

Telford & Wrekin Council
Highway Asset Management
Policy & Strategy
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 Update all reference to old documents and timescales Update Document Branding

Foreword

It is recognised that a good transport network is essential for a successful economy. Our roads provide access to jobs, services, schools, get goods to the shops and allow us to make the most of our free time. Our local roads are at the heart of the transport network and have a key role to play in ensuring that transport in Telford delivers the services our residents need.

In order that the transport network meets this need, the Council has adopted 12 key Asset Management Policy objectives and developed a strategy to ensure their delivery.

The approach outlined in this document will ensure that the infrastructure of the Borough is maintained to the highest possible standard within existing budgetary constraints. It will help to provide direction and to shape the overall quality and resilience of the public realm in Telford and Wrekin.



Councillor Lee Carter

Cabinet Member: Cabinet Member for Neighbourhood, Commercial Services and Regeneration

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A. BACKGROUND

1. The Corporate Context

Our roads, footpaths, street lighting, bridges and other highway assets all play a vital role in supporting our communities and businesses everyday lives, whether its accessing healthcare, education, local services, visiting family and friends or getting to work the highway network has an important role to play.

Telford & Wrekin's Highway Asset Management Policy and Strategy sets out how we will continue to develop and improve local transport infrastructure for the benefit of our communities and businesses. Our approach to effective transport asset management has evolved from consideration of the wider corporate objectives of the Council. These set out our commitment as a Co-operative Council to work with our communities to create 'Telford and Wrekin - the Place of Partnership, Enterprise and Innovation'.

The Council's wider commitment is to:

- put our children and young people first;
- protect and create jobs as a 'Business Supporting, Business Winning Council';
- improve local people's prospects through education and skills training;
- protect and support our vulnerable children and adults;
- ensure that neighbourhoods are safe, clean and well maintained;
- improve the health and wellbeing of our communities and address health inequalities; and
- regenerate those neighbourhoods in need and work to ensure that local people have access to suitable housing.

This wider, corporate policy is underpinned by the Council's Transport Policy as set out in the Telford and Wrekin Local Transport Plan (LTP) 2011-2026. The LTP

is fully aligned with national policy and sets out 6 key objectives:

- Making travel more reliable and efficient, to attract jobs and support growth and regeneration;
- Maintaining highways effectively and efficiently;
- Reducing carbon emissions to help tackle climate change;
- Allowing everyone to access jobs, education, healthcare, shops and leisure;
- Improving safety and security on the transport network and promote active travel choices which encourage people to be healthier; and



• Improving the quality of life by reducing the visual, noise, air pollution and other impacts of transport on people and the local environment.

The Council's economic development strategy 'Enterprise Telford' sets out the future vision for inward investment and jobs in the Borough. One of the key priorities within this strategy is 'Transform physical and digital connectivity' and the strategy notes:

'We want to continue to improve the quality and reliability of connectivity within the Borough, which is a key enabler of supporting people into work and sustaining employment. Telford enjoys purpose built infrastructure including serviced employment parks designed to sustain industrial and business growth, however the New Town legacy (the separation of employment and residential development and the reliance on car travel) has created a barrier to communities in our more deprived estates where car ownership rates are lower.'



Maintaining the highway has an important role to play in this regard, studies have shown that on average, businesses affected by poor road condition lose over £8,000 a year on vehicle damage and increased fuel costs. In addition a third of businesses also lose about £15,000 each per year because the condition of local roads reduces their competitiveness. Other studies have also estimated that the wider economic impact of poor road condition is costing the economy and small and medium enterprises – which contribute up to 60 per cent to the economy in some regions – £4.1 billion in England and Wales.

The Council's 'Being the Change' document sets out the four key themes required in order to create a culture that can deliver whilst overcoming the significant challenges that local authorities face.

The four key themes are:

- A. Focusing on solving problems and promoting social responsibility and action to manage and reduce demand for services
- B. Challenging and changing, reviewing and reimagining the way we do things
- C. Reducing our dependency on Government grants
- D. Being a modern organisation with modern practices and where we always get the basics right

These themes are the foundation on which we manage and maintain our highway assets. Overall we will work together and with our partners in support of these key priorities to 'Keep Telford Moving'.



The Telford and Wrekin Highways Vision guides all aspects of our highways service, including the management of our assets.

Telford and Wrekin Highways Vision

We will keep Telford moving by

- Delivering a safe, efficient and sustainable highway to meet the needs of communities and businesses, providing access to jobs and services, supporting health and wellbeing and catering for future growth
- Maximising and managing investment into the highway network to support the local economy, investing in new technologies and our workforce to promote innovation and creativity

Consultation, collaboration and community engagement will be the key to our success

The vision will lead the way forward and there are a number of opportunities and challenges ahead, including:

- Continue to move to a more asset management focussed approach and the associated change to highways maintenance capital funding, with the introduction of an incentive funding element;
- Opportunities for major scheme bidding through Marches LEP and Central Government.
- Channel shift to provide business efficiencies and improve communication with residents, parish and town councils and ward members.





2. The Transport Context

Telford & Wrekin's transport links feature good road and rail connections to the rest of the country. The M54 motorway provides a direct connection to the West Midlands conurbation and the M6 (S). It runs through the heart of the borough with four junctions providing unrivalled vehicle access for inward investment. All of the borough's major employment sites are located within a few minutes of the M54. It is also served by the A5 which runs parallel to the M54. This road forms part of the UK/Ireland-Benelux road axis of the Trans-European Network.

The borough has an extensive road system, including Primary Routes such as the A41 and A518. The A442 Eastern Primary Route acts as a key north-south distributor road within Telford as well as providing longer distance connection to Kidderminster in the south and the A41 and Whitchurch in the north.

The urban area has over 210 km of cycleway as well as a significant public footpath network, much of which runs through attractive green spaces and is used for leisure and work-related commuting.

The World Heritage site of Ironbridge is situated on the southern fringes of the Borough and is the home of the world's first ever iron bridge. The bridge crosses the River Severn which, at this location, runs through a steep sided gorge. The area is particularly prone to flooding at times of heavy rainfall in the upper catchment areas of the river. This causes significant damage to local highway infrastructure. Many parts of the Borough were also the subject of heavy mining activity in the past and this also impacts on the asset management challenges that the Borough faces.

As a New Town, much of the infrastructure dates back to the mid 1960's and a planned approach is required to provide for future maintenance in a cost effective manner. The estates





in the New Town area are based on the classical Radburn lay out. The residential and industrial areas are separated by a system of high speed distributor roads with local distributor roads providing access within the housing and industrial estates themselves. Links for pedestrians and cyclists are, in the main, segregated from the main highway links.

3. Current Situation

Historically, like many other local authorities in the UK, we have lacked an effective plan-led approach to Asset Management. The Borough has undergone several administrative changes since the establishment of Telford as a New Town in the 1960's. The Borough has also been affected by the de-trunking of certain key roads. Both of these factors have had significant implications for the effective and seamless transfer of highway asset data during this period.

In addition to this funding for highways has continued to fluctuate with long periods of under investment by Central Government. Since the recession and comprehensive spending review in 2010, the Council has saved over £126m and is projected to save a further £5.9m by 21/22 and over £7m by 22/23. This has affected available resources and standards of service delivery. Going forward we have to change our approach to maintenance in order to maximise available funding and to manage the risks associated with this. However despite this backdrop the Council's cabinet have continued to invest into the Highways Capital programme despite the level of financial pressures and also provided additional 'Pride in our Community' funding, some of which has enabled investment into local estate roads which may otherwise have deteriorated further.

In recent years we have undertaken significant steps to improve our management of the network including improving the use of data recording processes to make the best use of rapidly changing technology. We now have in place an effective GIS based register of publicly adopted roads, bridges. A project is in place to further develop an effective GIS based Public Rights of Way register. The Council has also adopted systems to allow for the management and recording of customer issues, defects, condition data and the management of our asset inventory.

Details of primary data collection methods and techniques for each of the main asset groups along with data storage system information are to be found in **Appendix A**.

4. What is Asset Management and Why Use this Approach?

Asset management can be defined as

'A strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future road users'



To put it more simply, asset management is about using data and intelligence from a range of sources in order to maximise the useful life of an asset to meet expectations both now and in the future.

Asset management has been described as a jigsaw that brings together existing practices, systems, policies and approaches to form a coherent picture for individual highway assets and our asset stock as a whole. We are adopting this approach because it brings us an overarching structure along with a number of specific benefits including:

- Improved highway data and up to date inventory information;
- Budget allocation by need rather than by historical precedent;
- Maintenance standards more closely aligned to customer needs;
- Joined up approach to managing all assets, even when managed by different teams;
- Sufficient information to address maintenance backlogs;
- Evidence to enable decision makers to understand the value of additional investment;
- Improvements in the defence of third party claims;
- Evidence and data to allow us to identify ongoing improvement efficiencies;
- Improved ability to manage the impact of others working on our assets (e.g. statutory undertakers); and
- Strong understanding of the links between treatments, costs and results

5. Our Asset Management Philosophy

Different parts of our road network fulfil different functions. To reflect this we have adopted a road hierarchy approach which focuses on the importance of the strategic elements of the highway in delivering economic growth and those roads at the other end of the hierarchy in relation to delivering a safe and sustainable community. The hierarchy can be found in



Appendix C.

We recognise that the wise and prudent use of limited public funds is vital and we firmly believe that our adoption of an asset management approach will enable greater value for money to be obtained by taking a plan led approach focusing on a longer term view in relation to key investment decisions. This approach will maximise the benefits for future prosperity and quality of place by ensuring the right investment decisions are made in regard to the transport network.

We will now proceed to develop an Asset Management Plan which will set out in detail how we intend to deliver the policies outlined in this document. This will take a long term view and will help us to make informed maintenance and investment decisions. It will take account of stakeholder requirements, promote levels of service, identify targets, assess options and point towards a preferred strategy for meeting these targets in the most cost effective manner. As such, it will include more detailed consideration of network performance, asset data, lifecycle planning and will identify a forward capital programme. It will also set out effective monitoring arrangements.

6. Objectives of the Telford and Wrekin Asset Management Policy & Strategy

Our Asset Management Policy & Strategy (AMP&S) is outlined in Section B of this document. Its purpose is to set out our overarching approach to the management of the highway asset. This is of fundamental importance to ensure that there is an appropriate allocation of resources for the longer term management, maintenance, operation and renewal of the asset to meet the wider corporative objectives of the Council and user requirements.

Our approach will ensure that the infrastructure of the Borough is maintained to an acceptable standard within available funding that will create a strong image and brand for the Borough and which will help to shape the overall quality of place. As such, our AMP&S will be the bedrock of effective planning and service delivery and will be promoted and integrated with other management and information systems of the Council.

The AMP&S will lead to the development of a well-planned programme of maintenance to ensure that goods and people can continue to move efficiently in the future as the Borough grows. Poorly planned maintenance can be a major source of traffic congestion creating problems for local businesses and residents. Keeping traffic flowing reduces vehicle emissions thereby, helping the Council to meet its current climate emergency target of being carbon neutral by 2030, to reduce global warming and improving local air quality. Good maintenance is also key to making the network safer for all road users including the elderly, children, pedestrians and cyclists.

In terms of spatial coverage, the differing roles and functions of different parts of the network are recognised within the AMP&S. This will ensure that both the type and quality of maintenance work required is specifically tailored to each road's role in the overall network hierarchy. This will ensure that available finance is invested wisely. The establishment of a clear road hierarchy that is accepted by all stakeholders is important in this regard. The road hierarchy is set out in



Appendix C.

The AMP&S will take into account the travel demands placed on the network arising from both existing and planned residential and industrial developments. It will accommodate movement by all road users and, as such, will take account of national and local transport policy.







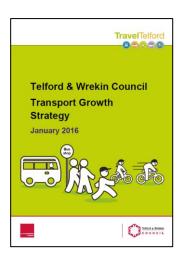
B. THE ASSET MANAGEMENT POLICY & STRATEGY

Overarching Aim: Keeping Telford Moving

We will provide a safe, well managed, maintained and resilient transport network for all who use it. We will make every effort to understand the current and future demands on the transport infrastructure and our stakeholders' needs.

In line with our highways vision, the overarching aim of this policy and strategy is that keeping Telford moving. Our Transport Growth Strategy 'Keeping Telford Moving' sets out our intentions in this regard.

Twelve policy objectives have been developed in order to ensure that we reach a level of maturity in our approach to asset management. They identify how we will show our corporate commitment to the principles of asset management through developing asset-specific lifecycle plans and programmes of work, based on well managed data and agreed levels of service; how we will regularly review our strategies, data and performance; how we will ensure that our network is maintainable and resilient; how we will communicate with stakeholders; and how we will develop an asset management framework for the borough.



Policy Objective 1: Commitment to Asset Management

We will adopt and promote the principles of asset management to give a strategic approach to managing the highway network. This will provide clarity and confidence to decision makers in relation to current and future planned maintenance

We are managing our highway assets in the context of an ageing network, reducing revenue funding, high public expectations and increasing pressure on local government services. An asset management approach, supported at all levels, helps us to work effectively and efficiently with limited resources now and in the future by:

- focusing on outcomes that help to prioritise future funding decisions;
- replacing short-term reactive repairs, with longer term cost-effective repairs and thereby providing value for money; and
- providing a clear evidence base to justify the need for investment in highways management and supporting decision-makers in reconciling short-term pressures and long-term priorities



The highway network is vital to the growth and prosperity of the Borough. It is the single most valuable asset that the Council owns, valued at just over £1.3bn. As such, it is vital that the network is resilient and able to cope with the future pressures as the Borough continues to prosper and grow.

The purpose of the Highway Asset Management Policy and Strategy is to provide a clear position on how we will maintain the whole highway network to ensure that it is adequate to support the growth of the Borough and specifically to meet the Council's Strategic Priorities.

Policy Objective 2: Data Collection and Asset Inventory

We are committed to a robust data collection and management programme for all assets. This will provide the information required to enable lifecycle planning to be undertaken and for levels of service to be fully developed.

A wide range of data is required for effective asset management and is used to

- establish the network inventory;
- describe its current condition and performance;
- assist with decision making;
- support communication with stakeholders;
- assess and manage risk;
- assess the effectiveness of alternative forms of maintenance treatments;
- assess alternative lifecycle planning strategies; and
- undertake value for money appraisals

Improving the quality and availability of highway asset data is one of our key aims. Up to date and accurate asset data is essential for effective management of all highway assets and is crucial if we are to comply with the requirements of Whole of Government Accounts (WGA). However, data collection can be expensive and resources need to be allocated to enable timely and efficient analysis. Ongoing maintenance of the asset databases requires the allocation of appropriate resources and therefore each asset type has been allocated to a specific asset manager whose role includes ensuring that accurate inventories are maintained.

A data collection and asset survey regime is in place for all assets, but the level and accuracy of information varies by asset type. Highways asset data is currently stored in a number of systems and it is our aspiration to bring all assets together into one comprehensive database Details of the primary data collection methods and techniques for each of the main asset groups along with data storage system information are summarised **Appendix A**.

A borough-wide asset data collection exercise was undertaken in 2013 using video surveys, a further LIDAR survey of the whole carriageway network was completed in 2021. This data now forms the basis of our asset inventory for carriageways, footways, signs & bollards and street furniture. In addition we have well developed inventory information for our bridges and a



separate street lighting inventory which until recently has been used primarily for providing accurate energy usage information.

We will regularly review our data collection procedures and frequencies to ensure that we make the best use of available survey equipment and technology, and are collecting the required information in the most efficient way.

Policy Objective 3: Lifecycle Planning

We will establish lifecycle planning, based on the current condition of each of the main asset groups. This will provide a robust understanding of how deterioration rates and future funding levels will impact on the long term condition of these assets. The lifecycle planning process will provide a solid foundation and evidence base for smart decision making and enable Levels of Service to be set with confidence.

Lifecycle planning is the process which links Levels of Service, current condition, future maintenance and budget requirements for an asset or group of assets. A detailed lifecycle plan will chart an asset's life from creation to disposal, setting out the options for maintenance over the course of its life.

Lifecycle planning and deterioration modelling is necessary in order to:

- derive an effective long term maintenance strategy;
- ensure that targets are met in a manner that maximises value for money;
- assess the cost and likely impact of alternative maintenance treatments on network performance over time by asset and road type as well as geographic area – the latter is often important in political terms; and
- ensure that costs are minimised over the lifecycle of the asset whilst still meeting performance targets.

Lifecycle planning allows funding requirements to be clearly identified to enable maintenance works to be properly planned for the most effective period of the asset's life. Where funding is constrained, or unavailable, lifecycle planning allows the extent to which the asset has deteriorated to be quantified so that the impact on its lifespan can be understood. Effective lifecycle planning will help us to move away from the traditional 'worst first' approach, whereby we focus on assets that look like they are most in need of maintenance. It will allow us to target investment at assets which represent the greatest risk or where maintenance would deliver the optimum benefit in line with the Council's Strategic Objectives.

Differing treatment strategies and materials can have different impacts and different service lives. For instance, in terms of the carriageway asset, reactive treatments such as infilling of pot holes can have an immediate and positive stakeholder impact for low cost. However, it may not offer the best value for money solution in the longer term. Preventative forms of routine maintenance, such as regular surface dressing programmes, can protect the structure of the



road more effectively and again are relatively low cost. Structural maintenance, such as partial reconstruction of the carriageway, is more expensive but offers greater structural integrity. In certain situations full reconstructions, whilst being the most expensive form of treatment, may in the longer term offer the best value for money solution.

Differing forms of treatment may be required for differing types of road depending on the importance of the road in the overall road hierarchy. Also, differing materials can be used, again with differing costs and impacts

We will also take into consideration the fact that, over time, it may become evident that certain new materials and techniques do not, in real life situations, deliver the levels of performance originally expected by the manufacturer. Service life and deterioration profiles may be different than predicted and this will be monitored as part of the Asset Management process.

We will ensure that the Highways Capital Programme is linked into the Highways Revenue programme. This will ensure that any new capital expenditure is fully integrated with the revenue funded maintenance programmes. Examples include the construction and adoption of new roads and associated infrastructure arising from the opening of new developments.

The development of detailed lifecycle plans for each of Telford & Wrekin's highway assets is ongoing and these will form the basis of our Transport Asset Management Plan (TAMP). In developing our investment strategy we will consider the following issues:

- What is the level of performance required to maintain steady state condition and what is the budget required?
- What is the level of performance that can be achieved with a fixed budget?
- What is the budget requirement to deliver the performance required?

More detailed information on the lifecycle planning approach can be found in **Appendix D.**

Policy Objective 4: Levels of Service

We will define and apply Levels of Service for each asset group. These will determine the condition at which each of the asset groups will be maintained and will relate to the available funding. Stakeholders will be consulted before Levels of Service are applied.

Levels of Service define the standard to which an asset will be maintained against the level of funding that is available. They provide a clear statement against which they can be measured.

Once a Level of Service has been set for an asset, lifecycle planning is used to determine the resources that will be required to maintain the asset in the condition stated within the Level of Service, and to identify the optimum times for repair and replacement within the asset lifecycle. As a minimum we will work to ensure that the transport network enables local residents and businesses to undertake their daily activities in a safe and sustainable manner.



Table 1 describes the Levels of Service are used within our highway asset management practice:

Level of Service	Description
Statutory	Meeting the minimum statutory and legislative requirements
Existing	Continuation based on current funding levels
Steady State	Maintaining the current condition, performance and value of the asset
Requested	Based on stakeholder expectations or aspirations
Optimum	The economically optimal level of service determined through life cycle planning
Attainable	A refinement of the optimum level of service based on available resources and funding

Table 1: Levels of Service

Levels of Service will vary by asset, and each of the asset groups will have its own technical definition for each level based on asset specific maintenance needs. Levels of Service are necessary for managing stakeholder expectations, particularly where funding is restricted. They provide a direct link between the objectives of the Policy and Strategy and the results of scheme delivery. Asset managers will work together to define their levels of service prior to consultation with stakeholders in 2022 However Levels of Service will need to be set in the context of future funding. It would be a failure to set Levels of Services so high that they cannot be achieved within the likely available funding thereby raising expectations and failing to achieve these.

Additional information in relation to Network Performance and Service Levels can be found in **Appendix E**.



Policy Objective 5: Scheme Selection

We recognise that the process for identifying planned maintenance works varies for each of the main asset groups and we will make planned maintenance decisions based on asset data, lifecycle planning and the agreed Levels of Service for each asset type. This will include developing a five year plan for investment in carriageways.

We investigate and prioritise proposed schemes before selecting them to become part of our forward works programme. This means they will be planned for delivery within the following five financial years, at the point where funding can be allocated for the work. The forward works programmes are carefully designed to minimise disruption and maximise efficiency by delivering maintenance works for multiple nearby assets together into the same package of works where possible. This will include the development of a five year plan for carriageways giving greater certainty to residents if and when works will likely to be undertaken. This will improve forward planning, communications and could help to drive better value through delivery by giving contractors greater certainty. Consideration will be given to developing longer term programmes for other assets as well including footways where appropriate to do so.

The forward works programme for each type of highway asset is published on our website - www.Telford.gov.uk/roadworks

Policy Objective 6: Maintainability

To ensure that our highway improvement schemes are truly maintainable, asset managers will carry out a maintainability audit for any schemes that affect the assets they manage. Consideration will also be given to the development of a core pallet of trusted materials for highway works.

Maintainability is a key component of asset management. We will introduce a maintainability audit process covering Council-led schemes to ensure that whole life costing and lifecycle planning are considered in the design process and asset managers are involved in decisions relating to assets that they will manage in the future. In order to identify ease and cost of maintenance, including replacement costs for damaged materials, we will audit designs for projects amend the highway. Designers will be encouraged to select materials on the basis of durability, ease of sourcing, whole life costs and supplier location.



The development of a materials pallet will formalise selection of materials. It will also optimise the asset lifespan, create a consistent appearance across the borough and reduce reactive maintenance costs. The pallet will be reviewed regularly and will consider new materials and technologies as they become available. Details have formed the basis of the Telford and Wrekin Council's Highway Design Guide, which is published on our website: Highway Design Guide (TWC)



Policy Objective 7: Performance Monitoring

Performance monitoring will be applied to our asset management policies, practices and processes and we will use all available data to ensure continual improvement in all aspects of asset management. Performance monitoring will be undertaken at a strategic, tactical and operational level.

Performance monitoring will incorporate, but not be limited to, the development of performance indicators. We will carry out strategic monitoring to ensure that the outcomes of this strategy are being met and that all processes are documented and are effective. Through system audits we will monitor the accuracy of the data held in our asset management systems and work to improve the data quality and outcomes.

Performance indicators will be developed to assess how successfully asset management is being applied locally. They will include indicators measuring data quality; asset condition; public satisfaction, contractor performance and results of benchmarking with similar organisation. They will feature in a formal monthly reporting process to the Assistant Director



for Customer & Neighbourhood Services. In addition they will be an agenda item in the forums shown in table 2:

Forum	Key Attendees		
Internal Strategic Board	 Director: Customer, Neighbourhood & Wellbeing Services Assistant Director: Customer & Neighbourhood Services Service Delivery Manager: Transport & Highways Cabinet Member: Finance, Partnerships & Commercial Services Cabinet Member: Transport, Highways & Customer Services 		
Highways Contract Strategic Board	 Assistant Director: Customer & Neighbourhood Services Service Delivery Manager: Transport & Highways Operations Manager: BBLP 		

Table 2: Highways Asset Management Governance Framework

Both boards will review performance and use the information to identify areas where improvement plans are required. The internal strategic board will be responsible for the Policy and Strategy and improvements in our asset management practice. The Highways Contract Strategic Board will use performance information to develop service improvement plans for maintenance activity. Results from the performance monitoring will also be included in an annual report documenting our asset management performance, making them publicly available. It is envisaged that this will be included in the Council's annual budget report along with other asset management information.

Performance information will be shared amongst highways asset managers who will meet regularly with other local authorities through structured frameworks such as the Midlands Highway Alliance + (MHA+ to benchmark performance and discuss best practice.

Policy Objective 8: Emergency Works and Network Resilience

We will further develop a resilient network that is able to cope with a range of highly disruptive events. The resilient network will be maintained to the required Level of Service to maintain access to the essential areas of the Borough should such an event occur.

We fully recognise the vital role transport has to play in maintaining the borough's economic vitality. Maintaining essential transport links to employment, education and training opportunities is essential in this regard. The Strategic Resilient Network (SRN) is made up of core local routes which are required in order to maintain economic activity and access to key



services during extreme weather. Phase 1 of the development of our SRN comprised identification of a revised road hierarchy ($\,$



Appendix C) which has been pulled together with the winter service routes (**Appendix F**) as these are seen to be the key routes for emergency access as outlined above.

In Phase 2, the Highways Team will work alongside the Civil Resilience Manager and key stakeholders to further develop the SRN in order to take into account other policies and plans such as the Severe Weather Plan and Operation Tangent, the specific plan for responding to a landslide in Ironbridge Gorge. In 2022 Telford and Wrekin will re-engage with key stakeholders across the borough to further develop an appropriate SRN Phase 3.

As the SRN develops it will be factored into, and prioritised in, maintenance decisions to ensure that it remains in a condition to serve its function in the event of major disruption.

Policy Objective 9: Winter Service

We will ensure so far as is reasonable practicable, that safe passage along the key highway network will not be endangered by snow or ice.

In line with 'Well Maintained Highways' the national code of practice for highway maintenance, this strategy uses the term Winter Service as the requirements during winter are specialist operations rather than physical maintenance.

The winter service is undertaken to assist in the safe movement of all road users including buses, cyclists, motorcyclists and pedestrians and to minimise delays caused by adverse

weather conditions. Consequently it is important in terms of both road user safety and the economy. It is a reactive service, delivered on the basis of need in response to extreme weather conditions.

We will continue to review our Winter Service Plan on an annual basis and will ensure that this links with the ongoing development of the SRN. The 2021/22 Winter Service Routes are shown in **Appendix F**.



Policy Objective 10: Stakeholder Communication

We will ensure that key stakeholders and members of the public have easily accessible and direct channels of communication to report issues, provide input into the management of the highway asset, and be kept informed about highway maintenance works and key decisions.

Well Maintained Highways describes highway authorities as 'stewards' of the highway network. In our role as stewards we maintain the highway network for the benefit of those who use it and our communication strategy aims to provide stakeholders with the information they need in order to understand the decisions that we make. It also provides the means by which they can communicate with us, although our aim is to minimise inward communication by providing the right information to the right audience at the right time.

High level asset management information is provided through our website. The development of this information is ongoing and whenever possible it takes the form of frequently asked questions (FAQs), particularly in relation to specific treatment types.

We have a well-established, formal communication process (**Appendix G**) linked to our Pride in our Community brand. The process is embedded into scheme delivery and incorporates a range of communication types including emails to stakeholders, letter drops and posters on site as well as the use of web pages and social media to keep stakeholders informed. We are also exploring the use of QR codes. The process is reviewed throughout the year and amended whenever improvements are identified.

Our incoming communication process is based on the principles of Channel Shift. Highway users will always need to contact us and are encouraged to do so using electronic means such as our website or the Everyday Telford smartphone App which allows highway defects to be reported directly through to the officer who will assess them and arrange for repair. It is our ambition to provide sufficient outgoing information to remove the need for stakeholders to contact us about the delivery of asset management schemes.

Stakeholders are able to communicate with us about our asset management performance in a number of ways including customer feedback requests which will be sent to a random sample of scheme frontages each year. This feedback will be used to identify areas where we can improve the quality of the information that we provide to stakeholders along with areas where our contractors can improve their performance. We also receive annual customer feedback through the National Highways and Transportation (NHT) survey. Information from stakeholder feedback will be monitored as a key performance measure and will feed into the quarterly board meetings as outlined in Policy Objective 7: Performance Monitoring.



Policy Objective 11: Asset Management Framework

A suite of asset management policy and process documents will be developed. These documents will form the framework for asset management in Telford and Wrekin.

The Highways Maintenance Efficiency Programme (HMEP) recommends that highway authorities should have a documented asset management framework (AMF) that comprises the activities and processes that are necessary to develop, document, implement and continually improve asset management. This framework should be endorsed by senior decision makers.

Our asset management framework will further develop the 12 policy themes set out in this document and expand on the context in which we carry out asset management as part of the TAMP. The suite of documents will include operational policies, lifecycle plans, internal guidance documents etc. **Appendix H** lists documents that have already been identified for inclusion.

Once it is fully developed our AMF will be subject to annual review in order to ensure that our asset management approach is robust.

Policy Objective 12: Strategy Review

We will review the Asset Management Policy and Strategy and supporting documents on an annual basis. This review will include consultation with key stakeholders if major changes are proposed.

The Asset Management Policy and Strategy are considered to be working documents and as such they will develop and change as our asset knowledge improves and as we develop to asset management maturity.

We will develop a formal review process for both documents. This process will involve all asset managers and asset management budget holders. Changes will be agreed through the Internal Strategic Board and, as the Council's Property Asset Management Plan is already included in the annual budget report this has been identified as the route through which highways asset management should be reported for executive sign off.



Next Steps

Our Asset Management Policy & Strategy brings together high level asset management information and summarises the direction in which we will travel. Throughout the document reference is made to actions that we will take in order to establish a mature asset management approach. The Action plan for these next steps in the process can be found in **Appendix I.**



C. APPENDICES

- A Details of the primary data collection methods and techniques for each of the main asset groups along with data storage system information
- B Asset Types and Inventory
- C Highways Network Hierarchy
- D Lifecycle Planning and Deterioration Modelling
- E Network Performance and Service Levels
- F Winter Service Routes
- G Highways Works Communications Process
- H Documents identified for inclusion in the Asset Management Framework
- I Asset Management Action Plan



Appendix A

Primary Data Collection Methods and Techniques for Each of the Main Asset Groups

Asset Group	Asset Type	Survey Type	Description	Frequency	Framework / Guidance	Purpose	Inventory Type
Carriageways	Principal Road Network	SCANNER Condition Survey	Detailed scanner survey of road profile from a moving vehicle	Annually	UKPMS	DfT reporting / long term programme development	UKPMS/XA
Carriageways	Principal Road Network	SCRIM Survey	Provides data on skid resistance values	Annually	CS228	DfT reporting / identify safety schemes	UKPMS/XA
Carriageways	Non-Principal Road Network (B & C Roads)	SCANNER Condition Survey	Detailed scanner survey of road profile from a moving vehicle	½ of B classified ¼ of C classified annually	UKPMS	DfT reporting / long term programme development	UKPMS/XA
Carriageways	Non Principal Road Network (U Roads)	Coarse Visual Inspection (CVI) Survey	Visual Inspection	¼ of unclassified annually	UKPMS	DfT reporting / long term programme development	UKPMS/XA
Carriageways	All Types	Highway Safety Inspections	Visual Inspection	Monthly, Bi-Monthly, 4-monthly or 6- Monthly	Well Maintained Highways Code of Practice	Carriageway Safety Surveys plus limited condition data	Confirm
Carriageways, Cycleways and Footways	Highway Adoption Records	Data Capture	Detailed data capture of Highway Adoption records	Ongoing data capture	Legal Highway Adoptions	Electronic record of adopted highway	GIS
Cycleways	All Types	Cycleway Safety Inspections	Visual Inspection	6-Monthly or annually	Well Maintained Highways Code of Practice	Cycleway Safety Surveys	Confirm
Footway	All Types	Footway Safety Inspections	Visual Inspection	Monthly, Bi-Monthly, 4-monthly, 6-Monthly or annually	Well Maintained Highways Code of Practice	Footway Safety Surveys	Confirm
Footway	All Types	Footway Network Inspections (FNS)	Visual Inspection	25% of footway network annually	UKPMS	Footway Condition Surveys	UKPMS/Horizons
Other Assets	Gullies	Data Capture	Visual inspection and GIS capture	Ongoing data capture	HMEP Highways Infrastructure Asset Management Guidance	Whole Government Accounts / Asset Management	GIS / Karboontech
Other Assets	Traffic Signs (inc. bollards)	Data Capture	Visual Inspection	Ongoing data capture	HMEP Highways Infrastructure Asset Management Guidance	Whole Government Accounts / Asset Management	Confirm
Other Assets	Traffic Calming	Data Capture	Visual Inspection	Ongoing data capture	HMEP Highways Infrastructure Asset Management Guidance	Whole Government Accounts / Asset Management	Confirm
Other Assets	Street Nameplates	Data Capture	Visual Inspection	Monthly, Bi-Monthly, 4-monthly or 6- Monthly Ongoing data capture	Well Maintained Highways Code of Practice HMEP Highways Infrastructure Asset Management Guidance	Safety Surveys Whole Government Accounts / Asset Management	Confirm
Other Assets	Vehicle Restraint Systems – linked to structures	General Inspection	Analysis of structural integrity	Bi-Annually	Code of Practice	Whole Government Accounts / Asset Management	Web-based asset inventory

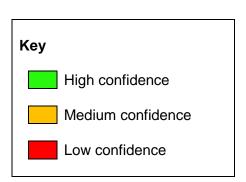
Other Assets	Vehicle Restraint Systems – not linked to structures	Data Capture	Visual Inspection	Monthly, Bi-Monthly, 4-monthly or 6- Monthly	Well Maintained Highways Code of Practice HMEP Highways Infrastructure Asset Management Guidance	Safety Surveys Whole Government Accounts / Asset Management	Confirm
Other Assets	Pedestrian Guardrail	Data Capture	Visual Inspection	Monthly, Bi-Monthly, 4-monthly, 6-Monthly or annually	Well Maintained Highways Code of Practice HMEP Highways Infrastructure Asset Management Guidance	Safety Surveys Whole Government Accounts / Asset Management	Confirm
Other Assets	Grit Bins	Data Capture	Visual Inspection	Annually	HMEP Highways Infrastructure Asset Management Guidance	Whole Government Accounts / Asset Management	GIS/Confirm/ Excel
Street Lighting	Electrical	ELI OHMS Testing	Resistance and High value readings	6 Years	TR22	Risk reduction and compliance with legislation	GIS
Street Lighting	Structural	Dip Stick Testing	Hot Swag Loss and deterioration	6 Years	TR22	Lifecycle planning and risk reduction.	GIS
Structures	Highway Structures (including retaining walls)	Principal Inspections	Detailed, Hands-on, Inspection	Bi-Annual	CS450. Management of Highway Structures Code of Practice.	Identify defects, track deterioration and inform scheme selection.	Web-based asset inventory
Structures	Highway Structures (including retaining walls)	General Inspections	Visual Inspection	Bi-Annual	CS450. Management of Highway Structures Code of Practice.	Identify defects, track deterioration and inform scheme selection	Web-based asset inventory
Structures	Highway Structures	Structural Assessments	Analysis of capacity of structure	Following major changes to loading, condition or nature of structure.	Design Manual for Roads and Bridge (CS454, CS459, CS455, CS451, CS458, CS457, CS455, CS456, CS453 Etc)	To determine structural capacity of bridge and safe working loads	Web-based asset inventory
Traffic Signals	Traffic Signals and associated equipment	Periodic Inspections	Detailed data capture of asset including, visual inspection & fully equipment inventory	Ongoing data capture as assets are upgraded	Design Manual for Roads and Bridges Vol 8 Part 2 TD101	Identify defects, track deterioration and inform scheme selection.	GIS

Appendix B

Asset Type and Inventory Information

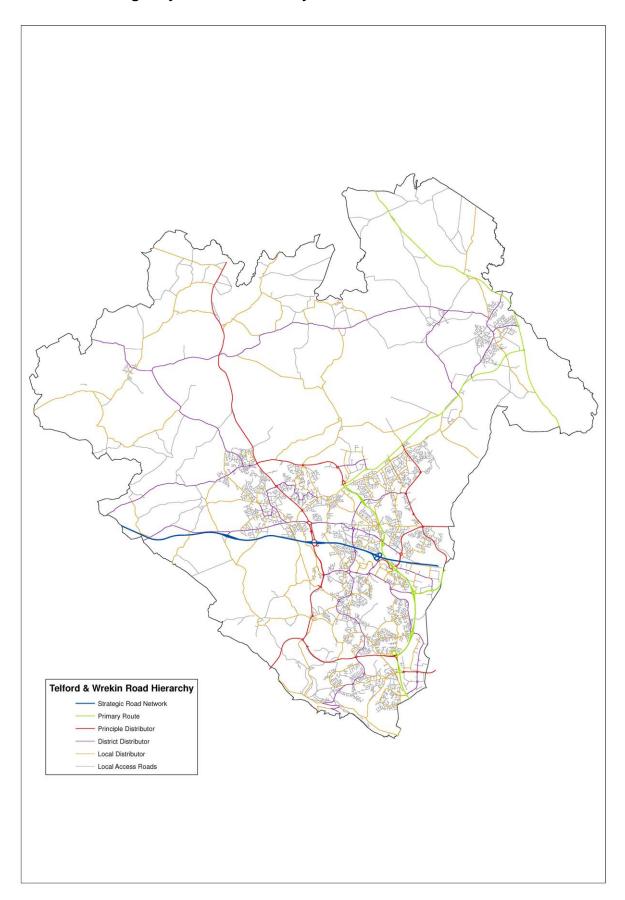
Asset Type	Amount	Data Inventory source and confidence
Carriageways & Footways		
Carriageways A	109.77km	
,	977364m ²	
Carriageways B	72.8km	
	505807m ²	
Carriageways C	258.39km	
Camia saviava II	1587461m ²	
Carriageways U	555.37km 2961349m ²	
Cycleways/Cycle Tracks	212.59km	
Footway Gullies	1000	Incomplete data
Footways	750.64km	moonipioto data
l comayo	1573133.6m ²	
Highway Drains	100,000m (minimum)	Incomplete data
Kerb	1-	No data
Lay Byes	-	No data
Road Gullies	35,000	
Vehicle Restraint Barriers (inc.	72.000m	
structures)	73,000m	
Structures		
Bridges –Road and footbridges	169	
Culverts (over 1.2m)	38	
Retaining Walls	4.5km (Ironbridge only)	Incomplete data
Subways	80	
Street Lighting		
Streetlights	22691	
Subway Lights	901	
Intelligent Traffic Equipment	•	
Car Park Management Signs	0	
Dual Pelican / Puffin / Toucan	12	
Real Time Passenger Information	0	
Traffic CCTV Cameras	4	
Traffic signal cable ducting	53000m	
Traffic signal controllers	100	
Traffic Signal Junctions	38	
Traffic Signal Pelican / Puffin / Toucan	48	
UTC centres	1	
Variable Message Signs (VMS)	8	
Vehicle Actuated Signs (VAS)	8	

Asset Type	Amount	Data Inventory source and confidence
Traffic Management Assets		
Belisha Beacons	35no	
Bollards	13,561	
Bus Stop Shelters and Flag Posts	1000	Incomplete data
Car Parks	30	
Fingerposts	50	Incomplete data
Illuminated Bollards	858	
Illuminated Signs	2283	
Non-illuminated Signs	17,455	
Park and Ride sites	1	
Pedestrian Guardrail	10,760m	
School Crossing Flashing Lights	13	
White and Yellow Lining	-	No data
Sundry Assets		
Boundary Fencing	-	No data
Electronic vehicle charging points	2	
Grit bins	636	
Street Furniture, bicycle racks etc.	-	No data
Trees	-	Incomplete data
Verge – urban and rural	826656 m ²	Incomplete data
Visibility Fencing	-	No data



Appendix C

Telford & Wrekin Highway Network Hierarchy



Appendix D

Lifecycle Planning and Deterioration Modelling

- 1. The lifecycle planning and deterioration modelling process will assess a range of alternative treatment strategies in order to determine the most cost effective way of maintaining the asset. The outcome of the lifecycle planning process is an investment strategy for the highway infrastructure asset that comprises an asset group and its components, that is affordable and delivers the required performance at the minimum cost.
- 2. Deterioration modelling can be used to examine a range of scenarios to consider the impact of different budgets and maintenance strategies. It identifies the most appropriate time to intervene with a maintenance treatment within the constraints specified. The model then selects the best strategy, or combination of treatments, to maximise network condition for the available funding across the entire analysis timeframe. In effect, the model generates a mini lifecycle plan for each road section, selecting treatments to suit its needs. It then rolls this up to a network-wide programme by selecting those treatments that offer the best value if all work cannot be afforded. The model does not just select preventative treatments, but has at its disposal a full range of options from surface dressing through to reconstruction and suggests the one that gives the greatest benefits.
- 3. In developing the Council's investment strategy, the following issues will be considered:
 - What is the level of performance required to maintain steady state condition and what
 is the budget required? Lifecycle plans may be used to demonstrate the investment
 required to maintain the asset at its current level of performance;
 - ii. What is the level of performance that can be achieved with a fixed budget? Where an authority has fixed funding, lifecycle planning may be used to determine the performance of the asset for the funding allocated. It can also demonstrate the effect of reduced funding on the performance of assets over the short, medium and long term;
 - What is the budget requirement to deliver the performance required? Authorities can use lifecycle planning to determine the future budget required to meet the specified performance targets;
- 4. The lifecycle plan will be prepared for a period of at least 10 years. The principal uses of deterioration models is to predict how asset condition are likely to change over time and, in conjunction with treatment options, to allow practitioners to determine the most cost-effective timing of treatments.

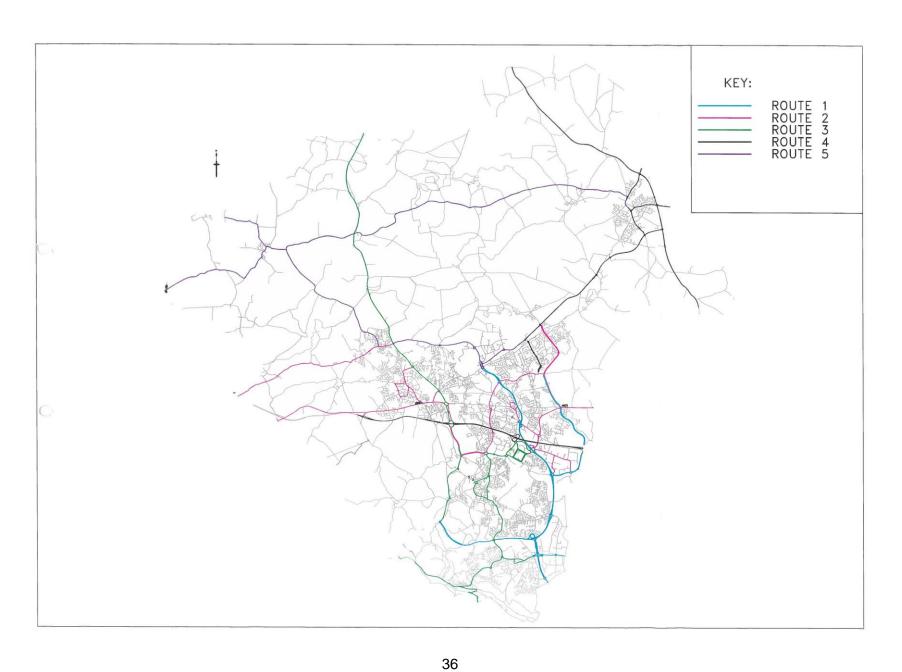
Appendix E

Network Performance and Levels of Service

- 1. Measuring network performance provides a systematic approach to assessing the effectiveness of asset management strategies and plans. The setting of targets is an appropriate procedure against which the effectiveness of alternative lifecycle planning investment strategies can be monitored and judged. Targets also provide a useful and easy to understand mechanism for engaging with stakeholders and the public and are a vital element in any Communication Strategy. It is important to demonstrate that available financial resources for improving the condition of the asset are being invested wisely and are achieving the desired results in a manner that provides good value for money.
- 2. The level of service provided to the road user is a key concept concerning acceptable levels of network performance. Different levels of service may be acceptable on differing parts of the network. For instance, on key routes of national importance, such as motorways, a higher level of service is generally expected whereas on roads lower down the road hierarchy a lower level of service may be more appropriate.
- Appropriate levels of service will be developed for different types of road and user through
 working closely with stakeholders. Factors to be taking into account when setting levels of
 service can be varied but examples would include safety, ride comfort; delay to the user,
 customer satisfaction, journey time reliability, accessibility to key services, environmental
 sustainability etc.
- 4. Future changes in travel demand, arising from increased car ownership, HGV movement etc., needs to be taken into account when setting performance targets and this is where the link to the LTP and Local Plan is crucial. Not only will the overall increase in future travel demand need to be taken into account but also the spatial distribution. Future demand can vary significantly between different areas of the Borough as well as between different roads. The Telford Strategic Transport Model (TSTM) will be important in assessing this aspect of future demand.
- 5. It is generally accepted that as traffic demand increases, levels of service, in terms of user delay, journey time reliability and accessibility to key services will fall unless the condition of the asset is maintained and improved.
- 6. Levels of service are normally expressed in qualitative terms that are easily understood by stakeholders and the general public. Performance measures are more specific and quantified. Performance measures are used to measure progress against performance targets. Targets are time related and need to be realistic. When developing them, consideration will be given to current and past performance and what is achievable in the target time period given available resources.
- 7. We will also develop a Performance Management Framework that will consider a range of levels of service, performance measures and targets.

Appendix F

Winter Service Routes



Appendix G

Highways Communication Process
NB Links to other documents are not enabled.

MAJOR WORKS	STANDARD WORKS	ACTION	NOTES	Templates and Guidance
During Des Survey	sign Site	'Before' photos	For use on the web page	
In advance of delivery	n/a	Consider the need for a publicity scheme and public engagement	This should be fed into the regular 'Highways Roadworks' liaison meeting with the Corporate Communications Team.	
6 weeks	n/a	Advance information to stakeholders (Major schemes only)	Area Working Group (AW) email address to be used	Advance warning email
6 weeks		Publish 'Planned' web page under 'Roadworks'	Content to be based on Example 1 of the guidance and approved by client or Asset Management and Transport Strategy Group Manager	Standard website guidance
11 working	ı days	Detailed information to stakeholders	AW email address to be used. Letter to stakeholders to be attached.	Detailed AW Guidance
11 w. days	N/A	Ensure press release is produced	Forward the detailed information email to Corporate Communications	

MAJOR WORKS	STANDARD WORKS	ACTION	NOTES	Templates and Guidance
10 working	days	Publish 'Final' web page under 'Roadworks'	Content to be based on example 2 of the guidance and approved by client or Asset Management and Transport Strategy Group Manager	Standard website guidance
10 working days		Letter drop to properties that front onto works (must be delivered <u>after</u> the information to stakeholders)	Contractor's letter Include friendly URL if using (see web info) otherwise use Telford gay uk/readworks	TWC letter TWS Letter template 16/17 Contractor letter guidance
10 working days		Advance warning signs on site (must go out after the letter drop to residents to reduce customer contact)	Using standard design (Cooperative Council Logo and Pride branding)	Small (Poster) Boards Template Large Scheme Boards Template
Immediatel commence	-	Sub-Contractor letter to residents (if required)	Specialist sub-contractors will deliver their own letters/cards relating to their work. The project manager must approve these before delivery.	

MAJOR WORKS	STANDARD WORKS	ACTION	NOTES	Templates and Guidance
During works During works		'during' photos Weekly Progress Updates	For use on the web site Where there are changes ensure that the web page is updated	Weekly update template
Once work is complete		'After' photos	For use on the web site	
Once work is complete		Advise of completion	Ensure the web page is updated/removed.	

Key

Work-Types

Major works
Projects requiring a closure and / or those lasting over 10 days. Also includes programmes of work such as surface dressing. Standard works
Projects lasting between 4 and 10 working days.

Appendix H

Documents identified for inclusion in the Asset Management Framework

- Transport Asset Management Plan
- Individual asset management strategies (more detailed than TAMP)
 - o Structures
 - Lighting
 - o Lifecycle planning and scheme selection process for carriageways and footways
 - o Drainage
 - o Traffic Management
 - o Intelligent transport systems
 - o Vehicle Restraint Systems
- Maintainability Audit process
- Winter Service Strategy

Appendix I

Action Plan

Ref	Category	Action	Deadline	Barriers and Risks
GA1	Gap Analysis	Document existing network inventory records and information on existing maintenance regimes and construction processes.	Ongoing	Incomplete or missing data from previous schemes
GA2		Analyse above to determine historic impact of maintenance treatments and materials used on asset condition and identify gaps in knowledge	Ongoing	As above
NI1	Network Inventory Survey	Carry out automated GIS survey of whole network and establish GIS data inventory	Completed in 2013. Further survey in 2021, data extraction still to be completed	-
NI2		Extract other assets from the automated survey onto XA as required	Ongoing	Cost of extraction
CS1	Condition	Carry out automated survey of surface condition of all major roads	Carried out annually	-
CS2	Condition Survey	Carry out detailed visual inspection of all minor roads and important footways	Carried out annually	-
CS3		Carry out coarse visual inspection of minor footways and cycleways.	Carried out Bi Annually	-
AM1	Asset	Develop Asset Management Policy & Strategy and Consult prior to corporate sign-off.	Completed	-
AM2	ManagementPolicy, Strategyand Plans	Undertake deterioration modelling and lifecycle planning over period 2017-2026	Completed	-
AM3	Asset Management Policy, Strategy and Plans	Assess alternative maintenance strategies by road type and time	Completed	
AM4		Develop Preferred Asset Management approach	Completed	-
AM5		Confirm annual funding requirement by road type over period 2022-2026	March 2023	

Ref	Category	Action	Deadline	Barriers and Risks
		Consolidate above into Highways Asset	February 2023	Missing or inaccurate data
AM6		Management Plan, incorporating plans for network		
		resilience and risk management		
WP1		Develop 5-year capital programme for carriageways	Completed	-
		based on agreed budgets		
WP2		Develop short term works programme for period	Completed	-
		2021-2023 Establish Data Management Strategy –	December 2022	
RS1	Develop Works	Accreditation, Testing, Training	December 2022	-
	Programme	Establish Financial Systems and Works Ordering	Completed	_
RS2		Processes Accreditation, Testing, Training	Completed	_
		Link above into other existing records (e.g.	Completed	
D.00		Streetwork Management systems, work scheduling,	Completed	
RS3		customer complaints, safety inspection and other		
		corporate GIS systems etc.).		
MO1		Undertake annual monitoring	Annual	-
MO2		Prepare Annual Review of TAMP including	Annual	-
IVIOZ	Monitoring	refinement of deterioration modelling assumptions		
		Assess progress on implementing HMEP Drainage	October 2022	-
MO3		Asset Guidance		
		Establish Communication Strategy	Completed.	-
OP1			Review annually.	
OP2	Other Policies	Develop risk based inspection policy and inspection	Completed	
		manual based on the new approach.		
OP3		Develop Skidding Strategy	Completed	-
OP4		Develop asset management strategies by asset	Ongoing	Competing priorities
<u> </u>		type.		
DA1		Develop performance measures and	Completed	ICT capacity
DAG	Data	internal/external dashboards	0	
DA2		Review and align revenue and capital budgets Review trend data in relation to	Ongoing	-
DA3			Ongoing	-
		Network condition		

Ref	Category	Action	Deadline	Barriers and Risks
		 Defects 3rd Party Claims 		
DA4		 Take part in benchmarking groups and studies Midlands Highway Alliance + (MSIG) CQC Efficiency Network (Customers/Quality/Cost) National Highways & Transport Survey APSE Performance Networks (Association for Public Service Excellence) 	Annually	-
DA5		Develop existing Public Rights of Way GIS information to improve accuracy	Completed	Resource availability
		Develop footway hierarchy and future footways programme	December 2022	
ST1	Stakeholders	Develop a strategy for the use of customer data to improve performance and reduce demand	Ongoing	Resource availability
ST2		Identify and implement a system for measuring customer satisfaction with contractor performance on scheme delivery.	Completed	Resources
ST3	Stakeholders	Complete a stakeholder mapping exercise and establish communication and consultation methods. Use the results to improve engagement.		-
ST4		Establish Communication Strategy	Completed. Review annually	-
FI1		Submit highways asset report for Whole Government Accounting (WGA)	Annual – September	Data quality and availability
FI2	Finance	Establish detailed, costed works plan for following financial year	Nov 2022	Timing of funding decisions may delay implementation
FI3		Annual asset management report as part of the Council's budget setting process.	Nov 2022	-
AR1		Establish governance processes involving members and senior officers	Completed	Missing or inaccurate data

Ref	Category	Action	Deadline	Barriers and Risks
	Asset			
AR2	Management	Those responsible for asset management to be	Ongoing	Funding
ANZ	Responsibility	competent and well trained		