

# Highways Infrastructure Asset Management Strategy

## April 2022-March 2027.

Appendix B.



# FOREWORD

As the Executive member holding the portfolio for Infrastructure and Climate, I am delighted to be able to introduce (endorse) this updated Leeds City Council Highway Infrastructure Asset Management Strategy.



Since the adoption of the former Highway Infrastructure Asset Management Strategy (2016) the regional landscape for the Council, in terms of both the political administration and transport -based priorities has significantly changed. Under the context of the new West Yorkshire Mayoral Authority and new regional and city centric transportation strategies, the need for continuing the efficiencies with which our valuable highway asset are managed plays an even greater importance. Further committing to this approach by the Council's senior decision makers this strategy will allow for the planning of budgets and the priority decision making to ensure that we can continue to provide a safe, serviceable, and resilient highway network for all users.

The Council are committed to supporting the development of strong economy whilst playing an active role in addressing the Climate Emergency ambition that form an integral part of this administration. The adoption of this revised HIAM strategy will ensure that the Council can provide the platform for decision making on our priority highways assets in terms of the investment-needs and the associated programme plans to meet these challenges.

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# 1. Introduction

- 1.1.1. Through the delivery of the highway maintenance service Leeds City Council recognises the importance of the associated highway infrastructure assets and how an effectively maintained and managed network both contributes to the local economy and supports the Council in achieving its corporate priorities. The Council understand that effective Asset Management is a platform to deliver clarity around standards and levels of service, and to make best use of available resources.
- 1.1.2. This approach has been widely accepted by Central Government, with the Department of Transport (DfT) since 2015/16 aligning the capital funding towards Local Authority highway maintenance with a self-assessment process, under which the corporate adoption of an associated Highway Infrastructure Asset Management (HIAM) policy and strategy is a mandatory requirement. This DfT Incentive Fund and the maturity bands under which highway authorities provide evidence to support their respective position with implementing highway asset management has achieved sector-wide success in raising awareness of and promoting the best practice in managing these assets.
- 1.1.3. Following an Officer led review there is clear indication that the Council's HIAM position has changed in terms of the context in which these assets are now managed, over and above the efficiencies and plans that surrounded the onset of the previous Leeds City Council Highway Infrastructure Asset Management Strategy (2015). The Climate Change agenda and the net-zero challenges that this now brings will have a direct link to the actions that the Council will be taking to transform mobility opportunities and transport connectivity across the city, the region, and the wider north of England. The highway and the respective infrastructure assets are a key facilitator to securing the City's transport future priorities and needs.
- 1.1.4. An updated HIAM policy and strategy is therefore a key component to ensure the Council's highway maintenance service is aligned to support these priorities. This ensures the ongoing commitment to adopting the principles of HIAM by senior decision-makers within the Council, at both officer and member level, and provides a positive link to both the local and regional strategies and plans under which the highway assets are managed and maintained.

## 2. Strategy Statement

- 2.1.1. The Council's HIAM policy has been prepared in accordance with the **Leeds City Council: Best Council Plan 2020-2025**, supporting the 'Best City' priorities to deliver the ambition of establishing a **Strong Economy and a Compassionate City** through the 'Best Council' culture of an **Efficient, Enterprising and Healthy Organisation** alongside the **Climate Emergency** declaration.



- 2.1.2. This strategy will provide the context and the direction to deliver on these priorities through an integrated asset management approach by;
- Promoting the continuation of engagement with stakeholders, including Elected Members, Senior Officers and our residents and customers
  - Improving our understanding of our residents and stakeholders current and future aspirations and expectations;
  - Assisting Elected Members, stakeholders, and resident's understanding of what the Council's does by identifying, explaining, and providing outcomes
  - Ensuring that the Council prepare and adapt to the changing future needs resulting from climate change, pandemics, weather emergencies, future needs for resilience and challenges on funding and investment;
  - Challenging the way in which the service is provided and creating opportunity to improve the performance of the service in a challenging environment through efficiencies and collaboration;
  - Providing a mechanism for close working and integration with other parts of the Council,
  - Improving the delivery model and maximising the outcomes within expected budget constraints;

- Influences the review and reappropriation of resources.

2.1.3. The regional climate has significantly changed in terms of the political map and the position of the Council within both the West Yorkshire Combined Authority (2014) and the more recent Mayoral Combined Authority (2021) following the devolution deal for West Yorkshire (2020). With the integration of the **West Yorkshire Transport Strategy (2040)** highway maintenance and asset management commitments into the CRSTS settlements, formerly the Intra-City Transport Fund (ICTF) settlements, there is a need for the new HIAM strategy to provide clear HIAM strategy commitments to deliver these longer-term transport strategy objectives.



### Asset management and resilience

Our ambition is to ensure that we make best use of our existing and future transport assets.

We aim to ensure our transport networks are fit for the future and properly managed in a safe, sustainable, environmentally friendly and cost effective way.

2.1.4. The West Yorkshire Combined Authority's (WYCA) Transport Strategy 2040 contains details of how the WYCA, and local authorities intend to create a world-class, modern, and integrated transport system. The Strategy supports the Leeds City Region Economic Plan and is focused around six core themes which include:

- Inclusive growth, environment, health & wellbeing;
- Road network;
- Places to live and work;
- One system public transport
- Smart futures
- Asset management and resilience

2.1.5. The Transport Strategy 2040 replaced the MyJourney West Yorkshire Local Transport Plan (LTP3 2011-2026) and fundamentally sets the framework under



which each of the Highway Authority's under the WYCA should align their respective HIAM policies and strategies to meet these asset management outcomes

- 2.1.6. WYCA have widely adopted the Government 's Highways Maintenance Efficiency Programme (HMEP) and, since 2011, have achieved significant efficiencies including being awarded the maximum incentive funding across the separate Constituent Councils of the Combined Authority covering the City of Bradford Metropolitan District Council, the Borough Council of Calderdale, the Council of the Borough of Kirklees, Leeds City Council and the Council of the City of Wakefield. The ambition of the WYCA across the period of this strategy (2022-2027) as part of the second five-year Implementation Plan period will be to;

### Deliver efficiencies and maximise funding and environmental performance in asset management through

- adopting better longer-term asset management planning, with common standards across district boundaries;
- reducing carbon emissions from the renewal and maintenance of our transport assets by maximising the re-use and recycling of materials and;
- adopting shared procurement for our asset renewal and maintenance programme to improve efficiency and reduce costs whilst maintaining quality.

### Improving the resilience of the road network to function reliably through

- taking a proactive approach to network resilience by tackling problems associated with disruption to the road network through active maintenance in clearing drains and carrying out tree or retaining wall inspections;
- invest in the timely renewal of assets such as traffic signals and lights to minimise the possibility of failures, with new equipment that is more reliable and cheaper to operate and;
- carrying out regular inspections to roads and roadworks to safeguard these assets and provide customer information through signage and social media to minimise delays and disruption.

### 'Invest to save' to improve performance and value for money in the transport networks through

- seeking new alternative funding sources to support asset maintenance and renewal, including from private sector developments to invest back into the network.
- alignment with our Connecting Leeds Transport Strategy which sets out our vision for Leeds to be a city where you don't need a car and where everyone has an affordable zero carbon choice in how they travel. Our priority is to support mode shift with an emphasis on Mass Transit, buses and active modes

of travel. More specifically, the action plan seeks to go beyond the traditional norm in terms of highways maintenance.

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## 3. Asset Management Framework

- 3.1.1. This Strategy confirms the Council's commitment to, and demonstrates how, a Highway Asset Management approach aligns with the authority's Best Council Plan 2020-2025. Aligning activities with the corporate vision and strategic objectives of tackling climate change, delivering inclusive growth, improving health and wellbeing, supporting safe and strong communities.

### Context

- 3.1.2. This establishes the context for highway infrastructure asset management in Leeds. The context includes a variety of factors that need to be taken into consideration when determining the Council's expectations for the highway service. The factors include national transport policy, Transport for the North, local vision and local transport policies, expectations of stakeholders and legal and financial constraints.

### Planning

- 3.1.3. This strategy sets out how the asset management policy is translated into planning. It sets out the key strategic priorities for each of the asset groups and identifies how these are set into practice. It gives clear strategic oversight of service delivery.
- 3.1.4. The activities include:

**Policy** – the Council's published commitment to highway asset management.

**Strategy** – the Council's published statement on how the policy is to be implemented, including framework, strategy for each asset group, and commitment to continuous improvement.

**Data** – the Council's strategy for data collection and management, without which informed decisions cannot be taken

**Works programmes** – the Council's annual and medium-term programme of works for each asset group and consideration of how Leeds can develop a cross asset prioritisation approach to work programming.

### Enablers

- 3.1.5. Enablers are a series of supporting activities that support the implementation of the Asset Management Framework. These include:
- Developing an asset management culture with clear leadership
  - Stakeholder collaboration and communication
  - Staff competency and skills development
  - Effective risk management
  - Performance measurement and steerage
  - Benchmarking progress and collaborating with WYCA and other highway authorities
- 3.1.6. Generating a culture of continuous improvement and innovation

## Delivery

- 3.1.7. Deliver the works programme while maximising efficiencies and environmental performance by incorporating longer-term planning processes. This will make better use of limited budgets, enable joint working and sharing of best practice. Reduce carbon emissions by maximising the re-use and recycling of materials.
- 3.1.8. Incorporating the strategic priority of clean energy and environmental resilience service delivery will aim to minimise carbon consumption and promote high quality green infrastructure.
- 3.1.9. This Highway Infrastructure Asset Management Strategy is based on the framework shown in Figure 1 overleaf. The elements of this strategy will support continual improvement in the management of the various highway assets.
- 3.1.10. This strategy explains how individual asset groups and elements fit in the framework, describes how the asset management planning process is implemented and refers to tools currently employed, as well as references to other key documents.
- 3.1.11. The development of the Asset Management Framework described in Figure 1 follows national guidance and recognised good practice. It is also based on the Council's approach to delivering services and aligns with the corporate policies on performance management and risk management.

# HIGHWAY NETWORK ASSET MANAGEMENT FRAMEWORK

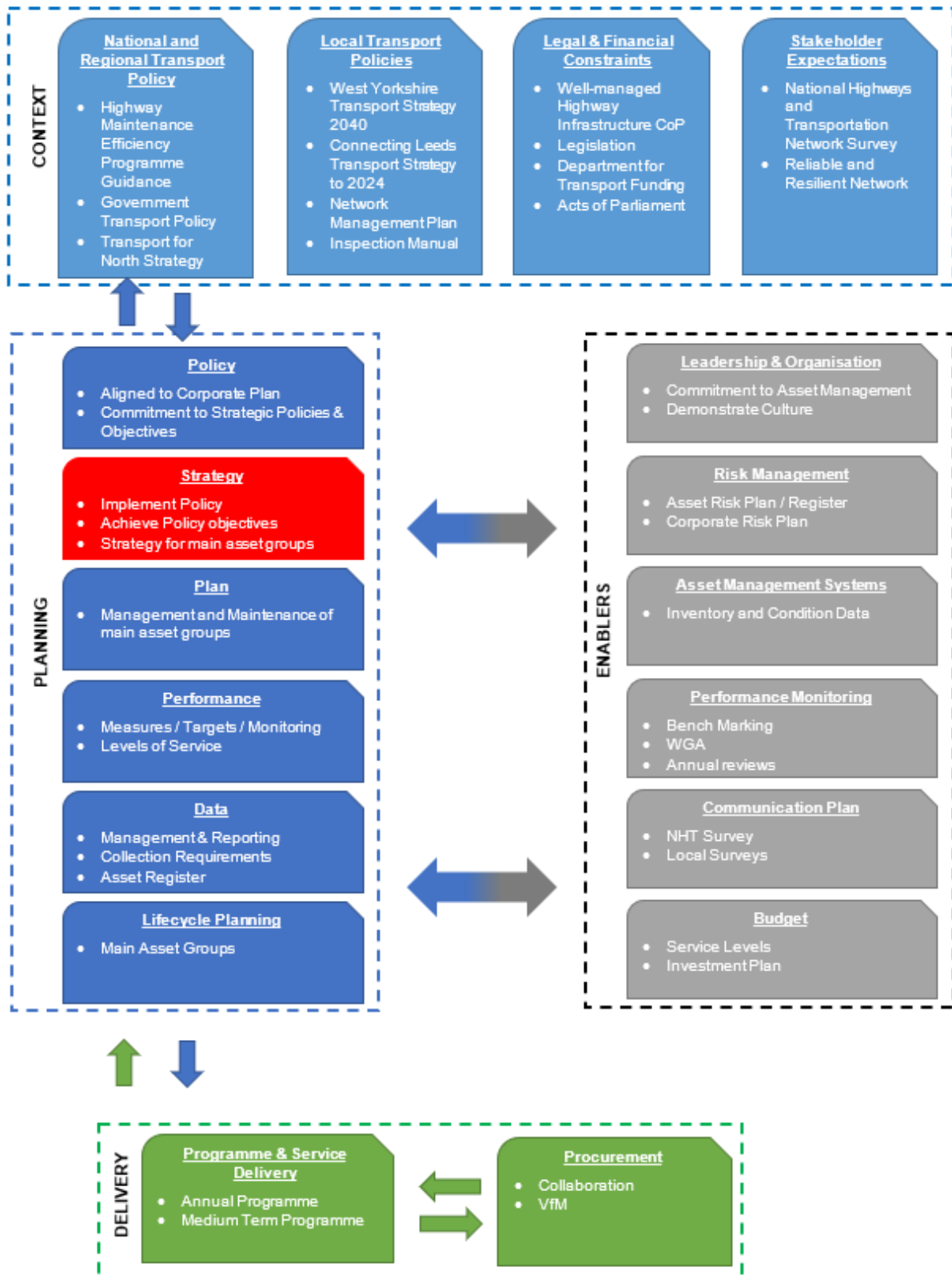


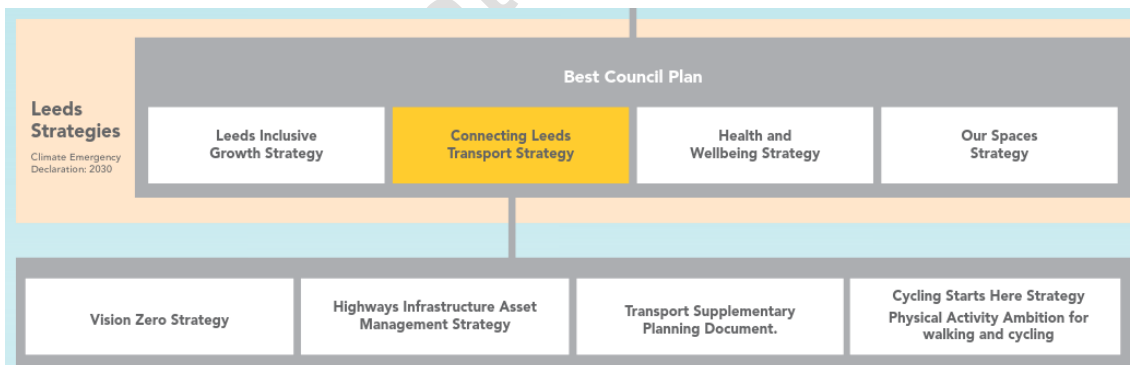
Figure 1 - (Leeds CC Highway Infrastructure Asset Management Framework)

## 4. Links to Corporate Policies, Strategies and Plans

4.1.1. The HIAM strategy is a key strategic document related to the delivery of the Highway Asset Management commitments made in the HIAM policy and forms the corporate link to the Leeds City Council: Best Council Plan 2020-2025. This strategy embeds the key priorities covering Inclusive Growth, Health & Wellbeing and Sustainable Infrastructure and will be at the forefront of supporting one of the cornerstone outcomes from the Council's Best City Ambitions to enable and encourage movement more easily around a well-planned, sustainable city that's working towards being carbon neutral.

4.1.2. The complete list of policies, strategies and plans integral to the development of this strategic approach are as follows:-

- **Leeds Inclusive Growth Strategy**
- **Leeds City Region Strategic Economic Plan**
- **Leeds Health & Wellbeing Strategy**
- **Leeds Better Lives Strategy**
- **Leeds Sustainable Infrastructure Strategy**
- **Leeds Mental Health Strategy**
- **Leeds Transport Strategy (Connecting Leeds Travel Strategy)**
- **Leeds Local Flood Risk Management Strategy**
- **West Yorkshire Low Emissions Strategy**
- **West Yorkshire Transport Strategy (2040)**
- **Transport for the North Strategic Transport Plan**
- **Climate Emergency Declaration (2019)**
- **Leeds City Region – Green and Blue Infrastructure Strategy**



The strategy will be aligned with the key principals of the Connecting Leeds Transport Strategy, where the 'Vision' looks forward to where everyone has an affordable and accessible zero carbon choice in how they travel. The effective maintenance of the highway network is a key requirement for these future transport needs and through this strategy, we will set out the steps to delivering this with the intention to consider where possible new technologies and techniques to deliver improvements and efficiencies in how the service is provided and the outcomes that are then achieved.



Our region's green and blue spaces are among its defining characteristics. Through highway asset management we will plan and deliver valuable future maintenance to the green and blue infrastructure on our network, including footways, cycleways, urban drainage features and green spaces, to ensure everyone in the Leeds City Region will continue to have access to benefit from these amenities.

## Leeds City Region Green and Blue Infrastructure Strategy

West  
Yorkshire  
Combined  
Authority

- 4.1.3. Within the highway infrastructure asset management framework are several documents that have been developed and are in the process of being developed to ensure compliance with relevant regulations.

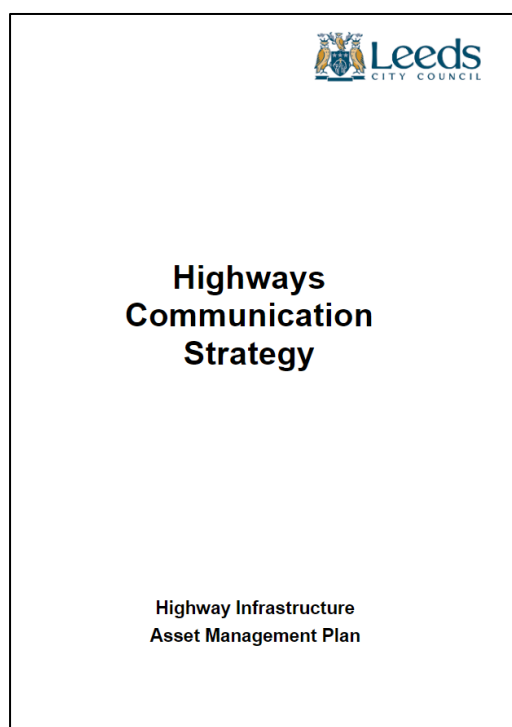
### Highway Infrastructure Asset Management Policy (2022/27)

- 4.1.4. The Highway Asset Management Policy sets out the Council's approach to Highway Asset Management; it describes the principles adopted in applying asset management to achieve Leeds City Councils strategic objectives. The policy describes the authority's commitment to highway infrastructure asset management. It is endorsed by senior decision makers, including elected members and is visible to all staff involved in related activities.

## Highway Infrastructure Asset Management Plan (2022/23)

- 4.1.5. The objective of the Highway Asset Management Plan is to document the activities and processes of the Asset Management Framework and to provide detailed information to senior decision makers to support investment decisions and enable longer term planning. The Plan informs all staff about how the highway infrastructure is to be managed. The Plan supports the Highway Asset Management Policy and Strategy.

## Highways Communications Strategy (2019)



As part of the delivery of asset management the Council commits to effective communication with our key stakeholders. Actively communicating and engaging with relevant stakeholders and customers is crucial to the transparent implementation of the Highway Infrastructure Asset Management Strategy. Through communication and engagement, the Council will have an enhanced understanding of stakeholder needs and expectations, then using this to make those longer-term investment decisions and consider cross asset prioritisation within the forward planned programmes.

Aligned with the outcomes from the highway asset management strategy, the communications strategy is reviewed bi-annually to ensure effective mechanisms to communicate service standards and outcomes are in place.

## Highway Network Management

- 4.1.6. Under the Traffic Management Act 2004 (TMA) the Council as Highway Authority have a duty to manage congestion and disruption on the road network therefore subsequently ensuring traffic moves freely and quickly. In terms of sustainable travel and the objectives of the Connecting Leeds Transport Strategy, the measures to effectively manage the network designed as road will now have greater benefit towards alternative travel modes including cyclists and users of public transport that are users of the same space nominally defined for the private car or vehicle.
- 4.1.7. The strategy will align with the development of a comprehensive Network Management Plan for the City, aimed at bringing together all the objectives, policies and standards required to effectively deliver services and manage the highway network under the TMA. This will include investment decisions that support the maintenance of a resilient network in terms of both local road congestion in addition to changing future demands including network hierarchy classification, climate

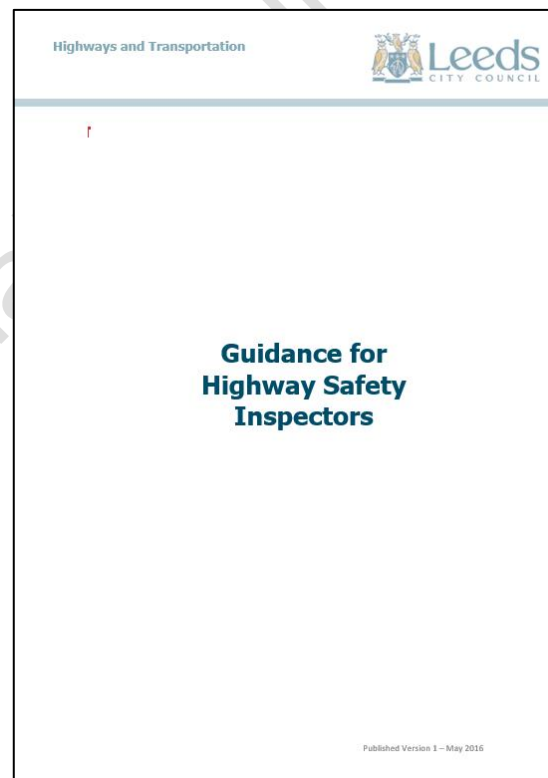
challenges and asset resilience. This will include all planned maintenance and improvement works being registered and co-ordinated under the **Leeds City Council Permit Scheme (2020)** and cross-asset prioritisation considered where such investment decisions will ensure the Council discharge the duties under the TMA in the most efficient and cost-effective manner.

- 4.1.8. The Council has adopted the Code of Practice for Well-Managed Highway Infrastructure (WMH), which is designed to “promote the adoption of an integrated asset management approach to highway infrastructure based on the establishment of local levels of service through risk-based assessment. The application of this approach and the sequencing of inspections and assessments through to the development of forward planned works programme will be managed in accordance with the integrated approach for the wider highway network management.

## Highway Inspection Manual

The Highway Inspection Manual will provide support for the individual asset performance outcomes and the integration of the risk-based planning approach defined in the strategy. The updated manual will set out the requirements for carrying out highway safety inspections on the highway network and contains guidance on the Council’s policy and requirements for prioritising timely repairs to safety defects in accordance with the risk-based approach methodology described within the Code of Practice (Well Managed Highways Infrastructure 2017).

Personnel responsible for managing or carrying out highway safety inspections as well as other staff who are responsible for the identification and/or instruction of defect repairs will need to comply with the requirements set out in the manual.

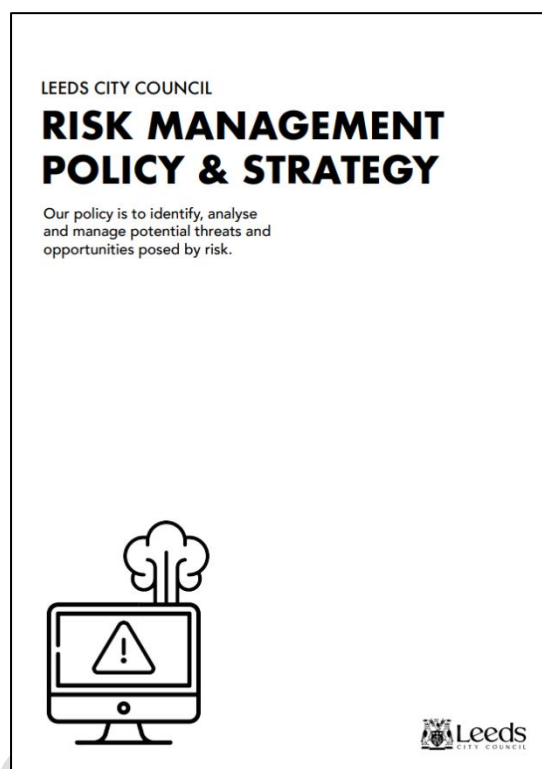




## Risk Management Policy & Strategy (2021)

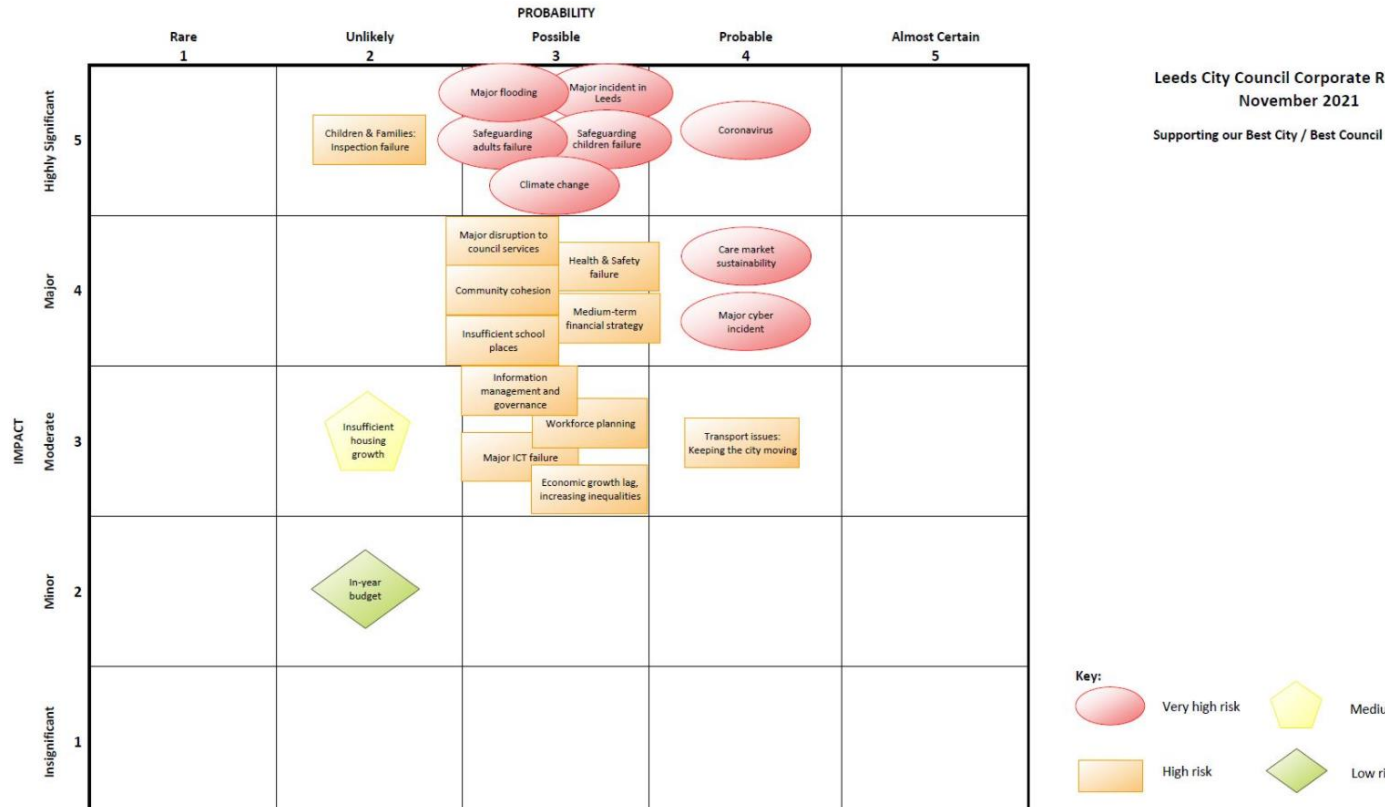
To align with our Best City ambitions the Council have adopted a corporate policy and strategy to identify, analyse and manage potential threats and opportunities posed by risk. This advocates a strong risk management culture that includes at strategy level a systematic approach that supports effective, robust, consistent, and clear proportionate management of risk.

Contributing to the corporate risk register external (as opposed to internal) risks are those that affect the city, its people, communities, businesses, and infrastructure. As the Highway Authority with responsibility for the assets and infrastructure covered by these external risks the Council has made a commitment to the City's partners to mitigate and manage these risks.



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Under the Corporate Risk Map (for November 2021), the risk matrix scoring for the identified hazards of Major Flooding and Climate Change are both considered to be 'Very High Risks'. These are two keys where the infrastructure assets managed through this highway asset management strategy can be both managed and mitigated.



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## 5. Changing Future Needs

- 5.1.1. Aligned with the **Leeds City Council: Best Council Plan 2020-2025** and the Inclusive Growth and Health and Well-Being Strategies, the Council are moving towards transforming travel that can deliver a strong economy within a compassionate city. Through the **Connecting Leeds Travel Strategy** and the vision to be a city where you don't need a car, the Council seeks to achieve these strategic visions through six key transport areas to provide connections between the city, communities and business are made in the most sustainable way and that everyone has an affordable zero carbon choice to travel.

### Climate Change

- 5.1.2. Fundamental within these strategic ambitions is the Council meeting the Climate Emergency pledge to become carbon neutral by 2030, now also supported through the Department for Transport aligned policies for carbon neutrality in Decarbonising Transport: Setting the Challenge report (March 2020) and the subsequent Decarbonising Transport: A better, greener Britain report (July 2021)
- 5.1.3. In response to these challenges the Council declared a climate emergency in 2019, so committing to making Leeds carbon neutral by 2030. Integrated these commitments into the **Leeds City Council: Best Council Plan 2020-2025** the plan is to;
- reduce the Council's own carbon footprint;
  - reduce pollution and noise;
  - reduce the level of greenhouse gas emissions from buildings in the city;
  - promote cycling, walking and the use of public transport;
  - promote a less wasteful, low carbon economy;
  - reduce flooding and other risks from the impact of climate change;
  - build sustainable infrastructure;
  - to help residents reduce their own carbon footprints.

In growing and maintaining all aspects of the asset, it is our intention, where appropriate to contribute to this aim through several measures. These include, but are not limited to:

- the use of low energy lighting or retroreflective materials;
  - Low carbon or warm lay materials;
  - Recycled materials;
  - Increased use of preventative maintenance techniques;
  - The introduction of material rejuvenators;
  - Maintaining a 'risk based' approach to limit excessive works;
  - Increased use of technology to reduce duplicate or avoidable works;
  - Seek to ensure a 'right first time' approach.
- 5.1.4. The highway infrastructure maintained through this strategy will look to deliver one of the key objectives of the **Connecting Leeds Travel Strategy Vision** through 'Tackling Climate Change' and with that, providing the mechanism to deliver the six 'Big Moves' that will support the challenge to persuade people to adopt more sustainable travel choices.



5.1.5. Through the **Connecting Leeds Transport Strategy Action Plan (to 2024)** we will ensure that our carriageways, footways, cycleways, bridges, traffic signals, streetlights and public transport infrastructure are all maintained through a strategy of investment and prioritising that facilitate these sustainable travel alternatives.

5.1.6. The Council will also work towards climate actions that promote the retention and replenishment of nature and the biodiversity environments, through from targets set through future works procurements to maximising opportunities for Biodiversity Net Gain.

## Sustainability

5.1.7. The Council will continue to take steps to minimise the environmental impact caused by its management of highway assets. Within the funding and resources available we will explore innovative materials, treatments and techniques that will maximise our use of environmentally friendly and recycled materials, minimising waste and reducing the use of carbon. This approach will place sustainable solutions at the core of our approach to highway maintenance, considering any resultant actions to mitigate direct and indirect impacts of on the environment and communities by considering.

- Nature Conservation and Biodiversity
- Effects of Extreme Weather
- Environmental Impact
- Carbon Costs – footprint, material appraisal, waste management and recycling
- Energy Reduction
- Noise
- Air Quality
- Light Pollution
- Water sources

## Network & Asset Resilience

- 5.1.8. Environmental conditions have a significant influence on the condition of the highway network, the infrastructure that support it and the services and communities that depend on it. Over recent years the UK has experienced periods of severe weather with several particularly harsh winters, extreme summer heat and prolonged dry spells, storms causing flooding and damage to trees.
- 5.1.9. The extraordinary winter of 2015/16 saw storms Desmond, Eva and Frank demonstrate the devastation flooding can cause. During the period of November and December 2015 the Leeds City catchment area suffered a series of high intensity, long duration rainfall events. These resulted in widely reported flooding from main rivers and watercourses that affected the outlying area of Otley as well as the City Centre. An estimated 78mm of rain fell during this period and was subsequently assessed as 1:200-year return period event. Property flooding following these events within the Leeds district exceeded over 3,300 properties.



- 5.1.10. The impacts from such events have been considerable on communities, both social and economic, from which the Council has identified those critical highway assets where any limitations or failure of the infrastructure would result in a significant impact to the local, and potentially the national economy, and affect the ability of public/emergency/health services to carry out their responsibilities.
- 5.1.11. To help inform maintenance priorities and investment decisions knowledge of the location and condition of these critical assets in terms of their current performance and the impact of their failure would have on the network is crucial. Management, including appropriate investment, of critical assets is essential to ensure that these assets are sufficiently resilient to the damaging effects of climate change, flooding, rising temperatures, high winds, and drought.
- 5.1.12. The Council will continue to work with our neighbouring West Yorkshire Combined Authorities to maintain and improve our knowledge of this network and importantly,



consider cross-boundary networks where the reliance of these communities and the services that the highway supports will have interdependencies.

## 6. Financial Summary

### Regional and Local Maintenance Funding

- 6.1.1. Funds for maintaining the highway infrastructure network assets are allocated from two sources independent of each other. Capital allocation, made of external funding grants and profiled capital resources through the 3-year business case process, and revenue allocation from the income budgets assigned to specific Service Units. Both funding streams are identified through the Medium-Term Financial Strategy (MTFS) and incorporate the Council's Capital Strategy, Procurement Strategy and Risk Management Strategy.
- 6.1.2. Under the context of the new Mayoral Combined Authority (WYCA) the funding to the entire West Yorkshire region for highway maintenance, among all other areas, has significantly changed. From the financial year 2022/23 the City Region Sustainable Transport Fund (CRSTS) settlement now provides a 5-year funding allocation against the previous indicative periods of the previous DfT spending period that provided only a maximum 3-year look ahead.
- 6.1.3. Aligning with the National Infrastructure Strategy (2020), the CRSTS will now include additional funding for local transport networks identified within the West Yorkshire Connectivity Infrastructure Plan, in addition to the sums equivalent to the annual average funding to date for the Integrated Transport Block (ITB) and Highways Maintenance Funding, including the Potholes Action Fund. Following the indicative allocation from HMG Treasury in January 2022, allocation of the funding related to Highway Maintenance (Local Road Network) has been profiled for the Leeds City region through the decision powers from the Mayoral Combined Authority.
- 6.1.4. Under the previous DfT Highway Maintenance block period (2015/16 to 2020/21) the Incentive Fund for highway maintenance allocation was based on a self-assessment process and attainment of a maturity being reached in asset management within graded bands.
- 6.1.5. At the commencement of the 2022/23 funding period the DfT have indicated that they are reviewing the basis of the incentive element, and with that strongly advocating a risk-based, whole lifecycle asset management approach to local authorities highway maintenance programmes, it is considered that this will also be fundamental to any evidence of the application of these asset management principals for those local authorities where highway maintenance funding is included within a broader CRSTS regional settlement. As the preparation, review, and approval at Executive Member of an appropriate HIAM Policy & Strategy remains a mandatory requirement for those local under the annual DfT Self-Assessment Questionnaire (SAQ) to receive the maximum level of DfT funding, the approval of these documents will provide the evidence for any future requirement.

- 6.1.6. Through the CRSTS funding and the five-year programme this will allow a greater consolidation of funding streams, supporting the West Yorkshire region flexibility to decide and develop long-term strategies that integrate all the local transport priorities. The HIAM strategy will provide the supporting evidence for the City's contribution to this funding submission and provides the localised strategies and plans as to how these funds will be both programmed and delivered.

## Asset Valuation

- 6.1.7. In line with the financial reporting requirements of Her Majesty's (HM) Treasury highway, asset valuations are submitted using the Whole of Government Accounts (WGA) process. This process enables the Council to understand the financial value of the highway infrastructure assets and improves the understanding of the network and deterioration through providing a basis for lifecycle analysis.
- 6.1.8. The Gross Replacement Cost (GRC) represents the cost of replacing the existing asset with a new modern equivalent asset. The Depreciated Replacement Cost (DRC) represents the GRC less the value of the deductions for physical deterioration and obsolescence.
- 6.1.9. The annualised depreciation figure is the cost of all the treatment required to restore the service life of the asset spread over the lifecycle. This is the theoretical annual cost of maintaining the asset in a "steady state" condition although in practice the budgets and costs are significantly less than this and does not achieve a steady state investment strategy.

## Asset Management Planning

- 6.1.10. Highway network assets generally deteriorate slowly and the effect of a change in the level of funding is not always immediately evident. Between asset groups there can also be significant variance in this rate of deterioration and subsequently and similarly, the cost for the whole replacement of the asset when condition defines as life-expired can also vary. The investment decisions then made during the life of an asset need to be proportion and in consideration of both the depreciation and gross replacement variables. The allocation of available funding to each asset type is dependant upon several factors, these include but are not limited to:
- Asset Hierarchy;
  - Statutory Obligation's;
  - Stakeholder consultations;
  - Duty of care and risk;
  - Whole life costings;
  - Serviceability;
  - Climate contribution.
- 6.1.11. Lifecycle planning establishes a strategic approach to the management of these assets by incorporating the prediction of the future performance of an individual asset or asset group based on investment scenarios and periodic maintenance strategies through the entire lifecycle.
- 6.1.12. The Lifecycle Planning process includes the following steps;



- Performance expectations, consistent with goals, available budgets, and organisational policies are established and used to guide the analytical process as well as the decision-making framework;
- Inventory and performance information is collected and analysed. This information provides input on future network requirements;
- The use of analytical tools and processes to develop viable cost-effective strategies for meeting the highway maintenance needs and requirements, using performance expectations as critical inputs;
- Alternative options are then evaluated and are consistent with long-term plans, policies, and goals.
- The cyclic process and investment decisions then made are then re-evaluated annually under the HIAM Plan process, considering performance outcomes, changing cross-asset prioritisation and funding programmes.

6.1.13. Lifecycle Plans will be developed which will consider the asset group inventory, condition, WGA valuation, historical investment (both revenue and capital), asset performance requirements, cyclic maintenance strategy and staged programme-of-works covering;

- Footways/Footpaths
- Cycleways
- Carriageways
- Highway Structures
- Intelligent Transport Systems
- Street Lighting
- Drainage

## Levels of Service

6.1.14. The Code of Practice WMH recommends that a risk-based approach should be adopted for all aspects of highway infrastructure maintenance, including setting levels of service. Adopting a risk-based approach enables the Council to set levels of service appropriate to circumstances and are achievable for the available budgets.

6.1.15. When setting and determining service levels the Council must also consider its statutory obligations as the Highway Authority. Measuring risk and liability as well as the application of national standards at a local level must be taken into consideration when determining a set of baseline standards.

6.1.16. The core principals for establishing define levels of service under which inspection and intervention will be planned are as follows:

**Category – Network Safety** – defines the risk to the customer in using the asset and will in all cases be required to meet high standards.

**Service Level - to provide a safe, resilient highway network for all who use it.**

**Category – Network Serviceability** – defines whether the asset actually delivers what service users and the Council require of it.

**Service Level - to ensure that the highway network is available and accessible by maintaining assets that are both reliable against deterioration and resilient to the changing future needs,**

**Category - Value for Money** – defined by the outputs of investment decisions against the long-term cost of maintaining the asset.

**Service Level – we will integrate the principals of an asset management approach to ensure future investment decisions demonstrate value for money.**

**Network Sustainability** – defined by the steps to minimise the environmental impact caused by the management of highway assets. Within the funding and resources available we will explore innovative materials, treatments and techniques that will maximise our use of environmentally friendly and recycled materials, minimising waste and reducing the use of carbon

**Service Level – we will consider sustainable investment solutions that will maximise our use of environmentally friendly and recycled materials, minimise waste and reduce our reliance on embedded carbon through the whole lifecycle materials and construction process.**

## 7. Communication and Engagement

- 7.1.1. Communication and engagement is a key element of our asset management strategy and follows our Best Council ambitions to maintain a clear focus on delivering high quality public services. Using needs-led, asset-based approaches based on early intervention and prevention, supporting the people and places most in need, fostering ongoing engagement with communities and individuals.

### Customer Focused

- 7.1.2. Web-based reporting forms on the Leeds CC website allow a problem to be flagged by members of the public easily, and for that information to get to the right place quickly.
- 7.1.3. Twitter communication is active and available through several feeds including @LeedsCC\_help, @LeedsCC\_news, @LeedsTravellInfo.
- 7.1.4. The 'CATS' corporate customer contact platform sends queries seamlessly into Symology 'Insight', the Highways query tracking system. All queries must be responded to in a set period. Completion is monitored by central communications team. KPI's are discussed with management teams each month and any required actions recorded.

### Benchmarking our activities

- 7.1.5. The Council commissions NHT surveys to understand how we are performing in the community. The annual surveys give us feedback on the public perception of how we are performing in comparison to last year, and how we are performing in comparison to similar local authorities in England.
- 7.1.6. Asphalt Industry Alliance – known as the ALARM surveys – are independently commissioned annual surveys which aims to take a snapshot of the general condition of the local road network and report on the backlog of work required to create a fully maintained highway.
- 7.1.7. Through the West Yorkshire Combined Authority (WYCA), the Council will collaborate and benchmark with member authorities to compare levels of stakeholder satisfaction year on year and compare performance with other members in the combined authority.

## Annual Programme of Works

- 7.1.8. All planned works are communicated on the Council website with interactive mapping.
- 7.1.9. One.network.org shows, in mapped format, all planned and reactive maintenance of the highway, this is designed as the one place where all works that are in the highway are recorded. This includes works by all Council departments, and other organisations, not limited to statutory undertakers. Annual planned works schedules are uploaded onto the site at the beginning of each year in April. The schedules are then continually updated throughout the year as work is carried out.

## 8. Asset Strategies

### Overview

8.1.1. The highway infrastructure is the most valuable publicly owned asset managed and maintained by the Council.

8.1.2. The major asset groups of our highway infrastructure consist of over:

**2,959 kilometres of roads**

**2,587 kilometres of footways**

**94 kilometres of cycleways and associated cycle parking**

**936 bridges and other highway structures**

**93,776 streetlights**

**26,000 traffic signs**

**500 traffic signal installations**

**147,800 gullies (and other highway drainage assets)**

**64 kilometres of vehicle restraint safety fencing**

8.1.3. The complete inventory of highway assets also includes drainage and flood-risk management features, street furniture, road makings, green spaces designated as highway and Rights of Way that can be on both Council-owned or privately owned land and property.

8.1.4. The asset management strategy is tailored to identify and promote best practice, and prioritise delivering a safe, serviceable, and sustainable highway service.

- **Network Safety** – Ensuring the controlled management of highway assets and meeting statutory obligations, to allow our customers to use the highway safely.
- **Network Serviceability** – Maintaining highway assets to a condition in which it remains functional for highway users.
- **Network Sustainability** – Designing, constructing, and maintaining assets to meet both current and future needs in a changing environment while making effective use of limited budgets.

8.1.5. This section summarises the existing highway asset, its current condition, and a summary of the strategy to be employed for each asset type in the future. An understanding of, and agreement to, the levels of service required from each asset type is essential for the successful delivery of the strategy. Further details of how the strategy is achieved is contained within the Highway Infrastructure Asset Management Plan (HIAMP). Each main asset group is considered with short, medium, and long-term desired outcomes, synchronising with the decision spans of the **West Yorkshire Transport Strategy (2040)**.

## Strategy for Individual Asset Groups

### Overview

- 8.1.6. As part of the asset management framework and aligning with the UKRLG HIAM Guidance, the Council's main highway infrastructure have been divided into asset groups. In addition to supporting programming and management decisions through monitoring condition and investment strategies during the HIAM Plan period, this also allows for future demands to be evaluated and information to support the Council's continuing reporting of the Whole of Government Accounts (WGA's).
- 8.1.7. Included within Appendix A the complete inventory of the Council's highway infrastructure assets is provided.
- 8.1.8. Under the five-year HIAM Plan period (2022/23-2026/27) the reference to Short, Medium- and Long-Term investment strategies is as follows;
- Short (1<sup>st</sup> Year), Medium (3<sup>rd</sup> Year) and Long (5<sup>th</sup> Year).

### Footways

#### Asset Breakdown

- 8.1.9. The hierarchy for footways is based upon traffic flows for roads, and defined priorities for footways. In addition, a further assessment has been undertaken to consider the functional factors that may influence how the footway is managed.

### Approach

- 8.1.10. Desired outcomes will be achieved through the continued development and implementation of the footway strategy. Informing the footway asset management approach are the following policy desires:
- Maintaining accessible, well-designed spaces for walking including those as developed for all Leeds Communities;
  - Maximising the re-use and recycling of materials; (West Yorkshire Transport Strategy 2040)
  - Improving inclusivity and health, age friendly and child friendly Leeds

### Performance & Outcomes

Network safety: % of claims received and the % successfully defended.

Network serviceability: % of footways requiring major maintenance (NHT Public Satisfaction Survey KBI 11, Condition of Pavements)

Network sustainability: % of material used that is considered to be sustainable or low carbon.

## Future demands

- 8.1.11. Footway condition will be monitored over the HIAM Plan period and appropriate measures for improving the condition of the asset will be taken through into investment campaigns following either of the following approaches;

**Structural Maintenance** – a programme of structural replacement of footways and kerbs alongside campaigns of both carriageway and footway/carriageway.

**Preventative Maintenance** – a programme of preventative maintenance consisting of surface treatments to arrest deterioration. These works may be provided in conjunction with carriageway treatments as part of a boundary-to-boundary highway preventative programme.

Short term – review survey techniques and cycles / data quality of condition surveys in respect of managing the maintenance of the asset.

Medium term – Extent of preventative treatments vs reconstruction treatments.

Long term – steady state

- 8.1.12. The environmental and climate impact of these footway maintenance works will be reduced through the early intervention using preventative treatments (surface dressing, micro asphalt & slurry sealing). This approach reduces the need to carry out more disruptive and deeper construction/resurfacing works in the future (on those roads treated). These more invasive works require more bituminous and aggregate rich materials to be produced, which in turn has an adverse effect on the environment and congestion during the ongoing works.
- 8.1.13. Wherever possible in paved areas, second-hand materials will be used to match existing. Re-usable stone products removed from site will not be disposed of. Where technically appropriate, processes which minimise the use of newly quarried materials (such as recycling) will be considered.

## Cycleways

### Asset Breakdown

- 8.1.14. One of the leading strategic developments in transport planning strategy to 2040 is the expansion of the cycleway network. It is developing at a fast pace. The cycleway network uses both the traditional carriageway and footway pavement assets and has developed over time without user focused asset management priorities in place
- 8.1.15. Current asset management focus is on identifying and registering all the cycleway routes in the city. This is carried out by highway inspectors as a specific task. The result will be the capture of the full cycleway network by date

### Approach

Desired outcomes will be achieved through the continued development and implementation of the cycling strategy.

Informing the cycleway asset management approach are the following policy desires:

- Maintaining accessible, well-designed spaces for cycling including those as developed for all Leeds Communities
- Maximising the re-use and recycling of materials; (Transport Strategy 2040)

## Performance & Outcomes

Network safety: % of claims received and % successfully defended.

Network serviceability: % of footways requiring major maintenance (NHT Public Satisfaction Survey KBI 13, Condition of Cycle Routes & Facilities)

Network sustainability: % of material used that is considered to be sustainable or low carbon.

## Future demands

Short-term desired outcomes – mapping system and developing systematic approach to updating network knowledge as new cycleway building projects are complete.

Medium-term desired outcomes – setting condition and maintenance targets as knowledge of network matures

Long-term desired outcomes – steady state targets

## Carriageway

### Asset Breakdown

The asset is managed according to a hierarchy based on road classification. The hierarchy is designed to recognise the relative importance of routes to the communities that they serve.

### Approach

Desired outcomes will be achieved through the continued development and implementation of the carriageway strategy.

Informing the carriageway asset management approach are the following policy desires:

- Maximising the re-use and recycling of materials (Transport Strategy 2040)
- Network resilience (tackling problems associated with disruption to the network, supported by active maintenance including clearing drains and carrying out tree or retaining wall inspections).
- Upgrade maintenance of key bus corridors to provide fast and reliable high frequency bus services
- Consider innovation and sustainable solutions



- Continuous improvement in identification and maintenance of critical assets and resilience

## Performance & Outcomes

Customer service: How satisfied are stakeholders with the condition of pavements

Network safety: % Cat 1 potholes repairs completed on time, % Cat 2 potholes repairs completed on time

Network serviceability: % Principal Network (A roads) requiring major maintenance, % Non-Principal Classified Network (B & C roads) requiring major maintenance, % of Unclassified Network requiring major maintenance

% Of carriageways requiring major maintenance (NHT Public Satisfaction Survey KBI 23, Condition of Roads)

Network sustainability: Preventative Maintenance completed (in kilometres) as a % of the total km's repaired as part of the Annual Works Programme

## Future demands

- 8.1.16. Carriageway condition will be monitored over the HIAM Plan period and appropriate measures for improving the condition of the asset will be taken through into investment campaigns following either of the following approaches;

**Structural Maintenance** – a programme of structural maintenance to adopted road network to strengthen and resurface with associated kerb and footway works where required.

**Preventative Maintenance.** a programme of preventative maintenance to the adopted road network consisting of surface treatments to the carriageway or footway to arrest deterioration These works may be provided in conjunction with footway treatments as part of a boundary-to-boundary highway preventative programme.

Future investment campaigns during the HIAM Plan period will include the following

**Preventative Maintenance pre-patching** - a supplementary programme of pre-patching works for the preventative works programme to the adopted road network for the following HIAM Plan investment financial year.

**Carriageway Coring** - A programme of core sampling of roads to be subject to structural maintenance to check for the presence of Coal Tar within the road construction, including the required laboratory testing through the West Yorkshire partnership. This will support investment decision for the future structural maintenance investment programmes including decisions on the rejuvenation and recycling of existing insitu carriageway materials.

Framework for achieving short, medium, and long-term goals:

Short-term desired outcomes: establish a systematic process to capture internal and external stakeholder requirements and expectations

Medium-term desired outcomes: align asset management objectives to address relevant stakeholder requirements

Long-term desired outcomes: Minimal material taken to landfill.

## Structures

### Asset Breakdown

8.1.17. The asset is managed according to a hierarchy based on structure type and road classification upon which the structure is located. Within this asset group, bridges, retaining walls and tunnels form the essential link to allow access across obstacles (rivers, railways, roads etc). Without adequate maintenance the structure stock deteriorates, costing more to repair later, and weight restrictions on individual structures becomes necessary to maintain structural integrity and to safeguard the highway user and the wider travelling public.

### Approach

8.1.18. The council's highway structures are continually monitored for condition and maintenance needs. Prioritised planned maintenance and strengthening programmes are developed to maintain the assets in a safe and serviceable condition appropriate for their use together with a view to minimising whole life costs.

8.1.19. The investment programme during the HIAM Plan period is focussed on the removal of major structural risks on the network with a balance of supporting or holding elements from;

- essential safety works
- strengthening and structural maintenance
- substandard structures
- risk management (including safety inspections, management of sub-standard structures and interim measures)
- strategic network priorities
- asset management ((including principal and special inspections).

### Performance & Outcomes

% Of Council owned structures in need of essential repair (Best Council Plan KPI)

Condition of structure stock (SSCi av and SSCcrit) (LPI)

% Of Council owned structures with weight or width restrictions (LPI)

Number of structures being monitored (LPI)

### Future demands

Redevelopment of transport network will change the flow of traffic through the region, identify if planned changes will put greater demands on existing stock re performance of resilient network.

Climate emergency – greater wind speeds and heavier concentrated localised rain fall. For instance, impact of bridge scour /strike etc.

Biodiversity – management of maintenance procedures to minimise impact on environment or create net gain in biodiversity value.

Maintain structures to serve 44t vehicles and improve the capacity where traffic demands make this necessary

Maintain abnormal load routes, including access to development areas.

Maintain and improve the Leeds Inner Ring Road (A58(m)/A64(M))

Short term – optimise use of asset condition data – more funding for sub-standard structures.

Medium term – achievable program to address the decline in infrastructure.

Long term – Steady State.

## Urban Traffic Management Control (UTMC)

### Asset Breakdown

- 8.1.20. The Council recognise the importance of traffic signals and other related assets ensuring an effectively maintained and managed network, which contributes to the local economy and assists in achieving corporate goals. This section outlines the agreed approach to effective Asset Management giving clarity around standards and levels of service ensuring that available resources are appropriately directed to maximise the benefit across the City.
- 8.1.21. In addition to individual traffic signal installations, UTMC includes for the associated communications network and computing, traffic monitoring CCTV, electronically variable road signs, bus priority units and journey time measuring systems.

### Approach

Informing the UTMC asset management approach are the following policy desires:

- New technologies to deliver efficiencies and improvements to manage and maintain the network.
- Developing the intelligent traffic management systems to reduce traffic delay and disruptions, and introduce an integrated network management and driver communications centre (Transport Strategy 2040)
- Reduce vehicle idling
- Smart signal programme that prioritises pedestrians and cyclists

Factors relevant to safety, reliability and performance are the age of the asset, its fault history, and its present condition are:

- Age
- Condition
- Energy consumption

## Performance & Outcomes

Indicator	Ref	Description	Reported
LKI	1	Percentage of faults where the maintenance contractor attends within the contract time	Monthly
LKI	2	Percentage of faults where the maintenance contractor repairs within the contract time	Monthly
LKI	3	Percentage of periodic inspections performed on time by PEEK	Monthly
LKI	4	Percentage of all signals across the city under UTMC control or monitoring	Monthly

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LKI	5	Average age of traffic signals controller (years)	Monthly
LKI	6	Percentage of pedestrian crossings compliant with DDA tactile equipment	Monthly
LKI	7	Cumulative number of unique visitors to Leeds Travel Info website	Monthly
LKI	8	Number of signal switch ons in Leeds (new or modified)	Monthly

Table 3.10 – Showing the suite of Performance Indicators

Additional:

Customer service: How satisfied are stakeholders with the efforts to reduce delays to traffic.

Network Safety: % of signalised installations repaired on time

Network Serviceability: % of UTMC Traffic Signal installations exceeding average expected service life

Network Sustainability: % of UTMC Installations with LED lanterns

### Future demands

Digitise environment and the potential for automated transport. Future ready decision process for upgrading ITS stock.

Carbon savings

Introduction of AI technology

Short term – Reduce vehicle idling, upgrades LED's / reduced electricity consumption. Timely renewal of assets to minimise the possibility of failures.

Medium term – prioritise pedestrian, cyclist, and public transport.

Long term – Have as energy efficient solution as possible.

## Streetlighting

### Asset Breakdown

- 8.1.22. Street Lighting and illuminated signs maintenance is a significant aspect of network management, both financially and in terms of its perceived importance to users, providing direction and advice for all types of traffic.
- 8.1.23. Street Lighting and illuminated signs both of which are managed outside this plan and are covered by a Private Finance Initiative (PFI) contract with Tay Valley Lighting (TVL). This investment and management programme has an expiry date of July 2031 and therefore the Council's streetlighting stock, including new equipment, will continue to be financed through this investment route throughout the duration of this HIAM Plan period.
- 8.1.24. A comprehensive database for all street lighting assets are maintained. All salient attributes of each street lighting installation are recorded. This allows easy analysis and reporting of numbers of each physical/electrical unit, energy usage and control strategies in operation. Records are contained in a database linked to electronic data files.

### Approach

Informing the streetlighting asset management approach are the following policy desires:

- Carbon off-setting and energy saving
- Green infrastructure biodiversity
- Light pollution
- Timely renewal of streetlights to minimise the possibility of failures

### Performance & Outcomes

Customer service: How satisfied are stakeholders with the speed of repair to Street Lights

Network safety: % Street Light faults repaired on time

Network serviceability: Number of street lighting faults as a % of total street lighting stock

Network sustainability: % of Street Lighting columns with LED lanterns

### Future demands

Short term – Increasing energy costs

Medium term – Begin preparation for new service delivery model. Awareness of new technology for better energy savings

Long term - Prepare for new service delivery model post 2031.

## Drainage

### Asset Breakdown

- 8.1.25. Drainage assets includes a wide range of assets, varying from combined kerb drainage units to open watercourses, which assist in the Council's duty to safely drain the highway and provide resilience in terms of flood risk to the highway network.
- 8.1.26. The condition of the drainage asset is proven to have a direct influence on the deterioration of other highway assets, in particular the carriageway. The Council have adopted a maintenance investment and prioritisation programme that seeks to minimise deterioration of other highway assets.

### Approach

Informing the drainage asset management approach are the following policy desires:

- Network resilience
- In response to Leeds Local Flood Risk Management Strategy, maintenance of highways SuDS based schemes/infrastructure required because of planning consents and approval for highway promoted schemes.
- Development of SuDS based maintenance solutions to highway drainage run-off in conjunction with Leeds LLFA guidance

The drainage asset is a substantial asset group within the Leeds City highway network, comprising of several asset elements. Owing to the nature of the differing maintenance needs these are managed more effectively by splitting them into two main groups:

- Highways Drainage - Highway gullies, Linear drainage systems
- Other Drainage Features – Culverts <900mm in width (Culverts >900mm in width are within the scope of the Part 2, Structures), Debris screens, Catchpits, Pumping Stations, Petrol Oil Interceptors, watercourses, etc

The approach to cyclical maintenance of highway gullies is to undertake an optimised programme of cyclical cleansing across the city with cleansing frequencies based on historical levels of silt recorded during previous cleaning cycles. This risk-based approach minimises the unnecessary cleansing of gullies and ensures gullies requiring higher cleaning frequencies are attended to.

## Performance & Outcomes

Indicator	Ref	Description	Reported
LKI	10	% of Road Gullies cleansed on time	Monthly

Customer service: How satisfied are stakeholders with drainage Conditions.

Network safety: % of Road Gullies cleansed on time.

Network serviceability: % of non-running gullies.

Network sustainability: efficient route planning.

### Future demands

Climate change and carbon management, focus on increased usage of footway and cycleway as preferred method of travel. Consider how maintenance can be reviewed to manage a network that will attract more usage during inclement periods of weather.

Collaborate with Flood Risk Lead (LLFA) on establishing the requirements from the highway drainage infrastructure to deliver the requirements of a Surface Water Management Plan.

Promoting more efficient working to reduce emissions

Treatment of waste material

Improve network resilience through proactive maintenance in clearing drains regularly

Short term: Reduce the number of non-running gullies.

Medium term: Have all site mapped to assist on-going maintenance.

Long term: Operate a fully risk based, performance driven regime.

## Green Space

### Asset Breakdown

- 8.1.27. The highway green space asset group is managed by Parks and Countryside with Highways & Transportation retaining the right to allow change of use e.g., change a verge to parking bay. The maintenance of green space is currently completed at the request of Highways & Transportation.

### Approach



Informing the green space asset management approach are the following policy desires:

- Local improvements through planting of street trees (Big Moves – De-carbonising Transport)
- plan and deliver valuable future maintenance to the green (and blue) infrastructure on our green network spaces (Leeds City Region, Green & Blue Infrastructure Strategy)

## **Future demands**

Review management of invasive species.

Review management of tree stock

Review verge maintenance schedules – grass-cutting widths promote biodiversity, safety, and reduce carbon usage / environmental impact of maintenance activities.

Proactive approach to network resilience by tackling problems associated with disruption to the road network through carrying out timely tree inspections

## **9. Data Management & Information Systems**

- 9.1.1. The Council's Highway Infrastructure Asset Management Strategy and Plans are supported by robust and reliable data. The Council has a robust data collection methodology which ensures it meets national government survey requirements regarding road condition data collection on the principal and non-principal network. In addition, it also carries out inspections and surveys on assets including, unclassified roads, footways, traffic signal installation and associated equipment, street lighting, bridges, and other structures.
- 9.1.2. Data management includes identifying and prioritising networks. Knowledge of these networks are regularly updated. When assets are added, amended, or deleted it is essential that these changes are reflected within a reasonable timescale. These timescales will vary depending upon the size and scope of any changes, but the most up to date information needs to be available to users and partners, as appropriate. Scheme originators must work with those responsible for asset accuracy to ensure suitable detail is made available.
- 9.1.3. Traditionally network analysis has focused on carriageway and off-carriageway (footpath) networks. As the cycleway network throughout Leeds and beyond develops, to manage the asset effectively, the creation of a new asset knowledge network is underway. Cycleway networks commonly utilise a combination of carriageway and footpath networks. The needs and requirements of cyclists are uniquely separate to motor vehicles and pedestrians. A new data set is required to understand how the highway assets are performing to satisfy these needs by recognising a separate management network.
- 9.1.4. The following systems are currently in operation by the Authority to manage its Highway Infrastructure Data;

- Symology 'Insight' Highway Management System, covering most of highway management needs, including works orders, public enquiries, street works, network management, inspection process;
- Symology United Kingdom Pavement Management System (UKPMS).
- GIS (ArcMap);
- Asset Management Expert (AMX). Bridge management system covering all aspects for structures stock. System also used by Flood Risk Management (FRM) team for data management etc needs;
- UTMC has a separate 24/7 fault management system is in place, with faults automatically highlighted by the UTMC computer, or by a member of the public or a responsible body;
- KaarbonTech GulleySMART cleansing management system
- Leeds specific tools to support all these systems;

9.1.5. As part of an initiative to ensure resilience in the management of the various data platforms and the integration of data for future asset optimisation the Council are moving towards a fully digital-based, cloud hosted solution. This will also reduce our reliance on multiple applications and will provide the ability for enhanced integration and compatibility between the various asset group data requirements and the effective maintenance of existing and proposed infrastructure assets whilst ensuring that the Council are able to continue to satisfy their statutory duties.

Future considerations:

In response to declaring a climate emergency, continued development of techniques towards identifying robust Carbon reduction calculations in selecting maintenance materials and process choices.

The management of the highway includes highway soft verge, and open areas that are recognised to be within the highway boundary.

# 10. Risk Management

10.1.1. The Highway Infrastructure Asset Management Strategy reflects the guidance provided by the Highways Maintenance Efficiency Programme, (HMEP) document 'Highway Infrastructure Asset Management' and the new National Code of Practice 'Well-Managed maintained Highways Infrastructure' which promotes a risk-based approach to all aspects of asset management.



Corporate Risk Management Process (July 21)

10.1.2. Managing risk is integral to the effective and efficient management of the highway asset. The identification of current and future risks associated with all aspects of Highway management is embedded in the asset management approach. Risk based decision making is used to inform and define the management approach to the Council's assets, including inspection regimes, setting levels of service, responses, resilience, asset group priorities and investment programmes. By adopting a risk-based approach highways maintenance can be carried out in accordance with local needs, safety, priorities, and affordability. Guidance and training of the risk-based approach and its implementation is provided to all those roles with responsibility for taking the risk-based decisions. Competencies and training for those staff have been identified and are regularly updated providing a programme of continuing professional development.

10.1.3. The HIAM strategy will also consider the National Risk Register (as published by the Cabinet Office) and those then regionally those that are considered to pose a county level risk as contained within the West Yorkshire Community Risk Register. This includes the Council maintaining a resilient network and ensuring the viability of critical assets as part of the response to and needs of 'West Yorkshire Prepared', the Local Resilience Forum for West Yorkshire and the identified community risks under the categories of Severe Weather and Flooding.

# 11. Performance Reporting and Review

- 11.1.1. A key component of an effective asset management strategy is a mechanism within which progress can be evidenced through the monitoring of performance across the asset groups. Through these periodic reviews performance targets can be assessed and respective service levels defined around a funded programme of maintenance. Importantly, where assets performance targets are set alongside both current and future service level demands this may identify where there is a projected shortfall in funding. In such instances the priority will be for statutory requirements on the Council as Local Highway Authority to be met. This is covered within the Well Managed Highways Highway Maintenance Code of Practice (COP) and the move towards the risk-based approach for managing highway assets
- 11.1.2. Under this strategy the review and setting of a level of performance for asset groups will consider the asset condition requirements over a lifecycle plan, outcome requirements and both the needs and expectations from stakeholder groups.
- 11.1.3. The strategy outcomes will be aligned with the published performance indicators from the West Yorkshire Combined Authority for Highway Maintenance, covering key areas of **Customer Service**, **Network Safety**, **Network Serviceability** and **Network Sustainability**. Through the Council's ongoing participation in the annual National Highway and Transport Public Satisfaction (NHT) Survey, community perception on the highway maintenance service provided at a local level will provide a benchmark for the service as a whole and importantly, the areas of highest priority to help inform future investment decisions.



*The 2021 NHT survey covered 5,000 households across the authority with 1,089 members of the public responding representing a 21.8% response rate, below the national average of 23.8%.*

*From the responses the 'Condition of Roads' was considered to both **Most Important** and **Least Satisfied** and where the level of service could be improved by **spending more**.*

11.1.4. To inform the decision-making process for future performance targets and the associated investment programmes, the outcomes from the Highway Infrastructure Asset Management Plan (HIAMP) will be summarised in an annual 'State of the Highway Network' report. This will include condition assessment data from the various asset groups and the breakdown of the various lifecycle maintenance programmes within the investment financial year. The report will also include the longer-term predictions of levels of defects and condition and respective investment backlog deficits based on GRC and DRC presets. The outputs from the report will enable the Council to review investment programmes and asset group strategies for the subsequent year(s) including stated service levels and consideration for cross-asset prioritisation.

Draft for Internal Circulation.

## 12. Strategy Review

12.1.1. This HIAM strategy will be reviewed formally after 5 years, in the intervening period there will be light touch reviews at years 1 and 3 and relevant details will be updated as and when appropriate.

Draft for Internal Circulation.



# 13. Collaboration and Continuous Improvements

13.1.1. The Council is committed to developing and implementing best practice and will make best use of the following forums where appropriate:

- The Chartered Institute of Public Finance and Accountancy (CIPFA)
- Highways Asset Management Financial Information Group (HAMFIG)
- UK Roads Board
- UK Bridges Board
- Association of Directors of Environment, Economy, Planning & Transport (ADEPT) Asset Management Working Group
- NHT CQC (Cost, Quality, Customer) Efficiency Network
- National and regional conferences
- Professional Institution engagement
- Competency training

13.1.2. In collaboration with our adjoining authorities from the West Yorkshire Combined Authority (WYCA) the Council will also contribute to the proceedings of the Yorkshire Highway Alliance, established in 2011 to cover all HMEP themes covering asset management, communication, and collaboration across procurements for routine and planned highway maintenance.

## **14. Appendix A – Asset Inventory Data Sheet (March 2022)**

Draft for Internal Circulation.

## Supporting Documentation

- Leeds City Council: Best Council Plan 2020-2025
- Leeds City Council Connecting Leeds Travel Strategy
- Leeds City Council Connecting Leeds Travel Strategy – Action Plan to 2024
- Leeds Local Flood Risk Management Strategy
- West Yorkshire Low Emissions Strategy
- West Yorkshire Transport Strategy (2040)
- West Yorkshire Low Emissions Strategy 2016-2021
- Transport for the North Strategic Transport Plan (2019)
- Climate Emergency Declaration (2019)
- Leeds Inclusive Growth Strategy 2018-2023
- Leeds City Region Strategic Economic Plan 2016-2036
- Leeds Local Flood Risk Management Strategy (2018)
- West Yorkshire Climate & Environment Plan (2021-2024)
- Leeds Green & Blue Infrastructure
- Leeds City Council Highways Communication Strategy (2019)
- Leeds City Council – Guidance for Highway Safety Inspectors
- Leeds City Council Skid Resistance Strategy (2019)
- Leeds City Council Risk Management Policy & Strategy (2021)
- Leeds City Council Winter Service Plan for 2021/2022