of documents which should be read in conjunction with each other and provide an overview of the asset management methodology and Performance Management Framework that is used to assess road condition, formulate targets for service delivery, monitor service delivery and inform staff and stakeholders to ensure knowledge and alignment with our strategy.

Worcestershire County Council manages its highway assets in line with the County Council's vision and key priorities:

"We are aiming to become a financially self-sufficient Council, to achieve this aim, we will promote and support businesses in the county, businesses looking to relocate to the county and those businesses we work closely with.

We hold four key priorities that will help us shape the future vision for Worcestershire:

Open for Business

It is an exciting time to be doing business within Worcestershire with major current and future planned improvements in workforce skills, employment, infrastructure and productivity.

Children and Families

With a strong focus on improving outcomes for the children, young people and families of Worcestershire we have been enabled our schools to achieve a 90% good or outstanding rating by Ofsted, with 70% of young people achieving five or more good GCSE's and facilitated an increase in the number of young people moving successfully into employment. However, will strive for continuous improvements in these areas and our providers are key in achieving this.

The Environment

Worcestershire's environment is one of our key features and is crucial to the success of Worcestershire's tourism economy, whilst also providing an attractive place to invest for business. We have a strong commitment to improve our transport network and this will require equal commitment from local innovative companies.

Health and Well-Being

By working with local partners we can ensure that the residents of Worcestershire are healthier, live longer, have better quality of life and remain independent for as long as possible. In order to achieve this, we must ensure that we are working with good quality care providers with a strong focus on outcomes, not just output.”

This document sets out the major assets that Worcestershire County Council has and how we will manage the highway asset to ensure we achieve our corporate priority outcomes, taking into account finance and the current asset condition, differing stakeholder needs, localised priorities and the benefits they provide over the medium to long term in terms of defined outcomes.

This document has been developed using the adoption of a highway infrastructure asset management framework which establishes the activities and processes that are necessary to develop, document, implement and to continually improve the highways asset management service within the county. The plan also seeks to follow the latest asset management advice, led by the Department for Transport (DfT).

The objectives of this plan are set out below:

- Demonstrate the commitment to adopting the principles of highway infrastructure asset management by senior decision-makers.

- Document the principles, concepts and approach adopted in delivering highway infrastructure asset management.
- Link with Worcestershire County Council's policies and strategic objectives and demonstrate the contribution of the highway service in meeting these.
- Set out the desired levels of service from implementing asset management.
- Facilitate communication with stakeholders of the approach adopted to managing highway infrastructure assets.

In managing the network, Worcestershire County Council work with other parties such as our District Council's, other surrounding Highway Authorities, utility companies, the Environment Agency and National Highways, where practicable, to provide a joined-up approach that enables a seamless service to stakeholders and transport users throughout the County.

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1. Introduction

Worcestershire County Council maintains 4,117km (2,550 miles) of highway network and associated assets. National Highways is responsible for the management of the motorways (M5, M50, M42) and A46 in Worcestershire.

The highway network in Worcestershire is the largest and most visible community asset for which the county council is responsible. The way it is managed and maintained has a direct impact on the county council's ability to deliver on its corporate priorities and other outcomes. Residents, businesses and visitors all depend upon safe and reliable journeys using our highway network to sustain our economic growth and transportation needs. Increasingly, there is a need to manage and maintain the network to respond to environmental change, in particular, to weather extremities. Worcestershire County Council seeks to ensure it invests in the transport network in a timely manner and that it has the necessary resources in place to effectively manage it in order to provide optimum benefits both now and in the future.

1.1 What is Asset Management?

Asset Management is a strategic approach that seeks to optimise the allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future users of the transport network.

Worcestershire County Council recognises the importance of applying the principles of asset management through the process of long term planning and whole life costing, to ensure best value and optimal future funding and programming decisions are taken where appropriate in line with available funds. Key elements of infrastructure asset management include adopting a life cycle approach, developing and deploying cost effective maintenance strategies for the medium and long term, identifying and providing affordable levels of service, and adopting a sustainable approach to the use of resources and continuous improvement in the highway services practices and processes.

Key highway assets include roads, footways, streetlights, street furniture, traffic signals, gullies and drains, trees, grass verges, signs, road markings, bridges and other structures that form the overall highway network infrastructure.

1.2 Highway Asset Management Policy

Worcestershire County Council has developed a Highway Infrastructure Asset Management Policy that sets out the County Council's commitment to highway asset management and demonstrates how the asset management approach aligns with the County Council's Core Purpose and vision. It also ensures that the highway maintenance service supports the County Council's wider transport objectives as outlined in the Local Transport Plan v4 (known as LTP4) from 2018 to 2030 and the Transport Asset Management Plan (TAMP).

1.3 How the HIAMP supports the Corporate Plan Priorities

Worcestershire County Council is committed to an asset management approach encompassing the outcome-based benefits of a whole cost lifecycle approach, ensuring the most efficient and effective use of the available highway budget and demonstrating the case for additional funding where this is appropriate. The continued use of innovative treatments alongside tried and tested maintenance materials, will ensure the appropriate treatment is utilised at the right time to maintain highways assets in Worcestershire.

The main purpose of the plan is to maintain the highway asset in the most effective and efficient manner to meet the corporate priority outcomes and the objectives that feed into these; Figure 1 shows the County Council's key priorities linked to Worcestershire's Local Transport Plan objectives:

Figure 1 – Corporate Plan themes linked to Local Transport Plan objectives

Worcestershire County Council's Corporate Plan – Key Themes	Worcestershire Local Transport Plan Objectives
Open for Business	To support Worcestershire's economic competitiveness and growth through delivering a safe, reliable and efficient transport network. The Economic Objective
The Environment Health and Wellbeing Children and Families	To limit the impacts of transport in Worcestershire on the local environment, by supporting enhancements to the natural environment and biodiversity, investing in transport infrastructure to reduce flood risk and other environmental damage, and reducing transport-related emissions of nitrogen dioxide, particulate matter, greenhouse gases and noise pollution. This will support delivery of the desired outcomes of tackling climate change and reducing the impacts of transport on public health. The Environment Objective
Health and Wellbeing Children and Families	To contribute towards better safety, security, health and longer life expectancy in Worcestershire, by reducing the risk of death, injury or illness arising from transport and promoting healthy modes of travel. The Health and Safety Objective
Health and Wellbeing Children and Families	To optimise equality of opportunity for all of Worcestershire's citizens with the desired outcome of creating a fairer society. The Equality Objective
The Environment Health and Wellbeing Children and Families	To enhance the quality of life for Worcestershire's residents by promoting a healthy, natural environment, for people, wildlife and habitats, conserving our historic built environment and preserving our heritage assets. The Quality of Life Objective

In contributing to the Corporate outcomes, the highway maintenance service is committed and responsive to improving our roads and footways, recognising that they are a high priority for the residents and businesses in Worcestershire. We will strive for top quartile performance in the quality of our roads and footways, understanding their importance in supporting the Open for Business and Health and Well-Being corporate objectives.

The Transport Asset Management Plan (TAMP) is a key document that sets out the primary asset types of Worcestershire County Council's road network, including the primary asset types of carriageway, footway, streetlights, bridges and traffic signals, and also the secondary asset types such as signs and drainage which support the road network functions.

Many asset management practices are already undertaken by the various Service Areas within Worcestershire County Council that have responsibility for road assets. The TAMP formally sets out the scope of these practices and the methods used.

Worcestershire County Council's published strategies and objectives indicate public aspirations supported by an effective road network. In particular, the Local Transport Plan (LTP) directs this TAMP to outcomes expected of the network. Worcestershire County Council is constantly seeking to enhance the current approach to transport asset management, thereby becoming more effective and improving our ability to meet national and local objectives and customer needs. The TAMP has the following objectives to:

- Achieve corporate objectives.
- Continue to identify improvements in the information and systems necessary to refine this process.
- Include all highway and transportation assets.
- Monitor the condition and performance of assets.
- Use optimisation tools to develop options for current and future service delivery, forward financial planning and investment and asset renewal programmes.
- Provide value for money by optimising the long-term life cycle costs of assets and through improved system and practices.
- Enable Worcestershire County Council to meet the Government's future requirements for financial planning for transport.
- Demonstrate effective management of assets on behalf of customers and stakeholders.
- Planning for future asset requirements based on projected demand and service levels.
- Seek the views of asset group users on appropriate service levels.
- Increase the horizon and confidence in future planning and programmes.
- Adopt best practice.

The adoption of a formalised asset management approach builds on the strong foundations of existing practices but also represents a further step improvement in what we do. The TAMP sets out practices in regard to these elements as far as is possible. Where changes are identified in the information and systems necessary to refine this process, they are set out in an improvement plan.

Figure 2 shows the linkages through from the Vision through to the objectives and outcomes as overleaf:

Shaping Worcestershire's Future - Corporate Vision 2017 to 2022:

We have an ambitious vision to improve the county as a place to live, work, visit and invest in. We aim to help people achieve their full potential and live healthy, happy, prosperous and independent lives for as long as possible.

Worcestershire County Council's 4 key priorities:

1. Championing Open for Business
2. Supporting Children and Families
3. Protecting the Environment
4. Promoting Health and Well being

Local Transport Plan
version 4

Transport Asset
Management Plan

Highways Asset
Management Policy
& Strategy

Strategic Priorities

1. Deliver a safe, reliable and efficient transport network .
2. Limit the impacts of transport in Worcestershire on the local environment by supporting enhancements to the natural environment and biodiversity, investing in transport infrastructure to reduce flood risk and other environmental damage and reducing transport related emissions to support tackle climate change and impacts on public health.
3. To contribute towards better safety, security, health and longer life expectancy by reducing the risk of death, injury or illness from transport and promoting healthy modes of travel.
4. Enhance the quality of life for residents by promoting a healthy, natural environment for people, wildlife and habitats, conserving our historic built environment and preserving our heritage assets.
5. Optimise equality of opportunity for all Worcestershire's citizens with the desired outcome of creating a fairer society.

Tactical Priorities

- Effective Highways Asset Management
- Delivery of Public Realm Schemes across the county
- Robust and effective Regulation and Governance
- Effective flood risk management and alleviation schemes
- Effective Winter Service operations
- Effective Reactive and Cyclic operations
- Effective Design and Build schemes
- Effective Transportation planning
- Streetscene partnerships with District Councils for joined up service delivery
- County Highway Liaison Engineers for each Divisional Member
- Highways and Transportation Control Centre for effective communications and coordination

Asset Management Objectives

- A strategic approach over the long term to manage the highway network
- Improve asset condition and performance
- Collect and analyse asset management data
- Meeting stakeholders' needs
- Using a systematic approach for service delivery and programmes of work
- Managing expenditure over the asset lifecycle
- Meeting performance and condition requirements in the most efficient way
- Managing risk
- Prioritise roads that would benefit from the use of preventative maintenance processes to prolong the life of our carriageway assets

Service Delivery & Operational Objectives

- Engage and communicate effectively to the public and stakeholders
- Support corporate priorities in the Corporate Plan
- Collect and analyse asset management data
- Deploy optimal use of resources
- Utilise a Performance Management Framework
- Provide value for money and continuous improvement from an informed and efficient contract (HMSC)

Service Delivery & Operational Outcomes

- Ensure we have a safe and resilient highway network
- Prioritise works across the county to maximise efficiency
- Develop and implement long term maintenance works programmes
- Provide levels of service that support service delivery priorities
- Where feasible carry out permanent first time repairs to potholes
- Install energy efficient Street Lighting lanterns as a matter of course when lanterns are replaced.
- Adhere to the 'Well Managed Highway Infrastructure' Code of Practice recommendations.

1.4 Benefits

The benefits of the plan are to:

- Provide a clear and transparent document stating the strategic, tactical and operational priorities and objectives of the County Council in relation to managing the highways asset.
- Work with key stakeholders to achieve defined outcomes and take on board their views.
- Provide for the effective use of tried and tested methodologies and the adoption of innovative techniques in the maintenance and operation of the highway asset in line with asset management principles and lifecycle costs.
- Enable us to review priorities effective in line with, and taking account of, the political cycle, resilience, economic shifts, severe weather and other emergencies.
- Assist us in working with other public and private asset owners in the county, the Midlands region and nationally where appropriate to work effectively together.
- Ensure all of our Senior Asset Managers are appropriately trained to be stewards of the highway asset in line with current asset management principles.

2. The Highway Asset

2.1 Asset Inventory

Asset inventory information is the foundation on which asset management processes are built. Accuracy and completeness of the inventory and condition data, and the management of associated systems is essential. The County has an Infrastructure Asset Management Team that is responsible for maintaining an inventory, assessing asset condition and developing the HIAMP. The Infrastructure Asset Manager is responsible for this team.

Prior to the previously required WGA requirements, the authority has strived to maintain an accurate and inclusive highways asset inventory and realising its importance in effective decision making.

Worcestershire County Council is responsible for a wide variety of highway assets; Tables 1 and 2 provide details of this infrastructure.

Table 1 : Worcestershire's Highway Infrastructure Key Assets

Highway Assets	Asset Group Elements
<i>Carriageway</i>	Carriageway - including lay-bys, bus lanes etc
<i>Footway, Footpaths, Public Rights of Way (PROW) & Cycleways</i>	Footways - adjacent to the carriageway Footways – divorced and remote from the carriageway PROW Cycleways - constructed off-carriageway cycleways, shared cycle/footways and cycle/carriageways
<i>Structures</i>	Bridges, sign gantries, culverts, embankments, retaining walls and subways
<i>Lighting (including illuminated signs and bollards)</i>	lighting columns, lamps, cabling, ducts feeder pillars, subway lighting. Illuminated signs & posts, information boards
<i>Integrated Transport Systems</i>	Signalised junctions, signalised pedestrian crossings, detection equipment, cabling, ductwork, bollards and variable message signs
<i>Safety Fences</i>	Vehicle safety fences
<i>Non-illuminated Signs</i>	Non-illuminated signs, warning, regulatory and local direction/information posts, information boards
<i>Closed Circuit Television</i>	CCTV Installations & Monitoring Equipment
<i>Drainage</i>	Gullies & linear drainage channels, highway drains (including pipework, manholes & outfalls), land drainage ditches and watercourses, roadside ditches, swales etc
<i>Traffic Calming</i>	Traffic Calming Features - including tables, humps chicanes etc
<i>Road Markings</i>	All road markings

<i>Verges and Planted areas</i>	Verges, soft landscaped areas and highway trees
<i>Street Furniture</i>	Cycle stands, bollards etc

Table 2: Worcestershire's Highway Asset Inventory

DESCRIPTION	Length /km	Area /sq.m	DATABASE	GIS Layer
Central Islands (CI)	11.41	58,893	EXOR	Y
Central Reservation (CR)	87.81	364,991	EXOR	Y
Cycle Track (CT)	18.07	30,016	EXOR	Y
Carriageway (CW)	4,117	23,470,000	EXOR	Y
Footway FW (roadside)	2977.72	5,241,147	EXOR	Y
Footway FW (segregated)	351.85	701,901	EXOR	Y
Lay-by (LB)	22.85	90,538	EXOR	Y
Verges (VG)	5,798.69	9,424,462	EXOR	Y
DESCRIPTION	Length /km		DATABASE	GIS Layer
Fences & Barriers (FB)	95.09		EXOR	Y
Kerb (KB)	4238.76		EXOR	Y
Safety Fence (SF)	111.82		EXOR	Y
DESCRIPTION	No.		DATABASE	GIS Layer
Culverts < 900mm diam (CU)	1,514		EXOR	Y
Roadsigns (SG)	58,725		EXOR	Y
Vehicular Access (VA)	144,875		EXOR	Y
Gully	100,883		DRAINMAN	Y
Bridges	907		AMX	Y
Retaining Walls	137		AMX	Y
Culverts > 900mm diam	374		AMX	Y
Sign/Signal Gantries	13		AMX	Y
Streetlighting units	55,000		MAYRISE	Y
Illuminated signs	4,710		MAYRISE	Y
Zebra Crossing beacons	190		MAYRISE	Y
Traffic Signals	111			Y
Toucan/Puffin crossings	179			Y
Information signs/systems	125			Y

Many of the asset groups shown above are also plotted within our Geographic Information System (GIS) as information layers, affording restricted secure access to key stakeholders such as District Councils and the Environment Agency where appropriate.

2.2 Data Capture and Management

The highway asset inventory is held on an Exor database. Whilst it is important to collect inventory and condition data related to existing assets, this needs to be progressed proportionately in accordance with the relevant risk and resources available. In line with new developments, we record all new assets in the asset register, ensuring procedures are in place internally and externally to capture these.

Other assets such as signs are periodically surveyed to account for additions, changes and deletions.

Street Lights are catered for using the Mayrise data base and the County's Structures are logged on an A.M.X. database.

Our Geographic Information System (GIS) is an integral database for our general use and management and communication between officers (both internal and external) in relation to key asset management data. This includes, a multi- layer information platform database for tactical and operational use. In addition, we use an emergency GIS system that is shared between ourselves, the emergency services and other key stakeholders.

2.3 Lifecycle Planning

Lifecycle planning is a technique which enables Worcestershire County Council to monitor and anticipate the future condition of assets and to know when we need to maintain or replace it. Through detailed knowledge of the size, safety, condition and value of our highways asset, the information gathered enables us to take in to consideration whole life costs when maintaining our assets.

Lifecycle planning tools have been developed which enable the development of work programmes which make best use of the available funding and resources in meeting long-term objectives, mitigating risks by allocating funds to where they will be most beneficial.

It must be noted that this type of allocation moves away from a more traditional “worst first” approach and targets work programmes at those parts of the infrastructure which present the greatest risk and where a strong element of timely 'preventative' treatment can achieve the most beneficial whole of life cost. This approach was advocated in the 'Going the Distance Report' by the Audit Commission in 2011.

Worcestershire County Council uses lifecycle planning to develop investment strategies to deliver an agreed level of performance or, where funding becomes constrained, a prediction of the effect of particular funding scenarios on the levels of service that can be delivered. This approach enables service delivery to be as effective as possible, allowing a cogent

allocation of resources to those areas which will contribute most to the overall objectives and priorities of the County Council and allow an assessment to be made of the residual risk.

In terms of determining the best method of management and repair for carriageways, the County Council has a comprehensive database of historical schemes and performance data for the carriageway asset and this assists in the planning of maintenance works. On an evolved network, the age of an asset is difficult to determine. Therefore, previous scheme performance data, collected over many years, is used when assessing the anticipated performance of different treatments and materials alongside quality engineering assessments and sound methodologies and innovations in consideration of asset management criteria and community need.

To this end, using many years of previously gathered data on treatment strategies and their longevity from the WCC network, the Asset Management team have developed a Financial Impact Modelling Tool (FIMT). The FIMT enables the future condition of any class of road to be predicted given a particular level of funding and helps the council to understand and manage risk in terms of asset deterioration in relation to required funding. FIMT is also extremely valuable to aid investment decisions when discussing future funding requirements via our Corporate Planning process with Senior County Councillors and Senior WCC officers, as it helps to clarify the risks involved around funding levels and methods of management and repair from an asset management perspective.

The excellent partnership with our Highways Maintenance Service Contractor Ringway, enables us to identify whole lifecycle costed programmes of work, prioritised using our locally developed asset value management prioritisation criteria that takes into account not only the condition of each length of highway but also managed risk and the benefit to stakeholders using the highway. We can also predict the effect of funding and budget decisions on key sections of the highway rather than just at a whole network level. This allows us to calculate the cost of those decisions in an efficient asset based manner.

Each major asset group has its own lifecycle plan and schedule of works that come together to enable us to identify the optimum management strategy for each group and the highway asset as a whole.

2.4 Condition Surveys

Asset condition information is collected at regular scheduled intervals to ensure the information held in the asset systems is up to date and supports the performance management framework. It also ensures the risk and value of premature failure associated with each asset is monitored and corrective actions at both a strategic and practical level can be instigated to prevent or minimise those risks in good time. By having foresight of potential risks at an early stage, investment decisions can be altered to ensure the efficiency and effectiveness of the overall management of the asset. New or accelerated risks are identified before they compromise delivery of the required outcomes.

To apportion a level of condition to the network, the County completes a number of surveys each year. These include:

- SCANNER
- Course Visual Inspection (CVI) – The County still retains a full time CVI team)
- SCRIM
- Structures G.I.s and P.I.s
- Diving surveys of bridge piers, quaysides and abutments

All the above have dedicated WCC revenue budget allocations and are clearly demonstrable by way of transactions and entries in WCC financial systems. In addition, relevant elements of information gathered from Highways Safety Inspections are considered as a part of the asset management analysis.

2.5 Integrated Highway Asset Management Systems

The collection and analysis of inventory and condition data enables us to make the right investment and priority decisions for each key asset group. The storage, sharing and use of that data is, therefore, paramount to the continued strategic planning and implementation of asset management works. Across all major asset groups integrated highway management software systems are in place, furthering our use of quality data in decision making. An example of this, is the utilisation of asset management planning software, supplemented by our asset value management prioritisation toolkits to inform asset management in relation to planned programmes of work on footways and carriageways.

2.6 Asset Groups

Different types of asset have their own asset management plans that reflect national codes of practice and the individual needs of each asset. Each group of assets have their own asset manager and are managed in different ways to reflect their need. For example, street lighting is managed under a contract with Prysmian, structures are managed by Jacobs, traffic signals and intelligent transport systems are managed in-house by the County Council, and all other highway maintenance is managed in partnership with Ringway Infrastructure Services via the Highway Maintenance Service Contract.

A major part of budget strategy is assessing the effect of budget decisions for an asset group on the delivery of corporate priority outcomes. We therefore ensure the effects of all strategic funding decisions are considered at an early stage to achieve the most efficient and effective outcome for the authority and our customers within the finance available for the service in relation to the County's highway asset.

The lifecycle plans for each asset group allow the effects of different budget strategies to be considered appropriately, in terms of providing for effective management and delivery.

2.7 The Value of the Asset

Since 2011, in line with HM Treasury's requirements in terms of Whole of Government Accounts (WGA), the County Council has annually reported both the Gross Replacement Cost and the Depreciated Replacement Cost of the Highway Asset. It has not been possible to carry out this calculation recently due to appropriate indices not being published.

The asset groups are managed and delivered through a number of different contract models depending upon the asset group, with WCC Client teams in place in relation to each key contract delivery area:

- **Highway maintenance, design and construction services** are delivered through our Highways Maintenance Service Contract (HMSC) with Ringway. The current HMSC was an evolution of the County's previous Term Highways Maintenance Contract and was procured using an NEC Term Service Contract after a thorough commissioning process. This is a strategic partnership to achieve measurable outcomes.
- **Structures Management** is delivered through a Term Service Contract (TSC) with Jacobs.
- **Street lighting** is delivered through a Term Service Contract (TSC) with Prysmian.
- **Other services** are delivered internally.

3.1 Procurement process

All WCC Highways related Contracts are NEC based, either Engineering and Construction Contract (ECC) or Term Service Contract (TSC), including the Professional Services Provision Contract although this will change to NEC4 PSC for the new term about to be procured. The County has a very strong commissioning process which ensures value for money. Our Maintenance Contracts have Contractors Share clauses and the Highway Maintenance Service Contract includes an efficiency factor that enables "in Contract" Price reductions.

The Highways Maintenance Service Contract with Ringway is a twelve and half year contract that was specifically tendered through a rigorous procurement process to achieve:

- Specification of outcomes
- Clarity of costs and risks
- Clarity of planning the Service
- Opportunities to remove cost / drive efficiency
- Flexibility
- Target Pricing involving both parties
- The Contractor's Plan that provides a strong management and planning tool for the Service
- Incentives and Efficiencies

Extensions to the Contracts are earned by meeting Contract Key Performance Targets which are reviewed regularly as part of the Performance Management Framework with senior level officers from both Worcestershire County Council and contractors.

3.2 Performance Management Framework

Worcestershire County Council operates a Performance Management Framework that supports the Highways Infrastructure Asset Management Plan and is used to measure its performance and continuous improvement in general. Shown in Fig 2 overleaf, the framework provides:

- The link between the corporate vision, asset management strategy, levels of service and maintenance operations.
- A systematic approach to measure progress in the implementation of asset management.
- Set levels of service and performance targets to enable auditing and monitoring of the delivery of the asset management strategy.
- The mechanism for demonstrating how funding is being used effectively to meet the levels of service and performance targets, and any shortfalls.
- Effective communications with key stakeholders by demonstrating performance against their requirements.
- Aids decision making to deliver value for money.

A diagram showing the Performance Management Framework is shown overleaf.

Highways Performance Management Framework

Worcestershire CC Corporate Plan: key themes:

- Championing ‘Open For Business’
- Supporting Children and Families
- Protecting The Environment
- Promoting Health and Well-Being



Local Transport Plan v4 (LTP4)



E&I Directorate Business Plan
Transport Asset Management Plan (TAMP)
Highways Asset Management Policy & Strategy

55,000 lighting assets
4,093 km of carriageway
3,307 km of footways
3,000 miles of Public Rights of Way
140 miles of waymarked trails and circular walks
99,193 drainage gullies
1,339 bridges/structures



4 x WCC Highways Balanced Score Card KPIs for highways



Strive to be in the upper Quartile of condition of A, B, C & U Roads.

Footways requiring treatment Reduced to 25% by 2020



Highways Asset Management Lifecycle Plan



Asset Condition surveys and financial modelling for treatments & Annual Programme of Works



Highways Maintenance Service Contract Key Performance Indicators (KPIs) x 12



Weekly Contract Management Team review meetings
Weekly Area Response Team (ART) defect meetings
Monthly asset meetings
Forward programme of works



Sharing Best Practice and Collaboration

Members of MHA Plus and HMEP to share best practice and collaborate with external parties such as Highways England, Environment Agency and with District/Borough and Parish/Town Councils for joined-up service delivery

Governance Mechanism

LTP is reviewed regularly.

TAMP – regularly reviewed and updated.

Corporate Strategy Planning process

Business Plan - Annual review by Directorate Leadership Team (linking to the Corporate Plan and providing for the broader framework.)

Quarterly Cabinet Member with Responsibility (CMR) and Directorate review meetings

Strategic Quarterly Review (SQR) mechanism in place.

Performance Management Framework Group – quarterly meetings.

Weekly Contract Management Team (CMT) meetings by senior managers to review Targets & Contractors Plan

Regular Member Led Scrutiny Panels and Process and meetings with Cabinet Member with responsibility for highways

PEMs (Public Enquiries) monitored

Annual NHT Public Satisfaction survey

Divisional Member and CMR Member feedback

Capital funded works

Revenue funded works for defects

3.3 Funding sources

In December 2014, the Secretary of State for Transport announced that £6 billion would be made available between 2015/16 and 2020/21 for local highways maintenance capital funding. In November 2015, it was announced a further £250 million for a dedicated Pothole Action Fund and a £12m allocation from the Transport Infrastructure Investment Fund for roads and structures. From the above funding, £578 million has been set aside for an Incentive Fund scheme, to reward councils who demonstrate they are providing an effective and efficient service in the management and delivery of their highway assets.

For 2021/22 a combination of the pothole Action Fund, Incentive Fund and Means Tested Maintenance block has seen a c. £4.3m rise to a total of £18.7m. This arrangement has just been confirmed for 2022/23 through to 2024/25.

In addition to the funding streams above, Worcestershire County Council has for a number of years provided additional funding into the highways network to augment the funding received from the DfT (in excess of £36m over the last ten years) that has been invested in footways, carriageways, flood alleviation schemes, tackling congestion and Public Realm improvements, following residents' feedback on the importance of improving the quality and condition of roads and pavements in key retail areas, to further attract business investment and productivity.

The County Council have just approved a three year budget with an additional £18m for carriageway investment and £12m for Footways.

The Council will continue to seek and secure other external funding and use its own funds to support other bids which will secure additional funding to improve highways and their effective resilience.

3.4 Condition of the highway network

Using our asset management framework, with DfT funding and the ongoing investments made the County Council we have not only maintained a steady state in highway condition but to generally improve its condition over the last ten years. See Appendix A that show the historical trend lines and future projections of the condition for A, B, C and U roads using Scanner and CVI data sources and the condition of footways.

The ongoing financial challenges mean we are moving into a period of greater prioritisation of overall funding across the authority; however, our strategy of preventative maintenance and whole lifecycle cost asset management will ensure the impact on the asset is proactively managed and we remain in a strong position to provide for effective highways asset management over the next three years.

3.5 Targets and Outcomes

The highway maintenance service is committed and responsive to improving our roads and footways, recognising that they are a high priority for the residents and businesses in Worcestershire. The target therefore, is to strive for top quartile performance in the quality of our roads and footways, understanding their importance in supporting the Open for Business and Health and Well-Being corporate objectives.

Thus, service performance monitoring is an important aspect of our Highway Maintenance Service Contract with Ringway with whom we operate weekly contract review meetings with senior officers to review targets and performance of service delivery. This data feeds into our Performance Management Framework which leads to the regular reporting of Key Performance Indicators (KPIs) and reports with the Senior Management Team within the Directorate. There are 12 KPI's aligned to the HMSC contract with Ringway which are outcome based. These include and relate to defect repairs, effective cost management, key people and positive local impact. We focus on the effective delivery of our design and build of highways works through the use of a target price system, and Contractors' Plan approach for efficient coordination and delivery of value for money.

In addition, we have targets relating to recycling and reducing our carbon footprint:

- Sustainability and recycling (40% minimum of all arisings to be reused)

Ringway also continues to use Low Temp Asphalt whenever it can be supplied.

3.6 Scheme of Delegation

Worcestershire County Council, as part of its governance arrangements, operates a Scheme of Delegation (Register of Executive Decision) that provides managers with a clear statement outlining who has the authority and responsibility to take officer decisions within the Economy and Infrastructure Directorate. This is an important legal document delegating executive powers given to the Director, and where appropriate, key managers and officers. The principle is that delegation will be to the lowest level possible, consistent with safe management of the Directorate's services, the protection of staff and the effective management of resources.

The Scheme of Delegation delegates the following responsibilities from the Chief Executive to the Director of the Economy and Infrastructure Directorate:

- To carry out the functions of the Council as Highway Authority (including footpaths, bridleways and cycleways) and to be Proper Officer under the Highways Act 1980.
- To carry of the functions of the Council as Traffic Authority, and also functions relating to road safety and on and off-street parking.
- To carry of the functions of the Council as a street or Streetworks authority.
- To carry of the Council's network management functions under the Traffic Management Act 2004.

- To oversee and coordinate public/integrated transport issues as they affect the county and carry out the County Council's functions in respect of public passenger transport services.

The day-to-day implementation and monitoring of asset management through its supply chain is undertaken by the Asset Management Team operating under the County Council's Scheme of Delegation.

For the Highway Maintenance Service Contract, a Contract Management Team (CMT) comprising Worcestershire County Council and Ringway Senior Leadership Teams has the primary objective to lead and monitor the performance and contractual requirements of the partnership. The performance of the partnership is monitored via a suite of key performance and operational performance indicators which are reviewed weekly, monthly and quarterly and forms part of the Performance Management Framework. This governance structure encourages a cycle of improvement to meet the contractual outcomes and deliver best value to the County Council.

3.7 Implementing Planned Works

To ensure effective network management and co-ordination, our works programmes are planned up to 3 years in advance in a rolling programme. Our annual programme of works is managed and implemented via the HMSC in the form of a Contractors' Plan. This Plan provides for an integrated approach, bringing together all areas of work and delivery. This ensures that works programming, co-ordination and management is more effective and joined-up to increase efficient use of resources across the board. We carefully review and consider all key customer enquiries, taking action to resolve defects, where reasonably practicable and incorporate key customer and communication issues in the development and implementation of our works programmes. Our levels of service delivery for highways take account of statutory duties and the management and mitigation of risk both to the service user and the authority.

Forward Works Programmes are developed and shared with Local Divisional Members as part of a fortnightly and three month rolling programme that is refined annually. These programmes outline the schemes that will be completed where and when, subject to the caveats of weather events. In addition, we have six County Highways Liaison Engineers whose primary role is to liaise and work closely with local County Councillors, ensuring quality outcomes for communities are achieved and complex matters are resolved.

Our major asset groups are managed and delivered via specific teams who ensure key issues are considered carefully in the management and delivery of works through our HMSC, including;

- Quality of works

- Effective and efficient coordination and delivery
- Asset condition
- Safety
- Stakeholder Interest

By the use of robust evidence based decision making processes, Worcestershire County Council is able to optimise assets by the appropriate prioritisation of work within the available funding.

One element of the decision-making prioritisation process is the potential for schemes to be clustered and coordinated across asset groups, for example; resurfacing a road in conjunction with a road safety scheme. Such alignment of schemes within the Works Programmes is key to optimising available funding across our service delivery.

With all key works, quality management systems are in place to ensure the durability and quality of products and works completed.

The lifecycle planning approach also allows tracking of performance against investment for each group and, thereby, informs following future strategies to ensure the investment achieves the outcomes planned.

3.8 Policy Framework

There are several Highways related policy documents that form part of an overall Policy Framework that adhere to national guidance and ensures that we can provide an efficient and effective highway service.

These include but are not limited to:

- The Local Transport Plan v4
- The Transport Asset Management Plan (TAMP)
- Highways Emergency and Resilient Network Plan
- Highways Inspection Manual v2
- Tree Risk Management Plan
- Winter Service Plan
- Highways Asset Management Communication Strategy
- Highways Funded Information Strategy
- WCC Highways Asset Management Policy
- Highways Asset Lifecycle Plan
- Level Crossings Policy
- Wetspots Policy
- Rights of Way Improvement Plan
- Appendix 1 (LTP4) Highways Physical Accessibility Policy
- Appendix 2 (LTP4) Highway Obstructions Policy

- Appendix 3 (LTP4) Ford Crossing Policy & Statement
- Appendix 4 (LTP4) Highways Skid Resistance management Policy
- Appendix B (LTP4) Highway Management Policy
- Appendix C (LTP4) Highway Maintenance Plan
- Appendix V (LTP4) Verge Marker Posts
- Highways Design Guide (LTP4)

3.9 Industry Good Practice

Effective collaboration is at the heart of the Highways Maintenance Service Contract between Worcestershire County Council and Ringway to ensure the specified outcomes are achieved. In terms of industry good practice, the partnership has secured the European Foundation for Quality Management (EFQM) award. The partnership between Worcestershire County Council and Ringway has also successfully achieved formal recognition of ISO 44000 (equivalent to BS11000) for collaborative working in successive years since 2017.

Worcestershire County Council is a member of the CQC (Customers, Quality and Cost) Efficiency Network that provides members with an annual assessment of their efficiency, using CQC methodology, focusing on key areas of highway maintenance expenditure identified by the CQC Steering Group.

The authority also participates in the annual National Highways and Transport (NHT) survey carried out by Ipsos Mori that collects public perspectives on, and satisfaction with, Highway and Transport Services in Local Authority areas. It is a unique, standardised, collaboration between Highway Authorities across the UK enabling comparison, knowledge sharing, and the potential to improve efficiencies by the sharing of good practice.

Worcestershire County Council has and continues to be a leading highway authority both regionally and nationally, sharing good practice and continual improvement through the Midlands Highway Alliance Plus. The membership the Alliance helps to deliver best value by working together with other local authorities to share information and industry best practice in order to further improve efficiencies, reduce costs and improve public satisfaction.

3.10 Public Satisfaction

Worcestershire County Council continually strives to improve public perception and customer satisfaction of its highway network and works closely with our supply chain to introduce innovative, cleaner and less disruptive treatment methods and programmes to improve the overall condition and performance of the network.

By participating in the annual NHT survey and collecting public satisfaction data from the annual Worcestershire County Council Viewpoint survey and data drawn from roadshows around the county and other sources, the authority analyses trends and uses this

information to measure, benchmark and diagnose performance and identify potential for improvement.

3.12 Tackling Congestion

In support of the Council's 'Open for Business' economic priority, the County Council has already invested £5m in a programme to alleviate congestion, which is focussing on identified corridors and pinch-points of congestion across the county with a view to implementing mitigation projects using new technologies and other appropriate works.

To also help combat congestion and disruption to the highway network, Worcestershire County Council operates a 'West and Shires Permit' (WaSP) scheme that allows participating authorities to better manage activities on the highway and minimise disruption and inconvenience. The WaSP scheme requires an activity promoter to apply for a permit in order to 'book' time on the highway, this applies to work by developers, utility companies and works carried out by the County Council. The Permit Authority issues permits with conditions attached to better focus the activity in terms of reducing the impact on road users and other stakeholders; this might be in relation to the timing of the works, the traffic management and methodology that is deemed important.

Equally, the Permit Authority can refuse to issue a permit if it feels the planning or the detail of the application is insufficient.

The Highways Team also hold a fortnightly highways co-ordination meeting, to review key impacts upon the highway network which are likely to lead to increasing congestion and focus on practicable options to reduce their impact, for example, using more effective traffic management and consideration of working outside peak travel times such as night time works.

3.13 Training

Effective management of the highway network requires professional well-trained staff. Worcestershire County Council ensures the experience and level of training required is developed through an annual appraisal review system with training requirements being a key element. Where staff that have the primary function of asset management as part of their job function, the UKRLG Asset Management Competency Framework is used to identify core competences.

In previous years, staff involved with asset management were required to complete the Highway Maintenance Efficiency Programme Asset Management modules when it was available through HMEP. This resource is no longer available.

4. Key Stakeholders

Ultimately everyone is a highway stakeholder to some extent; however, the needs of each stakeholder group and the way in which they use the highway asset vary to some degree.

This variation in highway users needs requires an array of approaches to engagement and information dissemination. This has resulted in the identification of the following key stakeholder groups, which is not restricted to:

- Elected members
- Citizens of Worcestershire (cyclists/motorists/ footway users)
- Businesses and the Chamber of Commerce
- Public facility organisations and services
- All road and footway users
- Emergency services
- Utility companies and apparatus owners
- Worcestershire Local Enterprise Partnership
- Local Members of Parliament
- Parish/Town Councils
- District and Borough Councils
- National Highways
- Environment Agency
- The Canal and River Trust

In the development of the LTP4 which is from 2018 to 2030, extensive consultation took place with the above stakeholders and a broad range of other user groups. In addition, key strategies and plans in relation to highways are shared with key stakeholders as part of the Communications Strategy and on an ongoing basis. The Council also uses its own citizen survey and public roadshows to gather information on the public's views on highways and other matters. These issues are considered and taken into account in the development of our work, where appropriate.

4.1 Communications Strategy

Communications and stakeholder engagement are co-ordinated in line with the Highway Asset Management Communication Strategy which is implemented in accordance with corporate communication guidelines and reviewed annually.

Supporting the Communications Strategy, there is a dedicated Transport, Travel and Roads section on the County Council website, which provides a wide variety of information on Highways and Transportation. It includes a facility for members of the public to report issues associated with the highway network and its associated assets. Members of the public using the system are kept updated with the defects remedial works via email. Through the same system, feedback will be sought regarding their experience of dealing with the authority.

5. Risk Management

The identification of risk and its management is an important consideration of highway asset management. It is, therefore, essential to have an understanding of assets that are critical to the functioning of the network. Our asset management principles encourage risk

management to take into account risk from condition of assets and increase the potential for 'spend to save' investment based on business risk. A better understanding of asset deterioration and failure rates, provide an evidence base to support risk-based decision making.

Worcestershire County Council maintains a Corporate Risk Register which is reviewed annually by senior managers and links into the Economy and Infrastructure Directorate Risk Register. A number of key elements of the Directorate Risk Register relate to Highways Assets and associated matters. All Worcestershire County Council Contracts have associated Contract Risk Registers that are reviewed regularly. These Risk Registers and reviews include our asset inventory.

We annually review asset risk registers and lifecycle plans to provide a dynamic approach to current and future risks to the asset, and in particular, manage the assets in relation to the 'Well Managed Highway Infrastructure' Code of Practice.

6. The Environment and a resilient network

In July 2021, Worcestershire County Council declared a Climate Emergency. With this declaration, the Council acknowledges the need to act on the causes and impacts of climate change, and commits to reducing greenhouse gas emissions to net zero from Council activities and operations by 2050. In practice, this

- Endorses the Council's ambitious Net Zero Carbon Plan.
- Continues the work with our partner authorities to review and update all relevant strategies.
- Establishes a Member Advisory Group to assist with the future revision of plan and report annually on actions taken.
- Reaffirms the target of reaching net carbon neutral by 2050 in line with the Government's target.

Worcestershire County Council needs to ensure it manages its work in highways and its resulting impact upon the environment. The County Council also has in place a resilient highways and transport network to which we give priority, in order to maintain economic activity and access to key services during extreme weather events.

In support of this, the County Council through its supply chain continue to promote the use of recycled materials and materials that consume less energy in their production, for example, Ringway have in place recycling targets and Ringway still continue to use Low Temp Asphalt whenever it can be supplied. Worcestershire County Council also asks potential suppliers how they could assist the County in achieving the carbon reduction plan as part of the procurement process.

In addition, Worcestershire County Council is working closely with the Worcestershire Local Enterprise Partnership (LEP) to develop a number of flood alleviations schemes around the county in order to keep key roads open for longer during times of flooding for the movement of traffic. The majority of the funding for schemes is coming from Government Local Growth funding via the Worcestershire Local Enterprise Partnership (WLEP), reinforcing the importance of keeping the county 'Open for Business' during times of severe flooding.

Over recent years, the Street Lighting contract has introduced Light Emitting Diode (LED) technology and variable lighting levels that is lower energy consuming. This programme should see the County's Highway Network fully LED lit by 2024. Over the life of this Strategy, Worcestershire County Council will continue to mitigate energy consumption against the planned growth of the street lighting asset.

Worcestershire County Council has a Highway Emergency and Resilient Network Plan that details how the network in Worcestershire is managed, and in response to, severe weather impacts, emergencies and other key resilience issues as identified in the Department for Transport's Policy paper published in 2014 called Transport Resilience Review: Recommendations.

7. Network Growth and Demand

The highway asset is constantly evolving to support the needs of the people of Worcestershire; assets are added and removed as a result of highway schemes commissioned by Worcestershire County Council and private developers. The evolution of the asset is heavily influenced by the economic activity of Worcestershire.