

Highway Infrastructure Asset Management Policy, Strategy and Plan

Report of the Chief Officer for Highways, Infrastructure Development and Waste

Please note that the following recommendations are subject to consideration and determination by the Cabinet (and confirmation under the provisions of the Council's Constitution) before taking effect.

Recommendations:

- (a) that the revised Highway Infrastructure Asset Management Policy, Strategy and Plan are adopted;**
- (b) that the Chief Officer for Highways, Infrastructure Development and Waste, in consultation with the Cabinet Member for Highways Management and Flood Prevention, be given delegated authority to make minor amendments to the documents and continue the development of the Highway Infrastructure Asset Management Plan Annexes.**

1. Summary

Highway Maintenance is a statutory duty of the County Council as Local Highway Authority and is set out in the Highways Act 1980.

Sound Highway Infrastructure Asset Management Planning supports Devon Highway's Strategy of: Driving Efficiency; Managing Demand; Enabling Community Self-Help.

The current Highway Asset Policy, Highway Asset Strategy and Highway Asset Plan were approved by Cabinet in March 2013.

There is a need to review and approve an updated suite of documents to take account of the revised Council strategic plan, the latest national guidance and codes of practice and to adopt emerging best practice, as well as to enable Devon to maximise its funding grant for highway maintenance. The maximum difference in DfT's level of Capital Funding between a Band 1 and Band 3 rating for Devon is £7 million in 2020/21.

2. Background/Introduction

Infrastructure asset management planning is an established and widely recommended approach in the highways and other sectors both in the UK and internationally.

Asset management has been widely accepted by central and local government as a means to deliver a more efficient and effective approach to the maintenance of existing infrastructure.

It enables best use of limited resources by taking a long term view of how highways are managed, focusing on outcomes by ensuring that funds are spent on activities that prevent, as far as possible, expensive short-term repairs. This makes the best use of public money whilst minimising the risk involved in investing in highway maintenance.

The adoption of sound highway infrastructure asset management planning can support Devon's strategy for Highway Maintenance: driving efficiency in service delivery; managing demand; enabling community self-help.

Devon's highway infrastructure asset management planning includes the adoption of defined levels of service for different highway assets, using data and information to establish maintenance needs, matching maintenance needs to available funding and prioritising investment to get the best overall network outcomes.

Devon's highway infrastructure asset management planning will support the case for funding, enable effective communication with stakeholders, and enable a greater understanding of the contribution highway infrastructure assets make to economic prosperity and to local communities.

3. Proposal

The national guidance issued by Highways Maintenance Efficiency Programme (HMEP) promotes a joined up approach to determining how all highway infrastructure assets such as roads, bridges, streetlights etc. are managed. A suite of documents has been developed to reflect this. The documents are:

- The Highway Infrastructure Asset Management Policy (Annex 1);
- The Highway Infrastructure Asset Management Strategy (Annex 2);
- The Highway Infrastructure Asset Management Plan (Annex 3).

This hierarchy of documents should be read and referenced as a set in order to understand the background and reasoning for Devon's approach to asset management and to how this will be delivered in the Highway Service.

A number of significant changes that have occurred since approval of the current Asset Management Policy, Strategy and Plan in 2013:

- The revised County Council strategic plan, Better Together was published in 2014.
- New national guidance 'Highway Infrastructure Asset Management' was issued by HMEP in May 2013.
- A revised Code of Practice on Highway Network Assets was issued in 2016. The revised code outlines the procedures to be applied for valuation of highway infrastructure assets.
- In November 2014, following consultation, the Department for Transport (DfT) announced a new formula for allocating Local Highway Maintenance Capital funding up to 2021. The new funding formula is made up of a Needs Formula, an Incentive Fund and a Challenge Fund. The new approach enables highway authorities to improve long term works planning as the announcement detailed the Needs Formula allocation, which is the major part of the overall funding, for a six year period. In addition it set out to encourage authorities to fully adopt good asset management practices as has incentivised this by requiring authorities to complete a self-assessment questionnaire which rates authorities and withholds a percentage of available funding depending on the outcome. The funding implications were set out in report HCW/16/13 and the maximum difference between Band 1 and Band 3 for the incentive fund is £7 million in 2020/21.
- Highway Maintenance revenue budget, funded from business rates, council tax and Revenue Support Grant has reduced each year in response to Devon County Council's corporate savings requirements.
- The Highway Service has engaged with communities to respond to reduced levels of service by facilitating community self-help.

- The Highway Service has developed its highway systems technology to manage customer demand by improving web based customer information on services and works programmes, and on-line customer reporting and data collection.

All of the above have contributed to shaping the Highway Service and to driving a review and update of highway infrastructure asset management planning.

The Highway Infrastructure Asset Management Policy outlines the objective to maintain the highway network as required by The Highways Act 1980. It describes the scope of the policy. It outlines the Policy aims and objectives and describes the benefits of the proposed approach to highway asset management.

The Highway Infrastructure Asset Management Strategy explains how the policy will be achieved and how long term objectives will be delivered. The Strategy outlines the Devon County Council's Asset Management Framework and provides details of the components which make up the core asset management planning tools. These have been developed by following Highways Maintenance Efficiency Programme national guidance. The framework includes Risk Management, Levels of Service and Performance Management.

The Highway Infrastructure Asset Management Plan provides the detail on how the policy and strategy are implemented.

The purpose of the Highway Infrastructure Asset Management Plan is to:

1. Identify and set out the maintenance requirements for the highway network in a clear and consistent framework, which follows the national guidance published by the HMEP.
2. Enable improved use of data and information and improved analysis of the maintenance of highway assets so that services can be delivered more efficiently.
3. Enable maintenance budgets to be used to effectively to reduce to a minimum the overall rate of network deterioration and to maintain a safe network that provides the optimum service with available resources.
4. Be a guidance document for the service in managing the highway network effectively.
5. Enable an improved approach to future maintenance challenges.
6. Support the process of identifying and accessing potential funding streams for addressing maintenance issues.
7. Understand the implications and risks for each asset group and to the network, from reduced funding.
8. Help with communications as we explain how we manage highway assets and how we propose to face the challenges of managing these assets in the future.

The Highway Infrastructure Asset Management Policy, Strategy and Plan are provided in Annexes 1, 2 and 3 respectively.

4. Consultations/Representations/Technical Data

Place Scrutiny reviewed the draft Highways Infrastructure Asset Management Policy, Strategy and Plan on the 20 September 2016. A separate Spotlight Review was also held on the 13 October inviting all members to be involved in helping to shape the key performance measures used to monitor the levels of service set out in the Plan. A report capturing member feedback and recommendations from the Spotlight review is attached as Annex 4. The recommendations have been included in the performance indicators presented in Annex 6 of this report.

Customer feedback is available through the 2015 National Highways and Transport (NHT) Public Satisfaction Survey. This reflects public perception of performance and the

importance and desire for various activities to be funded. Analysis shows that the condition of the highway network and the speed and quality of repairs are important to the public.

The complete survey can be seen at <http://nhtsurvey.econtrack.com>

As part of the tough choices budget reduction exercise a consultation was carried out in autumn 2014 on a range of proposed reductions to the Highways Revenue Budget. This resulted in reduced levels of service being implemented in April 2015 affecting winter service, grass cutting, parish lengthsmen, picnic sites and staffing in neighbourhood teams.

Further details are available at <https://new.devon.gov.uk/highwaysbudget/>

5. Levels of Service

Strategic levels of service are identified in the Highway Infrastructure Asset Strategy (Annex 2). These inform the development of specific levels of service for each asset group. Defining levels of service enables us to meet our objective of managing demand, having considered current and future capability to deliver within the resources available.

The high level aims for levels of service for the highway asset are:

- **Safe** and serviceable for people to use.
- **Connected** - enabling access to and from communities for people, goods and services.
- **Healthy** - supporting and promoting active and healthy lifestyles.
- **Prosperous** - contributing to wider economic growth.
- **Resilient** - making effective and efficient use of our local resources promoting sustainable communities.
- **Sustainable** - Is maintained appropriately to retain its value and condition and contributes to wider environmental management.

The specific levels of service for each asset group are listed in Annex 5.

6. Performance Framework

Performance measures can be used to monitor progress against levels of service and to track actual performance. The strategic indicators associated with the levels of service for each asset group are identified in Annex 6. It is intended that these will be reviewed annually and progress reported to Councillors.

The Highways and Traffic Management Team (HTMT) is developing a performance management framework. This aligns with corporate and asset management aims. The framework measures performance against key business areas and identifies current performance as: Excellent; Good; Fair; or Poor. The Highways Infrastructure Asset Management Plan strategic indicators form part of the wider service measures within the HTMT framework. The framework also includes specific measures used to assess our highways contractor's performance.

7. Financial Considerations

The asset management approach enables the County Council to demonstrate it has a clear methodology for valuing highway infrastructure assets and determining their condition.

Applying the approach to establish maintenance needs illustrates that there is a clear gap between the capital maintenance funding provided by DfT and the funding needed as assessed by condition surveys.

The result is that whilst higher priority assets can be maintained in an acceptable condition this is not possible for lower priority assets. Therefore, the condition of some lower priority assets will deteriorate in future years. For such assets, like some minor roads, safety related reactive interventions only will take place.

It is unavoidable that deteriorating condition will lead to increased costs of reactive repairs and to increased future planned maintenance costs. In the long term there will also be an impact on the selection of journey routes and the reliability of journey times.

By adopting good asset management practice the above impacts will be minimised.

8. Environmental Impact Considerations

The Highways Infrastructure Asset Management Plan includes a section on risk management which addresses the impact of climate change and how the Highway Service needs to adapt to ensure the resilience of the highway network. The Plan addresses how the impacts of climate change can be minimised by building in adaptation at the planning and design stages when planning future maintenance of the network.

Environmental impacts are also considered in the development of the strategic levels of service and the specific asset group levels of service (Asset Strategy Annex 2).

9. Equality Considerations

Where relevant to the decision, the Equality Act 2010 Public Sector Equality Duty requires decision makers to give due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other prohibited conduct;
- advance equality by encouraging participation, removing disadvantage, taking account of disabilities and meeting people's needs; and
- foster good relations between people by tackling prejudice and promoting understanding.

Taking account of age, disability, race/ethnicity (includes Gypsies and Travellers), gender and gender identity, religion and belief, sexual orientation, pregnant women/new and breastfeeding mothers, marriage/civil partnership status in coming to a decision, a decision maker may also consider other relevant factors such as caring responsibilities, rural isolation or socio-economic disadvantage.

This may be achieved, for example, through completing a full Equality Impact Needs Assessment/Impact Assessment or other form of options/project management appraisal that achieves the same objective.

In progressing this particular proposal, an Impact Assessment has been prepared which has been circulated separately to Cabinet Members and also is available alongside this Report on the Council's website at: <https://new.devon.gov.uk/impact/>, which Members will need to consider for the purposes of this item.

The Impact Assessment will be updated during the regular reviews of these documents or when changes are made to the documents which impact on equalities issues.

10. Legal Considerations

The Highways Infrastructure Asset Management framework of documents have been developed to ensure the Council continues to meet its statutory obligations as the Highway Authority and the relevant highway legislation including the Highways Act 1980 and the Traffic Management Act 2004.

11. Risk Management Considerations

Successful implementation of the Devon Asset Management Framework requires an understanding of the impact and consequences of strategic risks. Analysing risks provides information on the effect events will have on the desired performance of an asset.

A risk register has been developed to evaluate high level strategic risks and is linked as a supporting document to section 7 of the Highways Infrastructure Asset Management Plan. It is intended that the register will be regularly reviewed with particular regard to managing and responding to threats and agreeing mitigation measures with a view to reducing the impact of the risks over time.

12. Options/Alternatives

Keeping the existing Highway Asset Policy, Highway Asset Strategy and Highway Asset Plan would jeopardize the Council's Incentive Funding self-assessment which would have the adverse effect of reducing the amount of DfT grant funding available for 2017/18 and for future years.

13. Reasons for Recommendation/Conclusion

The Highways Infrastructure Asset Management documents have been revised to reflect the latest industry guidance and national code of practice. Adopting the revised plans will help enable the Council to maximise its grant funding allocations from government for highways maintenance and ensure the Council is managing its highway asset in an effective and efficient manner.

Enabling the Chief Officer for Highways, Infrastructure Development and Waste, in consultation with the Cabinet Member for Highways Management and Flood Prevention, to make minor amendments to the documents will allow for the flexibility needed to ensure it can continue to develop. The framework of documents have been developed as living documents recognising the asset management journey the Council is on and the need to continue to develop the plan as well as to adapt to changes in legislation and guidance.

David Whitton
Chief Officer for Highways, Infrastructure Development and Waste

Electoral Divisions: All

Cabinet Member for Highway Management and Flood Prevention: Councillor Stuart Hughes

Local Government Act 1972: List of Background Papers

Contact for enquiries: Joe Deasy

Room No: Lucombe House, County Hall, Exeter. EX2 4QD

Tel No: 01392 383000

Background Paper	Date	File Ref.
Impact Assessment	October 2016	https://new.devon.gov.uk/impact/published/

List of Annexes:

Annex 1: Highway Infrastructure Asset Management Policy

Annex 2: Highway Infrastructure Asset Management Strategy

Annex 3: Highway Infrastructure Asset Management Plan

Annex 4: Place Scrutiny Highway Asset Management Plan Spotlight Review

Annex 5: Asset Levels of Service

Annex 6: Key Performance Indicators

st201016cab Highway Infrastructure Asset Management Policy Strategy and Plan
sc 04 281016

Highway Infrastructure Asset Management Policy

Purpose of this Policy: This policy explains Devon County Council’s approach to meeting our objective to maintain the highway network in Devon as required by the Highways Act 1980.

Scope of this Policy: This policy applies to all highway infrastructure and highway assets which are managed and maintained by Devon County Council.

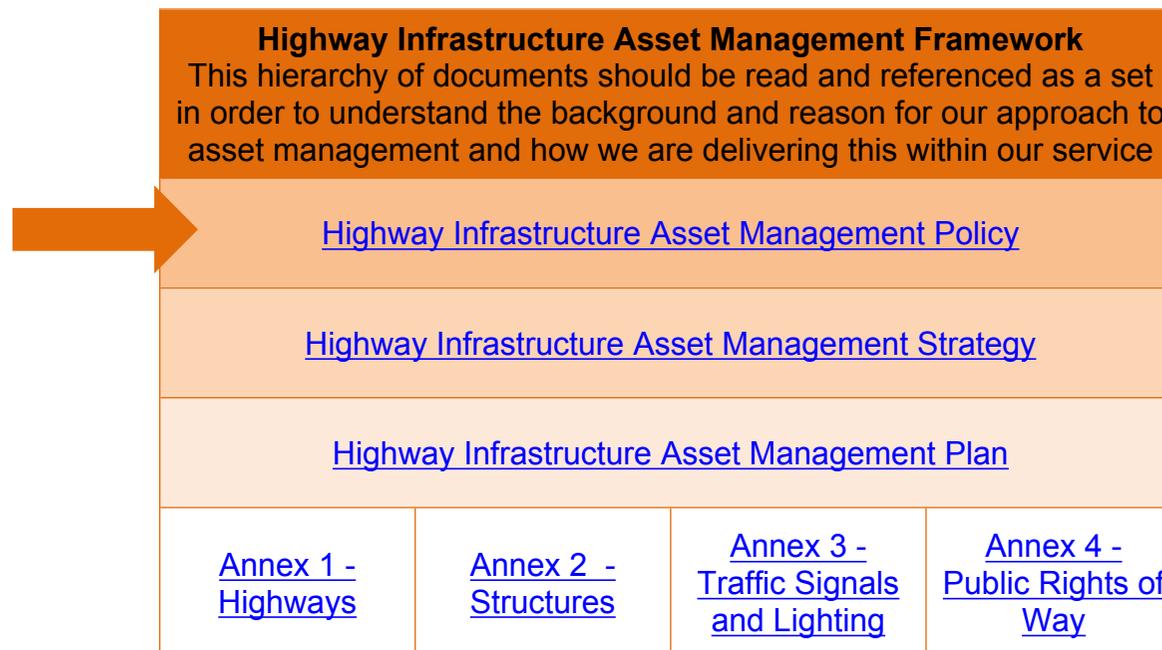
Note: Motorways and trunk roads are maintained by [Highways England](#)

What are highway assets? The highway infrastructure comprises the network of roads, bridges, pavements, cycle ways and public rights of way, together with street lights, traffic signals, bollards and signs, drainage systems and retaining walls. Together these are the highway assets.

We have:

- 7,700 miles of roads, the longest highway network in the country.
- 3,500 bridges
- 3,000 miles of public rights of way
- 2,000 retaining walls

Together these assets have a gross replacement value in excess of £12 billion. It is therefore essential that we maintain this valuable asset as effectively as we can with the resources we have.



Policy Statement

Devon County Council's vision is for Devon to be a safe and healthy place to live; a place where people can live their lives well. To meet this vision, it is essential to have a well-managed and maintained highway network. An effective asset management regime is one of the key components to enable this.

Through our Asset Management framework we aim to provide a highway network which supports the Council's vision and is:

- **Safe** and serviceable for people to use
- **Connected** - enabling access to and from communities for people, goods and services
- **Healthy** - supporting and promoting active and healthy lifestyles
- **Prosperous** - contributing to wider economic growth
- **Resilient** - making effective and efficient use of our local resources promoting sustainable communities
- **Sustainable** - Is maintained appropriately to retain its value and condition and contributes to wider environmental management

To do this we will:

- Regularly collect and maintain good quality asset condition survey data to inform Highway Infrastructure Asset Programme Development.
- Take a long-term view using a systematic approach based on defined levels of service for each asset
- Consider the whole life costs of maintaining an asset; we will look at what will provide best return on the money we spend in the long term, rather than a 'worst-first' short term maintenance treatment
- Understand the lifecycle of each asset and use this knowledge to plan when is the best time to do maintenance to keep the asset in a safe and serviceable condition and when it is time to replace it with new..
- Measure and review Highway Infrastructure Asset Management Plan performance indicators to influence spending on different assets.
- Develop maintenance programmes using asset condition data as the starting point and utilising local intelligence where appropriate
- Present a Maintenance Programme annually to Cabinet for investment decision making approval.



The approach is explained further in our Highway Infrastructure Asset Management Strategy and in our detailed Highway Infrastructure Asset Management Plan.

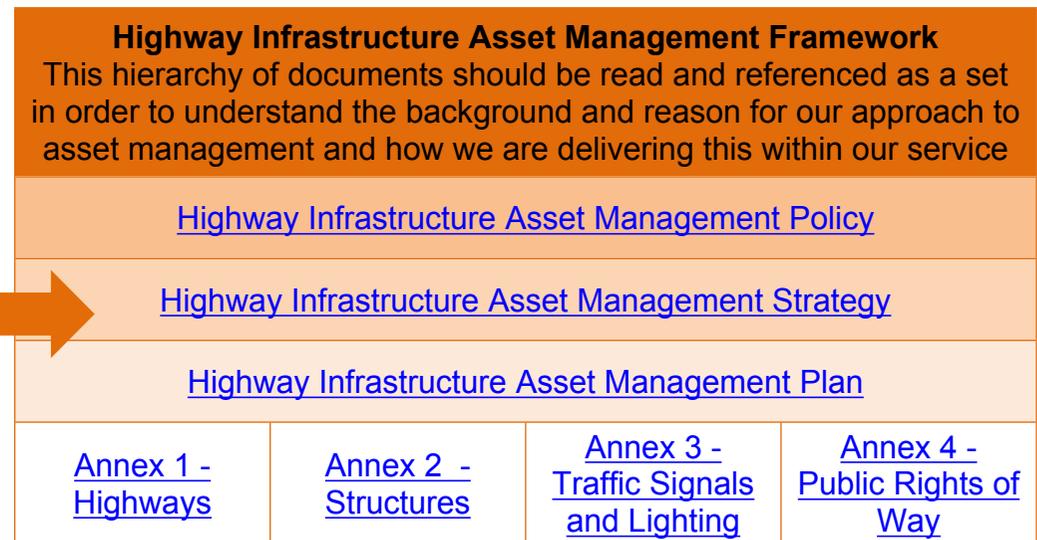
Highway Infrastructure Asset Management Strategy

This strategy has been developed to explain the framework we will use to manage the highway network as described in our Highway Infrastructure Asset Management Policy. With a gross value in excess of £12 billion, the highway network maintained and managed by Devon County Council is our County's most valuable and important public asset.

The management of such a valuable and vital asset needs to be undertaken in a systematic manner, which is set out in this strategy.

Asset management promotes a business-like way to highway maintenance. It makes better use of limited resources and delivers efficient and effective highway maintenance. We will take a long term approach to the maintenance of all highway infrastructure assets which considers the cost and anticipated performance of the maintenance work we do.

Devon has been developing and implementing asset management principles for the management of the highway infrastructure over a number of years. This strategy is developed from that experience but also draws on current industry best practice.



Developing our asset strategy

We have based our policy on national guidance and best practice developed by the [Highways Maintenance Efficiency Programme](#) and our service strategy to drive efficiency in delivery of our services, manage demand and mobilise communities.

Consultation on this approach: In creating this policy we have taken account of the feedback from citizens contained in:

- the National Highways and Transportation public perception survey
- consultation on our Local Transport Plan
- feedback within the consultation on the Better Together Strategic Plan
- the County Council's tough choices consultation.

The Council's Place Scrutiny has been consulted and input into the development of the documents. The Cabinet Member for Highway Management and Flood Prevention has been consulted and supports the approach.

During the life of this policy we will listen to citizens to check how well the approach is working and the impact it is having on individuals, communities and businesses. Full details on how we will do this are set out in our [Communication Strategy](#) document.

The purpose of this Strategy is to provide a high level document which links the Highways Infrastructure Asset Management Plan, a detailed document with many individual plans and policies embedded in it, with the Council's vision and aims. The following diagram shows how Highways Infrastructure Asset Management Strategy is linked to the Council's Vision, our Highways business plan as well as highways legislation and national and local guidance.

The maintenance backlog: Our asset modelling work suggests that across all highway assets (carriageway, footways, street lighting, bridges, drainage system, etc.....) we should be investing over £55m per year to keep up with annual deterioration and maintain the assets in their current condition.

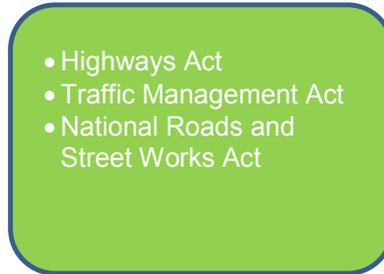
We also estimate that to fix the most deteriorated roads requiring maintenance now it would cost over £167m and that we should be investing approximately £38m per year just to maintain them in a steady state. Our capital grant allocation for roads from government was £29m for the 2016/17 year.

Every year that we are unable to spend what we need means that highway network condition will deteriorate. This will be particularly noticeable on our minor roads.

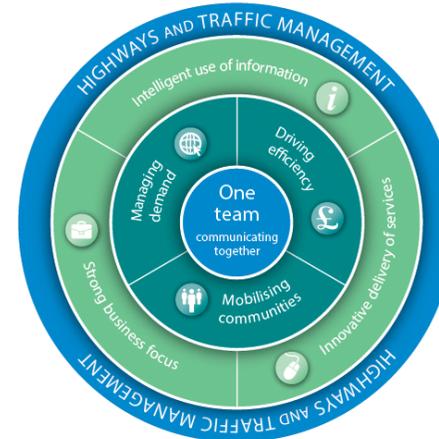
It is therefore essential that we target the money we do have to deliver the most effective maintenance of each asset in the longer-term.



Council Vision



Legislation

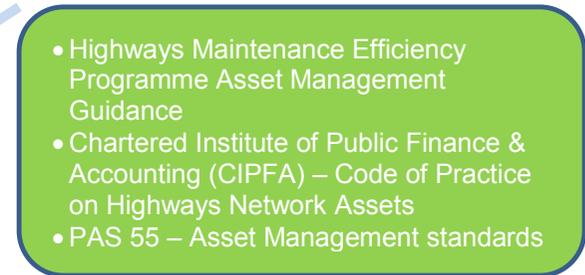


Highways and Traffic Management Business Plan

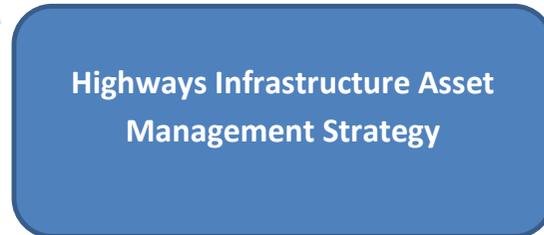
National codes of practice



Asset Management Guidance



Local guidance



Our Highway Infrastructure Asset Management Framework:

This framework aligns with our 2015-21 business plan model and focusses on the way we work together, with the aim of delivering the best we can with the resources we have.

This strategy, and supporting plan, highlight that whilst we are one large multi-disciplined and diverse team, we are increasingly working as one integrated team to deliver our strategic aims.

Our business plan has a strong and consistent message on how we will approach delivery of sustainable and resilient services for the next six years in support of [Better Together, Devon's Strategic Plan](#).

Highways and Traffic Management Business Model 2015-21



“Managing our highways is now a **critical challenge** to local councils, who have to manage an ageing network with high public expectations for **safe, reliable** and comfortable travel. At the same time, **resources are reducing**, with less funding available, increased pressure for other local government services and skills shortages.” (*Highways – Maintaining a Vital Asset, Highways Maintenance Efficiency Programme*)

Our approach to highway infrastructure asset management is aligned to our three clear business plan objectives to:



Drive efficient delivery of the service



Mobilise community support



Manage demand for highway services.

Our three business plan guiding principles which underpin how we think and what we do are also reflected in our approach to highway infrastructure asset management:



Intelligent use of information



Innovative delivery of services



Strong business focus

Our thinking will challenge the current ways of working and influence how we design and adapt our systems and processes to deliver our service through to 2021.

We will take account of:

- Devon County Council's objectives and vision for Devon
- The needs and aspirations of people using the highway network
- The maintenance needs of the different assets that make up the highway network
- The financial resources we can access now and in future

We will balance these factors against the:

- risks of failure of the asset, such as severe deterioration due to lack of investment and the destructive potential of severe weather
- future costs and availability of financial resources to invest in maintenance of the highway assets.

Benefits of this approach: This approach will enable us to:

- Have a clear understanding of the extent and condition of the highway infrastructure and assets
- Have a clear method which links our goals, aspirations and objectives with the defined level of service
- An improved ability to:
 - predict the levels of funding required to deliver the desired levels of service
 - to understand the impact of funding constraints and reductions and target the money we have to best effect
 - understand risks to the effective maintenance to the highway asset and how to try to reduce these risks
 - create programmes of maintenance further into the future to improve planning, reduce impact on citizens and achieve efficiencies when delivering the work
- Explain clearly to citizens why we do the work we do. For instance, surface dressing is a highly effective and economical way to extend the life of a section of road. However, it needs to be done while the road is still in a reasonably good condition. Often people see this work being done and do not understand why we are 'fixing a good road' when there is a 'worse road' just around the corner.

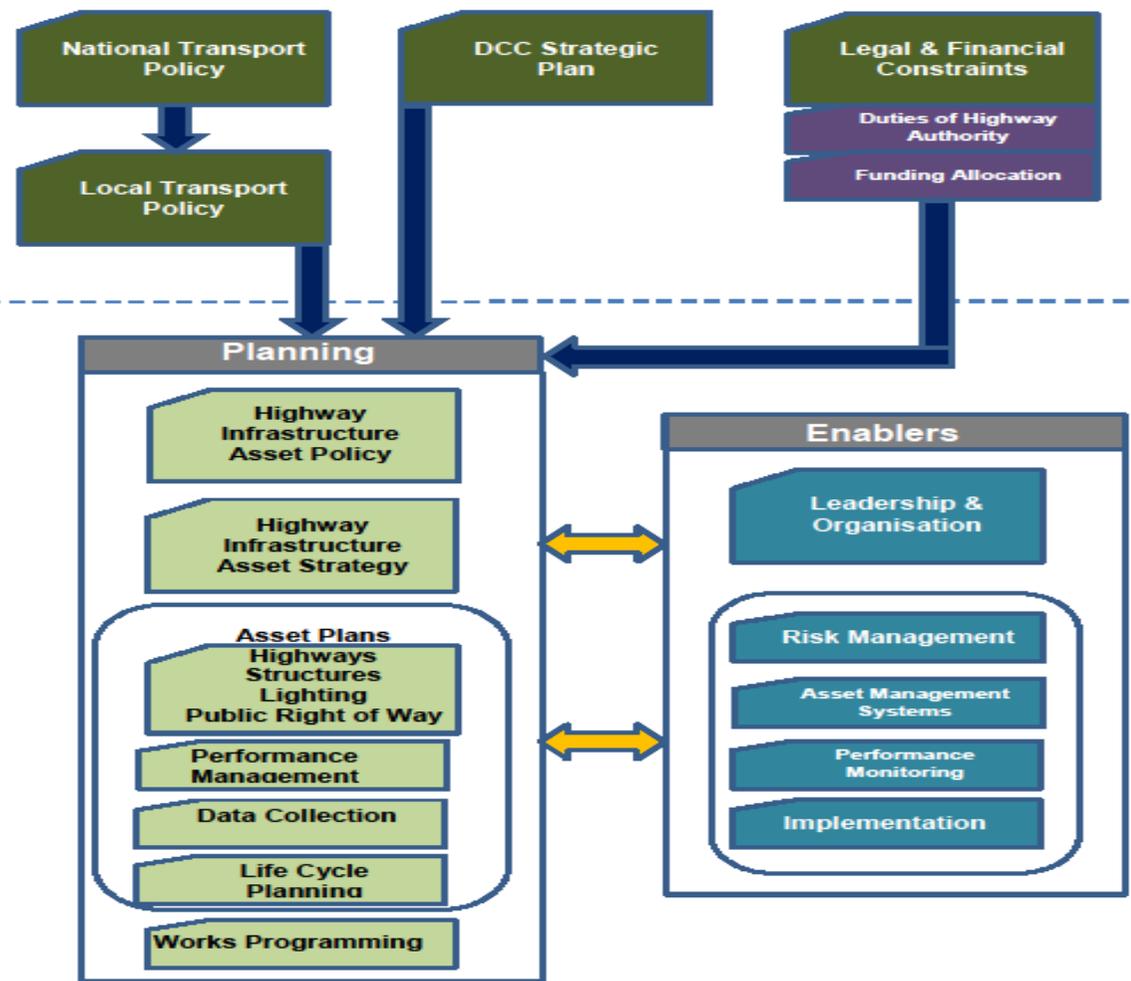
The effective management of these diverse and complex issues can only be adequately addressed within a strategic framework that balances the demands and aspirations with the reality of the current financial situation.

The responsibility for the delivery of the Highway Asset Management framework sits with the Asset Management Group within the Highway and Traffic Management Service, The aim of this group is to enable the successful adoption and implementation of this strategy so that our service is delivered effectively and efficiently and the highway assets are maintained and managed to support the current and future needs of Devon's citizens.

The Highway Asset Management Framework diagram shows the core elements of our approach which are explained in the next section.

DCC Highway Asset Management Framework

Context



Our core asset management planning tools

A robust asset management framework is delivered through a core set of planning tools.



Inventory and Data Management

Intelligent use of information requires us to develop and maintain our highway asset inventory, so that we know what assets we have, where they are and what condition they are in. This is important in order to have an overall view of the extent and condition of the highway network and enable a consistent management approach to be applied.

Our highway asset inventory is well developed with major asset components recorded in an integrated software system. Where there are gaps in the inventory, most notably drainage infrastructure, work is progressing to address this.

Currently these inventory systems include the following asset groups:

- Highways and highway drainage systems
- Structures
- Street lighting, Signals and Traffic Management Systems
- Public Rights of Way.

Our comprehensive programme of inspections and surveys of the highway assets, which are informed by national guidance and statutory requirements and tailored to asset groups, provides us with good quality data that enables effective risk management and decision making. These inspection and survey regimes are documented in the relevant asset plans for each asset types.



Levels of Service

By Levels of Service we mean a description of the standard of service that is provided or required. These levels link directly back to our corporate aims and objectives, departmental and service plans and other strategy documents such as [Better Together, Devon's Strategic Plan](#).

Defining levels of service enables us to meet our objective to manage demand, having considered our current and future capacity to deliver with the resources available.

In addition, levels of service must take note of statutory duties and the management and mitigation of risk both to the service user and the authority.

Levels of service can therefore be described in broad terms, which are then described in more detail to give concise standards and targets. The standards and targets can then be measured and used to inform the decision making processes.

Drawing on our key corporate objectives to promote the wellbeing of the citizens and communities of Devon, and enable people to live their lives well, we have set out our high level aims for levels of service for the highway asset in the Highway Infrastructure Asset Management Policy as follows:

- **Safe** and serviceable for people to use
- **Connected** - enabling access to and from communities for people, goods and services
- **Healthy** - supporting and promoting active and healthy lifestyles
- **Prosperous** - contributing to wider economic growth
- **Resilient** - making effective and efficient use of our local resources promoting sustainable communities
- **Sustainable** - Is maintained appropriately to retain its value and condition and contributes to wider environmental management

These strategic levels of service are then focussed on specific aspects of the infrastructure as part of operational service plans.



Performance

A strong business focus requires us to monitor and manage performance. By managing performance of the asset management approach we will:

- Provide a systematic approach to measure our progress in the implementation of the asset management strategy
- Set levels of service and performance targets to enable auditing and monitoring of the delivery of the asset management strategy.
- Demonstrate how funding is being used effectively to meet the levels of service and performance targets
- Provide the link between corporate vision, asset management strategy, levels of service and maintenance operations
- Support effective communications with citizens by demonstrating how we are performing against their expectations.
- Demonstrate any shortfalls in funding.

The current and future demand on the service will influence the degree of performance that can be achieved. Factors such as customer service provision, customer perception, asset condition and funding provision will all contribute to this. Demand is likely to change with external influences such as weather and seasonal variations. Future demand will be influenced by population and traffic growth and an increasing older population. The report '*Service Resilience in a Changing Climate – Highway Management Devon County Council*', identifies the impact climate change will have during the next century.



Lifecycle Planning, budget projection and valuation

Lifecycle planning is a technique which enables us to think about an asset in terms of its current and future performance. It links the desired level of service, the current condition, future maintenance needs and future funding. This process aligns with our objective to deliver our services efficiently.

Some assets have a limited lifespan and will eventually need to be replaced. For these assets we can use lifecycle planning to chart the journey from cradle to grave, so that we know when replacement will be necessary and the costs to maintain the asset effectively during its expected lifespan.

Some assets can have a longer lifespan provided they are maintained appropriately. For these we can use lifecycle planning to chart the journey from creation through phases of maintenance, refurbishment and back to an “as new” condition, when the cycle is repeated.

Lifecycle planning enables us to:

- Develop plans to invest resources to deliver an agreed level of service performance
- Predict the impact particular levels of funding will have on the service we can deliver.

Lifecycle planning tools have been developed which enable the development of work programmes which make best use of the available funding in meeting long-term objectives, mitigating the risk of failure by allocating funds to where they will be most beneficial. However, allocating funding in this way moves away from a more traditional “worst first” approach and targets work programmes at those parts of the highway asset which present the greatest risk and where early treatment can achieve the most beneficial whole of life cost.

This lifecycle planning approach enables:

- the delivery of a service which is as effective as possible
- allows a clear and logical allocation of resources to those areas which will contribute most to the overall goals and objectives of the Council
- allows an assessment to be made of the residual risk.

As well as the benefits outlined above, comprehensive lifecycle planning allows resources to be targeted to the preservation of the historic investment that has been made in our infrastructure. This is particularly pressing with the imminent introduction of the Whole of Government Accounts (WGA) as set out in the CIPFA Code for Transport Infrastructure Assets.



Works Programmes

The delivery of works programmes are the outcome from the asset management strategy.

The process to develop a works programme comprises the identification, prioritisation, optimisation, programming and delivery of individual schemes for the various asset types. It should meet the annual budgets that have been developed by the authority, ideally with the support of lifecycle planning process described above.



Risk Management and future

The Asset Management approach can be seen as an exercise in managing risk. The need to manage risk is a catalyst for us to be innovative in the way we deliver our services.

The key aspect of our approach is that by grouping assets by type into a hierarchy and then reflecting their importance in service delivery terms relative to one another it enables us to quantify the risk.

This risk based principle flows through the whole of the Asset Management Framework and is fundamental to deciding the levels of service, the scope, type and frequency of inspections, the allocation of budgets and the development of work programmes.

The Asset Management Group has developed a clear hierarchy for its core asset types. When used with robust lifecycle planning and deterioration models, the asset management approach enables an organisation to:

- respond to challenges as they occur
- make accurate predictions of funding required to sustain levels of service
- to quantify the risk to the organisation in terms of service delivery, third party liability and the loss of value and integrity of the assets.

Asset Management is a way of operating which seeks to incorporate all aspects of management activity into one overarching, inter-related system so that conflicting demands, goals, objectives, delivery targets and statutory obligations can be balanced and residual risk identified.

Our strategy for individual asset groups

As part of the asset management framework, and in accordance with other national guidance, our highway asset has been divided into asset groups. Each group is then broken down into asset components and activities. The asset groups and components are described below.

A key function of the asset management process is to understand the spending needs of each asset group, component and activity against the required levels of performance, aims and objectives. This means understanding funding needs to meet:

- Performance Targets.
- Department of Transport objectives;
- Delivery Planning

It is important within this process that we understand and consider:

- the influence of budget decisions on customer satisfaction and delivery of the corporate priorities
- the impact that investing on one asset component may have on the overall performance of other asset components, as well as the whole asset

Therefore we are developing a Needs Based Budgeting approach.

Our Asset groups and components: Highway infrastructure assets have been divided into groups and components as listed in Table 1.

Table 1: Highway Asset Groups	
Group	Components
Carriageways	Road surfaces
Footways and Cycle ways	Footways surfaces
Structures	Bridges, retaining walls, culverts etc.
Drainage	Piped systems, gullies, grips buddleholes and easements
Safety Fencing	Vehicle restraint systems, guard rails, fences
Highway Lighting	Columns, illuminated signs, etc
Public Rights of Way	Footpaths, bridleways, byways, signs, styles gates etc.
Traffic Management systems	Signals and pedestrian crossings
Street Furniture	Signs and other street furniture
Land	Highway verge

Evaluation and Review

We recognise that we are on an asset management journey and we will aim to continually develop our Strategy and Plan. This strategy will be reviewed annually and minor changes and updates will be made to the framework documents and subsidiary documents on an annual basis to reflect changes in funding and service levels. We will aim to review and update the entire framework on a five year cycle.

An Equalities Impact Assessment has been completed covering the Highways Infrastructure Asset Management framework of documents. The assessment will be updated during the regular reviews of these documents or when changes are made to the documents which impact on equalities issues.

Prepared by:

Joe Deasy

Asset Management Group Manager

Highways and Traffic Management Service

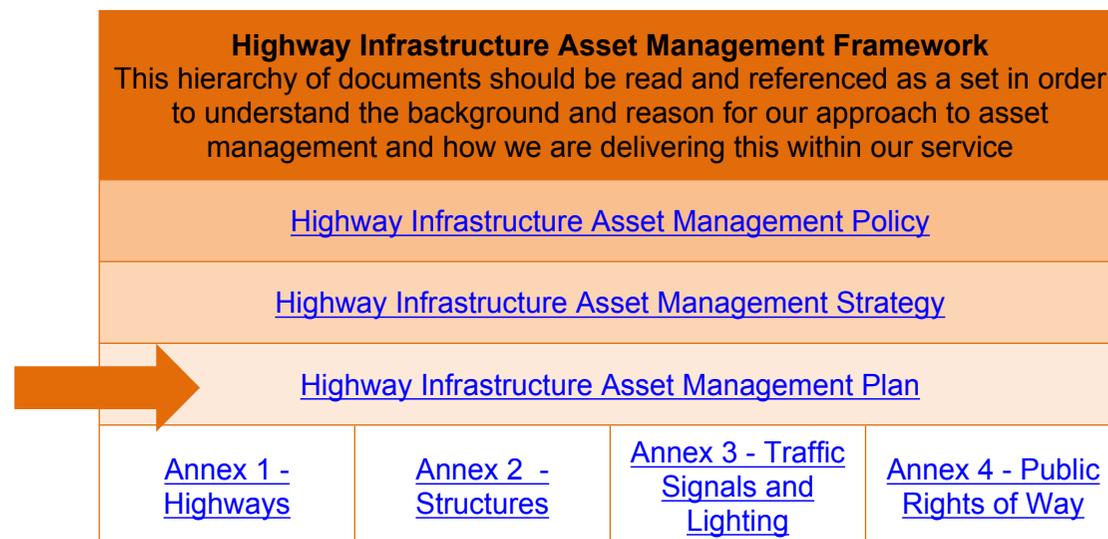
24th October 2016

If you would like this information in another format please contact:

Highway Infrastructure Asset Management Plan

Contents

- Foreword
- 1 Purpose and Scope
- 2 Value of our highway assets
- 3 Inventory and Data
- 4 Levels of Service
- 5 Lifecycle Plans
- 6 Works Programme
- 7 Managing Risks
- 8 Evaluation and Review
- 9 Annexes
 - a. Annex 1 – Highways
 - b. Annex 2 – Structures
 - c. Annex 3 – Traffic Signals and Lighting
 - d. Annex 4 – Public Rights of Way



Highway Infrastructure Asset Management Plan

Foreword

The highway network is the most valuable asset that the County Council manages and maintains. It is key to enable safe and resilient links for people to connect with their communities, to lead to healthy, prosperous lives; to get to work, to get to education, to get to health services, to participate in exercise and leisure activities, to bring people to Devon to enjoy our beautiful county, to bring goods in and connect Devon's people and produce to the rest of the world.

Highway asset management is a way of running the 'business' of operating a highway network. This document, the Highways Infrastructure Asset Management Plan (HIAMP), identifies highway assets and develops a framework to enhance existing good practice and improve the effectiveness of decision making. The key driver is a long term or 'whole-life' approach to decision making, choosing the right time in the assets' life to repair or replace in order to get best value and performance.

Importantly an asset management approach also helps us to understand the value of the highway asset and the costs linked to maintaining it, to limit further deterioration and contain the backlog of required maintenance. Like all authorities, Devon is facing significant budget pressures and it is critical that there is a clear understanding of the links between levels of service delivery and funding. Yet typically, discussion at budget time is often about funding new projects, with limited consideration given to looking after what we already own. Providing the highest levels of service against shrinking budgets is a challenge and it is hoped that this document will provide a framework for moving forward.



Photo Credit: [Julian Roskilly](#)

Our asset strategy for highways clearly links to the Council's Corporate Strategy and has been developed to take account of the various national codes of practice and the Highways Maintenance Efficiency Programme (HMEP) asset management guidance. Where possible we have adopted industry or emerging best practice from others including through our collaborative work with the South West Highways Alliance.

The document has been developed as a living document as we recognise the asset management journey we are on and the need to continue to develop the plan as well as to adapt to changes in legislation and guidance. We have been recognised by the Department for Transport (DfT) for developing new ways of working to help us tackle the challenges we face including our innovative approach to encouraging localism and inspiring communities to get involved in helping to maintain their local highway assets. Formal approval of this document by the Council indicates approval of the approach and the use of the HIAMP as a tool for managing our highway assets.

This document together with the asset policy statement and the asset strategy sets the framework for delivering highway maintenance in Devon in the medium term to long term. Together they will ensure the aims set out in the Corporate Strategy for Devon to be a safe and healthy place to live will be achieved and that people who reside in, or visit, the County benefit from an effective, safe and sustainable highways network.



David Whitton
**Chief Officer for Highways, Infrastructure Development
and Waste**



Councillor Stuart Hughes
**Cabinet Member for Highway
Management & Flood Prevention**

1 Purpose and scope of the plan

Purpose:

The purpose of the Highway Infrastructure Asset Management Plan is to:

1. Identify and set out the maintenance requirements for the highway network in a clear and consistent nationally recognised framework.
2. Enable improved information and analysis of the maintenance of highway assets so that services can be delivered more efficiently
3. Enable maintenance budgets to be used to effectively to reduce deterioration and maintain a safe network that provides the optimum service with available resources.
4. Be a guidance document for the service in managing the highway network effectively
5. Enable us to have a planned approach to future maintenance challenges
6. Identify and access potential funding streams for addressing maintenance issues
7. Understand the implications and risks to the network from reduced funding by asset group
8. Explain how we manage highway assets and how we propose to face the challenges of managing these assets in the future.

Scope:

The HIAMP includes all Devon County Council maintained highway assets and their components. We focus the greatest detail on the assets of highest value, such as roads, bridges and the street lighting infrastructure. The groups of assets within the scope of the HIAMP are:

- Highway Network (carriageways, footways and cycleways)
- Drainage
- Street Lighting
- Public Rights of Way
- Structures (bridges, retaining walls)
- Traffic Management Systems
- Street Furniture

Our highway infrastructure assets:

As the Local Highway Authority, Devon County Council has the duty to maintain a road network of 7,710 miles comprising:

- 582 miles of principal (A) roads
- 396 miles of non-principal (B) roads
- 2,706 miles of non-principal (C) roads
- 4,026 miles of unclassified roads
- over 1,800 miles of footways
- over 3,500 bridges
- 1,579 retaining walls
- highway embankments
- road restraint systems
- traffic signal installations
- cycle ways
- over 80,000 street lights and illuminated signs and bollards

Key elements of the plan

The HIAMP is an evolving document that will shape long term management and service delivery. This document follows a review of the Highway Asset Management Plan approved in March 2013, which focussed primarily on the highway network assets. Since the approval of the original plan, national guidance has been produced by the Highway Efficiency Maintenance Programme (HMEP) which recommends having an integrated plan incorporating all highway infrastructure assets. We have developed this HIAMP document in response to the HMEP recommendations.

In developing our HIAMP we are drawing on the specific guidance published by HMEP in 2013, “Highway Infrastructure Asset Management Guidance” which was part of the DfT highways efficiency programme. To achieve the appropriate level of benefit from asset management we are implementing the 14 recommendations from that guidance as follows:

1. **Asset Management Framework**- An [Asset Management Framework](#) has been developed and endorsed by senior decision makers. All activities outlined in the Framework are documented in the supporting Policy, Strategy, Plan and Appendices.
2. **Communications** – We have set out our [strategy for communicating](#) our asset management approach to all relevant people and have an [action plan](#) with details of ongoing activities.
3. **Asset Management Policy and Strategy** – We have developed and published our asset management policy and a strategy which aligns with the corporate vision and demonstrates the contribution asset management makes towards achieving that vision.

Our Performance Management Framework:

Looks for answers to these Key Business Questions:

1. How well are we controlling our budget?
2. How well managed is our service?
3. How well are we communicating with citizens?
4. Are we doing what we say we will do?
5. How effectively are we managing the highway asset infrastructure?
6. How safe is it to use our network?
7. How well are we managing activities on the highway network?
8. How well are our contractors delivering the work?
9. How have we enabled and supported communities?
10. How innovative and collaborative are we?

4. **Performance Management Framework** - A performance management framework for the Highways and Traffic Management Service is being developed. The framework aligns with corporate and service objectives and the asset management strategy. The [Performance Management Framework](#) focusses on answering 10 key business questions and monitoring our performance levels in terms of excellent, good, fair or poor. Within the framework is a specific set of KPIs for [monitoring the HIAMP](#).
5. **Asset Data Management** – Our highway asset data is held in our Integrated Highways Management System (IHMS) currently provided by WDM and known as iWays. This system enables us to collect, store, manage and report our key asset data for highway network, structures and street lighting. Records of inspection, reactive maintenance, customer contact and collisions are recorded on this system as well as data from road condition surveys. Our approach to data management is outlined in the Inventory and Data chapter ([Link to 4](#)) and in our [Data Management Strategy](#).
6. **Lifecycle Plans** - Fundamental to asset management is a sound understanding of how an asset is likely to behave and deteriorate throughout its service. We use [Lifecycle Planning](#) to decide which maintenance activities are required within what timescales to maintain the asset and ensure it provides the level of service that is required. Lifecycle planning also helps us to support investment decisions and substantiate the need for appropriate and sustainable long term investment. We are adopting a systematic approach to managing the life of an asset to minimise the whole life costs and to enable us to produce lifecycle plans. These life cycle plans form a long term strategy for managing our assets or group of assets, with the aim of providing the required performance while minimising whole life costs.
7. **Works Programme** – We are working towards developing prioritised forward works programme for a rolling period of three to five years. In [Chapter 7 Works Programme](#) we detail how programmes of work are developed. Our current highway network (roads, footways, drainage) [Works Programme](#) is available on our maintaining roads webpage.
8. **Leadership and Commitment** – Our Senior decision makers have demonstrated leadership and commitment to enable the implementation of asset management by approving the HIAM Policy and Strategy and the contents of the HIAM Plan. Additionally the commitment to the principles of asset management has been demonstrated in our [Business Plan for 2015-21](#), and through our communication to stakeholders as detailed in our [Asset Communication Strategy](#) and [Asset Communication Action Plan](#). The [roles and responsibilities](#) appendix sets out which groups, and roles within groups, are responsible for aspects of the HIAMP, both in terms of specific groups of asset, such as structures or lighting, and enabling functions such as performance management and communication.

9. **Making the Case for Asset Management** - The case for implementing the Asset Management Framework has been made by clearly explaining to Cabinet, the Cabinet Member for Highways and other stakeholders, the funding required and the wider benefits to be achieved. This is demonstrated in Annual Reports to Cabinet by the Head of Highways, Capital Development and Waste at the commencement of the financial year: [County Road Highway Maintenance Capital Budget: Progression 2015/16 Schemes and the 2016/17 Programmes](#) and the [County Road Highway Maintenance Revenue Budget and On-street Parking Account 2016/17](#).
10. **Competencies and Training** – We are developing our competency criteria for all roles within the service as part of our [Team Development Plan](#), and in particular for those associated with the delivery of the HIAMP. Competency checks are done by managers during our standard performance management processes with staff on a regular basis. Where training is identified, a programme of support is put in place. Within the Highway Asset Management Group, we have identified that the Highway Asset Senior Officer role should attain the Institute of Asset Management’s Certificate qualification.
11. **Risk management** – We maintain a [risk register](#) which identifies early warning indicators, assesses the risk and identifies mitigation. Section 8 [Risk Management](#) covers how we assess and measure risks and details the key risks to the highway assets.
12. **Asset Management Systems** – Our principle system for asset management are the Integrated Highway Management System (IHMS), currently provided by WDM iWays. We also have a Public Information Portal (PIP) available via our website for the public to report concerns. The PIP functionality is currently being further developed to enable:
- improved live information on the status of inventory items such as if a grit bin has been filled or when a gully was last cleaned
 - improved ability for the public to report issues with asset inventory items.
13. **Performance Monitoring** – The performance of the Asset Management Framework will be monitored and reported against [Levels of Service](#) and a Performance Management Framework of 10 key business questions as described in point 4 above. This will be reported:
- Strategic level - annually to Elected Members
 - Strategic and Tactical level - quarterly to the Senior Leadership Team

- Operational level – monthly to managers responsible for delivery of each asset group, or responsible for an associated enabler, such as communication

14. **Benchmarking** – We undertake local and national benchmarking to compare our performance of the Asset Management Framework and to share information that supports continuous improvement through membership of the South West Highways Alliance and the affiliated Benchmarking Club. We are also active members of local authority and national groups for various asset groups.



Photo credit: Julian Roskilly

Why Asset Management

Although asset management for highways assets has been promoted for many years, many struggle with the concept of transferring asset management principles to the management of roads. In particular council members often see the road as a liability rather than an asset, consuming resources and resulting in customer dissatisfaction.

One of the keys to improving value for money in highways maintenance is knowing and understanding when and how to intervene. By considering an asset over a whole life cycle, it is possible to select the best time to intervene. This will maintain road condition and preserve the asset in an economically viable way.

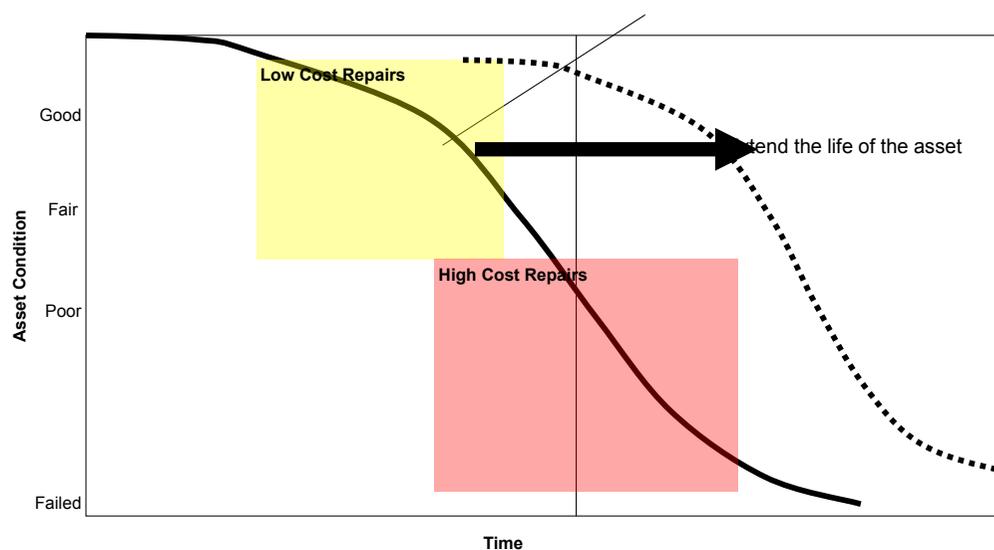
Typically there are two options for prioritising spending on road maintenance:

- Worst first – focusing maintenance on the stretches of road in the poorest condition. This is a high cost approach, which meets short term public satisfaction but is not forward thinking and results in fewer roads being treated.
- Whole-life cost – focusing maintenance to minimise the total maintenance costs over the lifetime of the asset. This strategy prioritises some funding for preventative works and recognises that some assets will remain unrepaired.

This graph illustrates the financial benefits of intervening at the right time in a roads life cycle. Roads deteriorate over time depending on the volumes of traffic they carry and the environmental conditions they are subject to (weathering).

A road can often be cheaply restored to ‘nearly new’ condition and its life extended by intervening at the right point in the life cycle. As roads deteriorate further more expensive interventions may be required to restore the road to nearly new condition. Allowing roads to deteriorate below the failure threshold therefore represents poor value for money.

Carriageway Asset Life Cycle



“You fixed the wrong road!”

One of the key aims of our asset strategy is to move towards a preventative approach to the maintenance of highway assets and prioritise roads and other highway assets that have not yet fallen into the failure range. Whilst carrying out maintenance on a road that doesn't look to be in need of repair may seem wasteful and unnecessary, this will often be the right choice and ultimately deliver the best value for the road user in the long-term.

Focusing on the worst roads first may not be the best approach to managing with less funding. Devon needs to be tougher in prioritising long-term demands over short-term demands, to minimise costs and deliver value for money over the long term particularly when we know that pressure on budgets is likely to continue for many years. If the County were to give a greater priority to worst-first which has the biggest immediate impact for road users it would over time, result in deterioration of a much greater share of the road network.

The Benefits of Asset Management

The adoption of asset management practices will make more efficient use of available resources, delivering value for money and providing a service that is aligned to its customers. This is demonstrated by:

- Alignment of the Council's objectives with delivery of the service;
- A comprehensive understanding of the asset and the associated liability;
- A programme of inspections and surveys to record current asset condition;
- Defined Levels of Service;
- Adoption of a lifecycle approach to the management of the asset;
- Explicit identification and management of risks;
- Decision making that is based on the relationship between the asset and the Council's Priorities and Objectives through Levels of Service;
- Demonstrating the consequences of funding decisions;
- Considering the current condition and priorities required to maintain the asset and the network.

Asset Management Framework

Asset Management is a rational process that links stakeholder expectations, Government transport policy and the Council’s Corporate Plans. It also considers operational and tactical management through organisational and business processes and systems which manage the flow of information. An additional benefit will be that it starts to link highway network needs with Value Management and Risk.

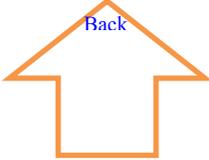
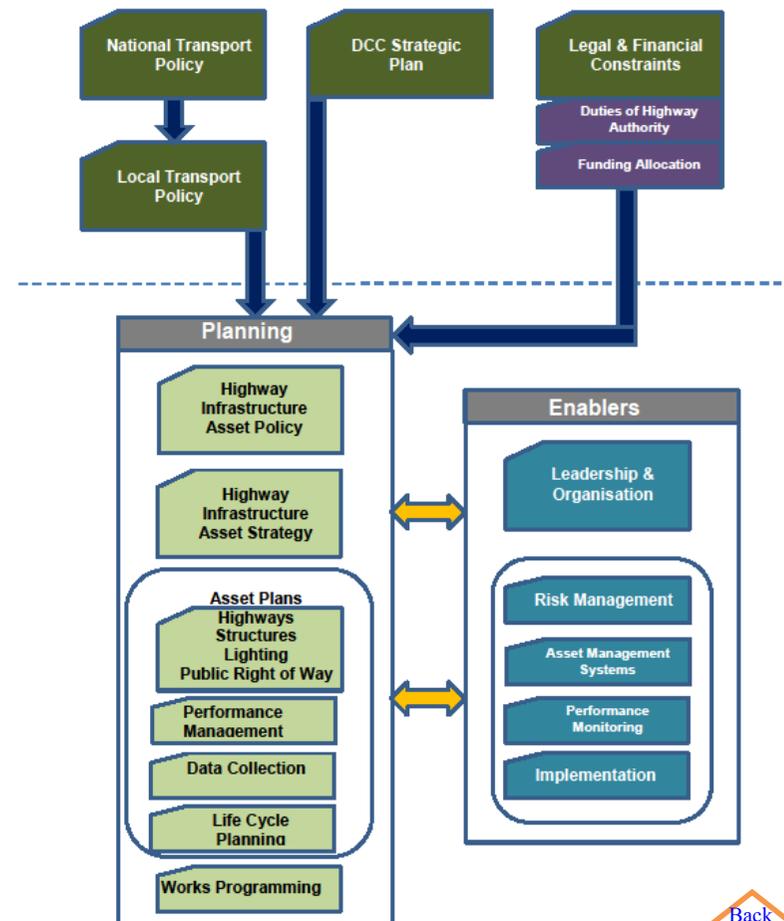
Devon’s Highway Asset Management Framework comprises the activities and processes that are necessary to develop, document, implement and continually improve asset management.

The framework is presented in three parts:

- Context – provides the structure and context within which the highways service is delivered.
- Planning – the key activities and processes and how they apply to managing the highway asset
- Enablers – support the implementation of asset management.

DCC Highway Asset Management Framework

Context



2 Value of our highway assets

Whole of Government Accounting (WGA) has been introduced for highways local government accounting. There is a phased introduction to this method, which is moving away from the historical cost method traditionally used to assess the value of local authority highways assets. Annual depreciation not only represents the annual consumption of service benefits but also provides a measure of what needs to be spent, on average, year on year to maintain the assets in a steady state.

The WGA method is based on the value of the replacement cost of assets owned and maintained by the highway authority. The figures required are the:

- Gross Replacement Cost (GRC) - based on the cost of constructing an equivalent new asset.
- Depreciated Replacement Cost (DRC) - the current cost of replacing an asset with its modern equivalent asset, less deductions for all physical deterioration and impairment.
- Depreciation - the cost of restoring the asset from its present condition to 'as new' - this is the difference between the GRC and DRC.
- Steady State – the annual expenditure required in order to maintain the network in its overall current condition

Estimates are calculated on the basis set out in the “CIPFA Code of Practice – Guidance to Support Asset Management, Financial Management and Reporting” (published March 2010).

The 2015/16 valuation illustrates that the cost of addressing the backlog of repairs to provide assets in 'as new condition' is just over £1.3 billion.

Devon County Council 2015/16 WGA submission

	GRC estimate (£'000)	Depreciation (£'000)	DRC estimate (£'000)
Carriageway	10,313,194	806,462	9,506,732
Footway & Cycle Tracks	420,792	105,854	314,938
Structures	1,238,318	324,599	913,719
Lighting	82,750	52,284	30,466
Traffic Management Systems	20,869	13,345	7,523
Street Furniture	90,510	58,011	32,499
Land	4,899,633		
Total	17,066,066		
Total Excluding Land	12,166,433	1,360,555	10,805,878

Our funding

Funding for Devon County Council's Highways and Traffic Management service is either a Capital or a Revenue allocation.

Capital expenditure reflects investment in an asset and is defined as “expenditure which adds to, and not merely maintains, the value of a fixed asset.” Highway works eligible for capital funding include activities that:

- extend the life of the asset, such as resurfacing schemes
- enable construction of improved infrastructure, including the acquisition of land, such as the South Devon Link Road
- replace an existing feature with an enhanced structure, such as major drainage improvements and the construction of new retaining walls.

The majority of capital funding comes to us as a direct grant from central government with the remainder allocated by County Council borrowing or from capital receipts, such as sale of land. The highways capital budget is set by adopting an asset based approach. This involves a systematic strategic review looking at:

- Highway condition data and other intelligence, such as customer feedback
- Spending requirements for each asset group, such as bridges, main road network, drainage, street lighting etc., are then determined.

Revenue expenditure covers day to day expenditure and income, including works which maintain, rather than increase, the value of a fixed asset. Some examples of revenue items are works involving repair of safety defects, minor drainage repairs, grass cutting and winter maintenance. It also includes the running costs of the service, such as staffing, premises costs and income received from licences etc.

Revenue funding is available via the community charge, business rates and funds provided by central government. Another source of revenue funding is the on-street parking account. Any surplus revenue generated from on-street parking after the operating and management costs have been accounted for can be spent on things like public transport provision, highway improvements and environmental highway maintenance work.

Highways revenue budgets have been through a rigorous ‘zero based’ budgeting review in recent years in order to drive out the required efficiencies from budgets that had previously been allocated on a historical basis. Where possible budgets are now based on need with the overall strategy focused on maintaining a prescribed level of service over the long term.

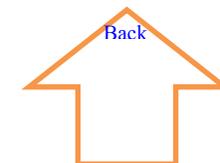
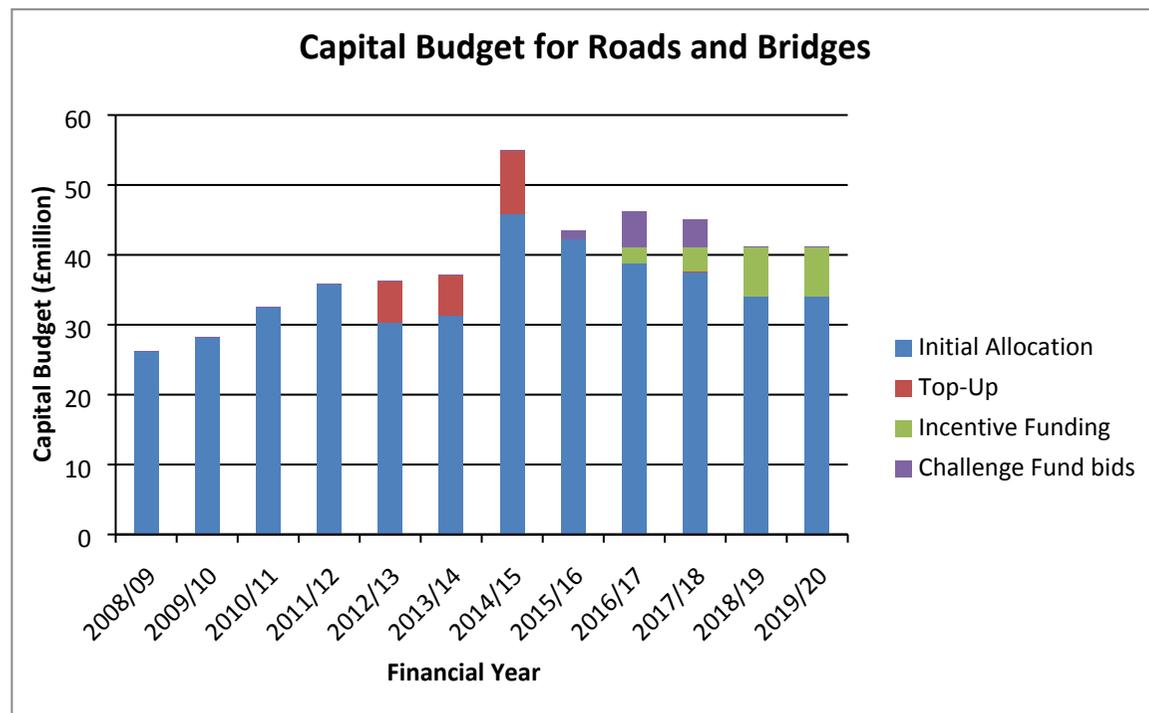
Asset Management Incentive Funding

In November 2014, the Department for Transport (DfT) announced a new formula for allocating Local Highways Maintenance funding allocations. The funding is now based on a Needs Formula, an Incentive Fund and a Challenge Fund. The approach enables better planning for local authorities with a six year allocation.

The Incentive Funding is awarded based on the completion of an annual self-assessment questionnaire which looks at how well the authority is delivering services and adopting an asset management approach. Authorities are scored in bands with level one authorities receiving less funding and level three authorities receiving their full funding allocation. During the first year of the programme (when no funding was at risk), Devon was found to be a band two authority. A detailed gap analysis was completed to ensure continued improvement and that by 2017/18 the authority will be assessed as band three and receives the full funding allocation. Our latest [Incentive Funding questionnaire](#) demonstrates the improvements Devon has made in implementing asset management into our highways service operations.

In 2016/17 Devon was successful in attracting £10.2m from the Challenge Fund specifically for a programme of LED street lighting aimed at reducing energy costs and carbon emissions.

In order to prepare for an anticipated further round of Challenge Fund bidding in late 2016 officers are developing an economic business case for investment in minor roads for additional expenditure on roads we wouldn't normally have funding for.



3 Inventory and Data

Data management is fundamental to the overall asset management process. In order to apply an asset management approach there are three types of data that are required:

- Inventory – details of the number, location, size, type, age and make up of each asset.
- Condition – measurement and rating of the condition of the asset.
- Use – details of how the assets are used.

These records will enable Devon to:

- Monitor and report on the condition of the highway network.
- Assess the expected life of assets or their components.
- Assess current levels of service and develop future levels of service.
- Assess current and future performance indicators.
- Model future maintenance options and identify future investment strategies.
- Develop long-term forward work programmes and associated budget requirements.
- Carry out valuation assessments of each of the assets and calculate depreciation.



Photo Credit: Julian Roskilly

Effective asset management is not just about the assets to be managed, it is about the systems and business processes used to manage those assets. As such there is a need to examine processes, storage and usage of the data.

Management Systems

Our highway asset data is held in our Integrated Highways Management System (IHMS) currently provided by WDM and known as iWays. This system enables us to collect, store, manage and report our key asset data for highway network, structures and street lighting. The iWays system is accessible to relevant staff and the Public Information Portal (PIP) is available via our website for the public to report concerns. The PIP functionality is currently being further developed to enable:

- improved live information on the status of inventory items such as if a grit bin has been filled or when a gully was last cleaned
- improved ability for the public to report issues with asset inventory items

Records of inspection, reactive maintenance, customer contact and collisions are recorded on this system. We use the data when undertaking any assessment and review of the highway asset. We commission surveys across the network to obtain carriageway (road) condition data. This information is analysed using UK Pavement Management System within iWays.

Our [Data Management Strategy](#) sets out how we manage data within these systems. We have also completed a gap analysis to identify asset area where we have no inventory data or limited condition data and priority assessed these to ensure that we continue to invest in gathering data that will assist us in making better decision going forward. The [Inventory Gap Analysis](#) helps to ensure that we collect the right data and don't collect data unnecessarily.

Networks

In order to store data effectively and efficiently it must be referenced geographically. We have developed and must maintain a number of digitised 'networks' which allow us to capture and organise our asset data. By network referencing assets it enables us to know what assets we own on even given road, what extent of the land is highway (extent of our responsibilities) as well as what condition those assets are currently in. It also helps us in programming work. An example of this is how a safety inspector will record a highway defect against a specific road section so that we send the gang to the right location with the right materials to make the repair the first time. We can even identify the hazards and risks at the location so that the gang know what traffic management they will need in order to keep themselves safe whilst making the repair.

We maintain two networks to represent the Devon's Highway:

- the National Street Gazetteer
- the PMS network

The National Street Gazetteer is a record of all of the roads which we manage closely with the local district council's to ensure that it is updated as new roads are adopted from developers. This network is used for managing streetworks by utility companies as well as forming the backbone of our iWays works management systems.

The PMS network is used within the iWays system specifically for managing road condition data from inspection records and annual road condition surveys as well as recording completed capital structural maintenance works. It is different to the Local Street Gazetteer because it is defined by the physical characteristics of the highway rather than junctions and street names.



4 Levels of Service

Levels of service describe the quality of services provided by the asset for the benefit of the customers. They are composite indicators that reflect the social, economic and environmental goals of the community. Levels of service are therefore the manner by which the highway authority engages with the customer and are about reflecting the customer's interests in terms that can be measured and evaluated (*CSS Framework for Highway Asset Management*).

Ultimately, from a customer perspective Levels of Service are about defining the minimum service standards. It is then up to the local authority to measure and monitor its performance against the service standards in order to determine if the levels of service being provided match up with the customer expectations and are in line with both national and local goals and objectives.

Determining service standards must involve an assessment of available funding as well as community need and desires. It is not beneficial to customers to set expectations of high levels of service delivery if funding pressures result in a lower level of service being delivered. In addition, in setting and determining service levels a local authority must also consider its obligations as the Highway Authority and not set service delivery standards below nationally expected codes of practice or endanger road users. Measuring risk and liability as well as the application of national standards at a local level must all be taken into consideration when determining a set of agreed minimal standards.

Drawing on our key corporate objectives to promote the wellbeing of the citizens and communities of Devon, and enable people to live their lives well, we have set out our high level aims for levels of service for the highway asset in the Highway Infrastructure Asset Management Policy as follows:

- **Safe** and serviceable for people to use
- **Connected** - enabling access to and from communities for people, goods and services.
- **Healthy** - supporting and promoting active and healthy lifestyles
- **Prosperous** - contributing to wider economic growth
- **Resilient** - making effective and efficient use of our local resources promoting sustainable communities
- **Sustainable** - Is maintained appropriately to retain its value and condition into the future and contributes to wider environmental management.

Monitoring Levels of Service Performance

How these levels of service translate to how we operate our highways service is critical to understanding the impact for users of the network. The table below gives an example of how some basic service provisions for carriageway assets relate to how they help us deliver our levels of service. The full [Level of Services Table](#) details the highways service provision.

Service standards are often full of jargon and technical speak. In an effort to understand what it really means for users of the highway asset we have also considered the range of provision of safety, serviceability and sustainability issues in an easy to understand [Maintenance Service Standards](#) table.

Level of service		Safe	Connected	Healthy	Prosperous	Resilient	Sustainable
Carriageway	Inspect highways at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	✓	✓		✓		✓
	Respond within 2 hours to any occurrence or incident that poses a threat to life or renders the highway unusable or unsafe.	✓	✓		✓		✓
	Using road condition data develop and deliver an annual programme of carriageway structural maintenance repairs including resurfacing, patching and surface dressing to maintain roads within available budgets.	✓	✓		✓		✓

Fit for Purpose Roads

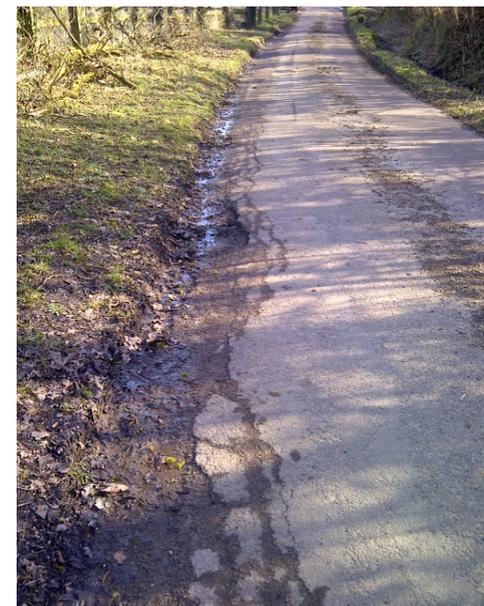
Devon has a wide variety of roads and footways, from high volume dual carriageways in congested urban environments to single lane rural roads connecting small farms or villages. It is not possible to maintain every road to a high standard, the backlog of deterioration and limited funding available simply make this impossible. The travelling public should expect to find a condition which is safe and consistent with the type and location of that particular road or footway.

Simply put, a motorist would expect the condition of a Principal Class A road carrying high volumes of traffic at speed to be in a high standard of repair without safety defects or significant depressions in the running lane; whereas the motorist using an unclassified road in a very rural environment should not be surprised to find a road surface that may have minor potholes, depressions or other deterioration. Likewise, there is an expectation within the Highway Code that motorists drive at a speed appropriate to the type of road and the conditions.

This concept is captured by establishing a hierarchy of road types. Establishing a network hierarchy is key to providing a consistent maintenance strategy and crucial to asset management in creating levels of service. A road's hierarchy must reflect the needs, priorities and actual use of the road as determined by its functionality and importance. Devon's road hierarchy is detailed in [Annex 1 Highways](#)



Expectations for strategic network road condition are for a higher standard with no running lane defects and a smoother ride quality.



A typical fit for purpose rural unclassified road with some edge deterioration, over-riding, detritus and the occasional non-running lane pothole defect.

Photo credits: Julian Roskilly

Performance Monitoring

Measuring how a local authority is performing on delivering its service standards has always been difficult. No one single target or indicator can fully capture how well an authority is maintaining its highway assets. Devon has chosen to follow the example set by other lead authorities by using a simplified approach to measuring its performance. This approach first sets out the headline levels of service and then considers the specific levels of service for each asset group. It then considers what performance indicators the authority is already reporting at national level, for LTP3 monitoring and for local contract monitoring which could be used to measure the performance of the service level within each asset group. A workshop was held with members to help determine what set of KPI's not only fit the levels of service but were easily understandable and could be communicated with the public for measuring how the service was performing.

Each Level of Service can be delivered to varying standards depending on the investment provided. The following definitions are provided:

- POOR – Service delivers below minimum requirements
- FAIR – Service delivers at minimum requirements
- GOOD – Service constantly delivers above minimum requirements
- EXCELLENT – Service delivers well above minimum requirements.

Levels of Service Key Performance Indicators

Strategic indicators related to the HIAMP are detailed in the tables on the following pages. The Highways and Traffic Management (HTMT) service has also developed a performance management framework which aligns with corporate and asset management aims. The majority of the indicators for the HIAMP relate to our purpose to maintain the highway network and specifically the one question “How effectively are we managing the highway asset infrastructure?”, but measures are also drawn from other key questions within the HTMT Performance Management Framework including some which directly measure the performance of our highways contractors.

Performance indicators have not been identified against each level of service as the selected indicators represent a strategic set of performance measures.

Level of service		Strategic Indicator	Means of Measurement	Indicator reported	Target	Performance Level			
						Excellent	Good	Fair	Poor
Overarching	Use an asset management 'whole life' approach to scheme prioritisation to ensure effective and efficient management of the asset.	The backlog value of the highway asset reported to Government is being maintained or decreasing	The accumulated depreciation as a percentage of Gross Replacement cost	Annual		<14 %	14-16%	16-20%	>20%
	Continue the development of community schemes such as the Community Road Warden Scheme (CRWS), Parish Paths Partnerships (P3), snow wardens, grass cutting, wild flower verge planting and similar community schemes to support sustainable communities.	Number of parishes, town councils or community groups taking up the schemes	As reported by Neighbourhood teams	Annual					

Carriageways	Inspect highways at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	Completion of Safety Inspections on time	% of safety inspections completed on time	Monthly	100%	100 %	90-99%	80 - 89%	< 80%
	Continue the development of the Community Road Warden Scheme (CRWS) by providing training, equipment and materials to local volunteers to assist with repairing non-safety defects and carrying out minor amenity maintenance activities.								
	Respond within 2 hours to any occurrence or incident that poses a threat to life or renders the highway unusable or unsafe.	Response to emergency call outs within policy timescales	% of callouts responded to within timescales	Monthly		90-100 %	90-80%	80-75%	>75%
	Using road condition data develop and deliver an annual programme of carriageway structural maintenance repairs including resurfacing, patching and surface dressing to maintain roads within available budgets.	The condition of the road network is nationally recognised as good	National Road Condition Index Percentage of network requiring planned maintenance	Annual	Minimise decline to stay in top quartile performance nationally	A >4%	5-6%	6-10%	<10%
						B >4%	5 - 6%	6-10%	<10%
C >13 %						13-15%	15-20%	<20%	
Uncl as >25 %						25-32%	32-40%	<40%	
Survey skidding resistance on A roads and investigate, monitor and repair deficiencies and/or put up slippery road warning signs.	Skid resistance surveys indicate high levels of skid resistance	Percentage of A roads in satisfactory condition	Annual		>90 %	90-85%	85-80%	<80%	

	Operate a winter service of precautionary salting and snow clearance on strategic roads and when possible on secondary routes as laid out in our Winter Service and Emergency Plan.	Precautionary gritting	% of routes started within the agreed start time (+/- 15 mins)	Monthly during winter	>95%	95 - 100 %	95- 90%	90- 85%	>85%
	Support communities in their efforts to salt local roads and footways by providing support and training to snow wardens as well as equipment and bagged salt where applicable.								
Str Footways & cycleways	Inspect footways and cycleways at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	The condition of the Primary footway network is nationally recognised as good	Footway Network Survey. The percentage of footways in structurally unsound	Annual		< 4%	5-6%	6- 10%	>10%
	Develop and deliver an annual programme of footway and cycleways maintenance repairs.								
Str	Carry out structures inspections in accordance with the national code of practice.	The condition of bridges is nationally recognised as good	Report on Bridge stock using the County Surveyors Society Bridge Condition Indicator	Annual	Maintain condition index score within the 'good' range	100 - 95	94 - 90	89 - 80	<79
	Monitor those structures considered to be below standard.								

	Using condition data develop and deliver an annual programme of bridge and retaining wall maintenance and structural repairs to maintain structures within available budgets.								
	Target structures which are in the Poor/Very Poor condition band where this has a potential impact on safety.								
Drainage	Investigate reports of highway flooding and damaged or blocked highway drains and take appropriate measures to get water off the highway, alleviate or mitigate flooding as appropriate.								
	Cleanse gullies on the salting network and in rural areas on an annual basis; and all others on a three year rolling programme or at required enhanced frequency.	Percentage of annual/triannual cleans completed on time.	Contractors cyclical maintenance returns reporting number of gullies cleansed and percentage of programme completed	Quarterly	95% of programme completed on time	100 - 95	94 - 90	89 - 80	<79
	Jet drainage systems on a reactive basis as they are reported or found through inspection.								
	Carry out an annual programme of grip cleaning and cutting.								

<p>Safety Fencing</p>	<p>Assess safety fences when they are knocked down or damaged and repair or replace as required.</p>								
<p>Highway Lighting</p>	<p>Respond within 2 hours to reported traffic accidents involving lighting columns or other lighting emergencies.</p>								
	<p>Develop and deliver a programme of column repair and replacement in order to maintain the street lighting asset and reduce the risk of column failure.</p>	<p>Highway street lighting is in good condition</p>	<p>The percentage of columns older than their recommended design life</p>	<p>Annual</p>	<p>5% of columns are older than their recommended design life</p>	<p>< 5%</p>	<p>5-8%</p>	<p>8-12%</p>	<p>>12%</p>
<p>Public Rights of Way</p>	<p>Carry out regular ease of use inspections on footpaths.</p>	<p>The public rights of way network is easy for people to use</p>	<p>Former best value indicator 178. The percentage of PROW which are easy to use.</p>	<p>Annual</p>	<p>90% of PROW are easy to use</p>	<p>>92%</p>	<p>92-90%</p>	<p>90-80%</p>	<p><80%</p>
	<p>Continue the development of the Parish Paths Partnerships (P3) by providing support, training, equipment, materials and funding to enable volunteer maintenance of footpaths.</p>								

Devon County Council – Highways Infrastructure Asset Management Plan

						90-100%	90-80%	80-75%	>75%
Traffic management systems	Respond within 4 hours to signal failures.	Response to emergency call outs within contract timescales	% of callouts responded to within timescales	Monthly					
	Operate an annual inspection, electrical testing and repair regime for all traffic signals and pedestrian crossings.								
Street Furniture	Repair or replace any safety signs knocked down or damaged by routine traffic accidents.								
Land	Carry out annual programme of grass cutting to maintain safe visibility at junctions and visibility splays.								
	Inspect highways trees and prioritise repairs to safety defects in accordance with the Tree Inspection Policy.								

5 Lifecycle Plans

Lifecycle planning is the broad method that enables us to model the future consequences of investment in Infrastructure.

The elements of a lifecycle management plan are best described in diagrammatically, as shown here.

Understanding the objectives and policies for the authority is vital as this is likely to be where the funding is focused.

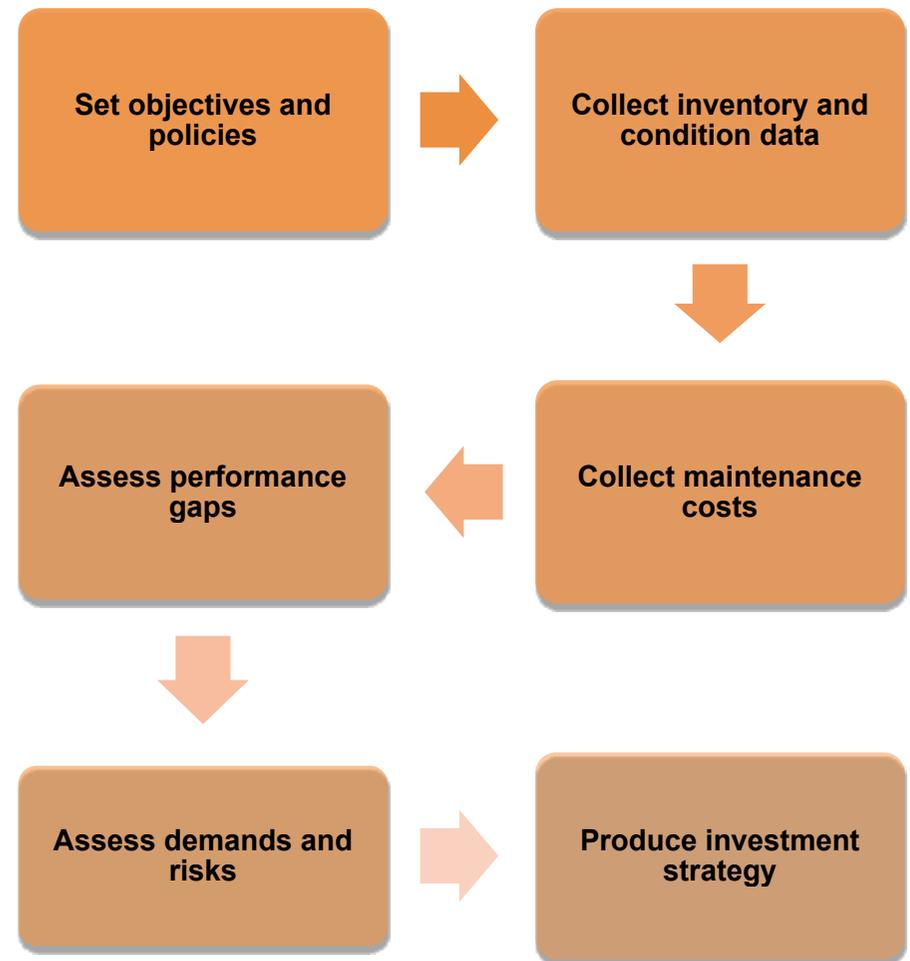
Knowing what assets exist, and what condition they are currently in, forms the basis for knowing what standard the authority would like to achieve.

A good knowledge of current maintenance costs for a range of treatments allows different investment strategies to be examined for the best whole life cost.

Comparing the current level of performance with the desired level of performance allows the 'gap' to be quantified and costed.

Before an investment strategy can be completed, it is also necessary to look at the demands and risks for the asset. The future demands that the asset will be placed under based on current knowledge, e.g. HGV traffic levels, will help to determine the necessary future performance. It is also important to identify risks to the asset, including the risks of not maintaining to the desired standard.

Effective lifecycle planning is about making the right investment at the right time to ensure that the asset delivers the requisite level of service over its full expected life, at the minimum cost.



Lifecycle Plan Development

In the development of this plan we have recognised that over time implementation of asset management principles for each of our main asset groups will have evolved separately, due to the way the service has organised maintenance activities in the past, but also appropriate to the needs of the particular assets. We recognise that each asset group has distinct maintenance and investment needs within its lifecycle, but we are working towards developing consistency of approach across asset groups where a long-term benefit in doing so can be evidenced.

Therefore, we have for the time being developed this plan with separate Annexes providing specific information on our current approach and the status for each of the four main asset groups:

[Annex 1 – Highways and Drainage](#)

[Annex 2 – Structures](#)

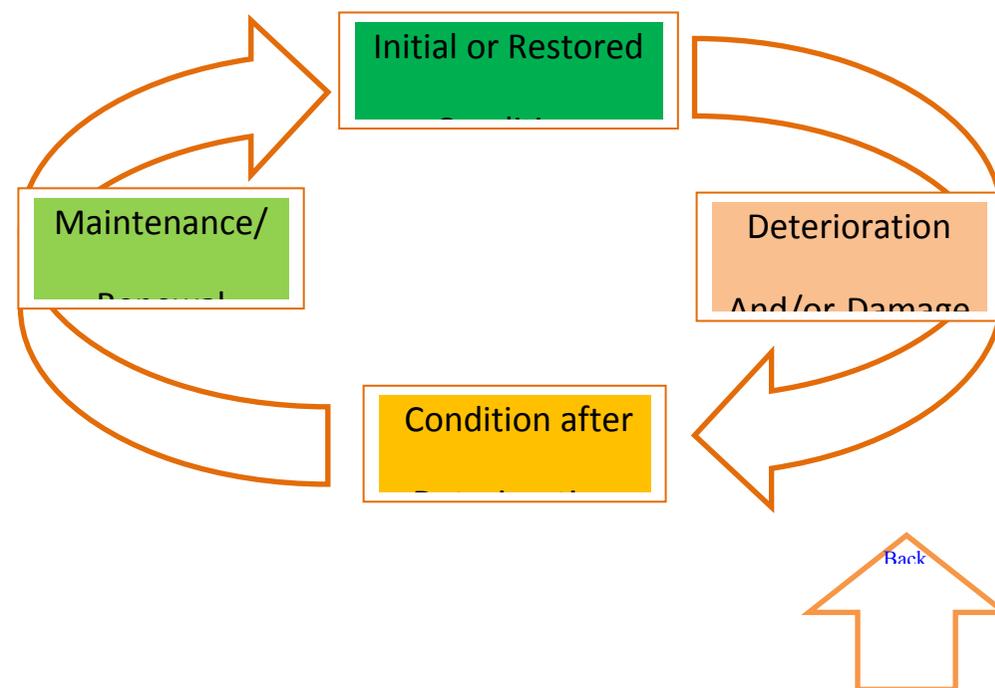
[Annex 3 – Traffic Signals and Lighting](#)

[Annex 4 – Public Rights of Way](#)

It should be noted that we are at different stages of development of the asset management approach with each of these four areas.

To start we are working towards a consistent approach to lifecycle planning; collection of inventory; understanding the condition of inventory; determining the lifecycle plans and performance levels of service for each group.

Deterioration and Maintenance



6 Works Programme

We prepare a three year programme of capital structural maintenance works based on identified need. A report summarising the programme of works delivered in the previous year and the proposal for how budgets are to be spent in the following year goes to Cabinet each spring for approval.

The first year of the programme is a delivery plan; whereas the second year and subsequent years of the programme represent a draft list of proposed schemes allowing members to see which scheme are likely to be built in the future so as to provide comment and input into the decision making.

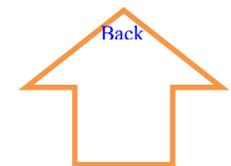
Schemes in the programme are selected through a process which involves prioritisation based on road condition and engineering data as well as needs led based on information provided by Neighbourhood Highways Teams. This dual approach is a fundamental step towards complete asset management and ensures that limited resources are targeted towards restoring the life of the sections of the networks with the greatest requirement, whilst always striving to meet local concerns. This approach is summarised in the diagram on the following page.

A three year programme of work is also prepared by the Structures team covering planned works to bridges and retaining walls. The Street Lighting team produce an annual programme of planned column replacement, lantern repairs and LED conversions.

We share these programmes of work on the Council's website at the following link:

<https://new.devon.gov.uk/roadsandtransport/maintaining-roads/>

How the programme is developed



7 Managing Risk

Managing risk is an integral part of the management of the highway asset. All activities from management, identification and prioritisation of works to the establishment of budgets have risks associated with them. Ideally, risks should be identified at each level of the management hierarchy (strategic, tactical and operational) using tools and procedures to identify critical risks and then manage them.

Risk management is an integral part of good management practice; benefits include:

- Fewer surprises, a reduction, control or transfer of risk;
- Provision of a better quality of services;
- Improved planning, performance and effectiveness ;
- Increased ability to manage change;
- Contingency planning;
- Exploitation of opportunities and innovation ;
- Delivery of best value;
- Improved information for decision making;
- Improved accountability, assurance and governance;
- Improved economy and efficiency;
- Awareness of limitations;
- Improved stakeholder relationships;
- Enhanced reputation;
- Protection of decision makers (members, directors and officers);
- Personal wellbeing;
- Opportunity to design risk out.

The [Asset Management Risk Register](#) captures and rates the major risks to highway assets and records the control and mitigation mechanisms.

Identifying Key Risks

- **Funding pressures**

Part of lifecycle planning includes identifying the level of funding required to maintain the status quo for condition of each asset. Over the next few years, public finances are going to be limited and it is likely that the Capital programme allocation will not be sufficient to meet the required standstill budget.

- **Future demand**

Given the importance of the road network to the economic vitality of the County there is a need to plan and develop the network for future growth

- **Climate Change**

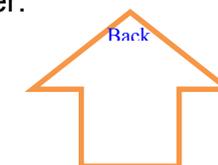
The long term decisions we are making now about the repair and replacement of assets needs to account for the potential extremes in weather we are likely to

Resiliency – adapting to climate change

Transport assets have a wider social value above the Gross or Depreciated Replacement Costs. This can take various forms: - additional costs of transport using longer routes, the closure of businesses through loss of custom, the associated loss of jobs, the social impact of people having less spending power etc. Recently this was highlighted in the aftermath of events such as the 2012 floods in Devon and Somerset, the 2009 bridge collapses in Cumbria and the 2007 flooding in Gloucestershire. Within Devon there are specific parts of the transport network whereby loss of those parts would have a greater significance due to the lack of easy alternative routes. Potential landslip sites or the proximity to rivers that regularly flood can make some key routes vulnerable, and loss of these could create significant difficulties for local communities.

Climate change considerations include:

- Re-evaluation of design and design adaptation in view of impacts and climate proofing (including materials/assets to accommodate weather extremes).
- Ensuring developments minimise flood risks, e.g. by building the most vulnerable infrastructure away from the river edge or above extreme flood levels and incorporating flood proofing in high risk areas, e.g. planning for flooding at critical locations (e.g. use of flood boards) and ensuring critical components (e.g. switch gear, substations) are above flood levels or can be isolated.
- Incorporating climate change into routine risk management procedures to help prepare for future adverse events.
- Adapting to climate change costings can be minimised if adaptation is built in:
 - At the planning stage for new developments;
 - When infrastructure is upgraded;
 - When plans come up naturally for review; before organisations are forced to act by a sudden extreme climatic event(s) or mounting maintenance costs.
 - Where possible, decision-makers should avoid actions that will make it more difficult and costly to cope with future climate impacts, e.g. new infrastructure projects (such as storm drainage) should include a reasonable allowance for climate change risks where the costs of subsequent upgrading would be prohibitive or very difficult to engineer.

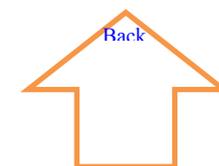


8 Evaluation and Review

We recognise that developing sound asset management policy and processes is a journey and we have set out a plan for the future. Our Highway Asset Management Plan published in March 2013 focussed mainly on the highway asset group. This updated Highway Infrastructure Asset Management Plan published in 2016 brings together all highway assets and therefore includes our approach to structures, lighting, traffic signals, street furniture and public rights of way. This plan will be regularly reviewed and updated as we work towards our objectives. Key milestones we are working towards are:

2013	Highway Asset Management Policy, Strategy and plan published
2014-15	Working towards development of the HIAMP
2016-17	Highway Infrastructure Asset Management Policy, Strategy and Plan published Working towards development of a three-year forward maintenance programme for highest priority assets
2017-18	Working towards a consistent approach to lifecycle planning for highest priority assets within each asset group Working towards development of a four-year forward maintenance programme for highest priority assets
2018-19	Working towards a consistent ability to deliver lifecycle planning for highway priority assets Working towards development of a five-year forward maintenance programme for highest priority assets
2020-21	Working towards development of an updated HIAMP for the future - to consider legislation, funding availability, industry guidance and any other external factors that influence delivery of highway infrastructure maintenance.

The HIAMP is an evolving and complex document, which draws together diverse information, procedures and service guidance. It will therefore be reviewed and regularly updated to reflect improvements and change to operational practice. We will aim to review the policy and strategy at two years intervals. We will review the HIAMP and Annexes as and when service, national guidance or legislation changes require. During the course of developing the HIAMP a number of actions for future implementation have been identified; these are summarised in the [HIAMP Action Plan](#).



An Equalities Impact Assessment has been completed covering the Highways Infrastructure Asset Management framework of documents. The assessment will be updated during the regular reviews of these documents or when changes are made to the documents which impact on equalities issues.



**Place Scrutiny Committee
Highway Asset Management Plan Spotlight Review
13th October 2016**

1. Background

The Place Scrutiny Committee received a Report at their meeting on 20th September, outlining proposed changes to the Council's Highway Asset Management Policy, Strategy and Plan. The Council's approach to highway asset management was being refreshed to reflect recent national guidance and changes to Department for Transport funding formulas.

In light of the complexity of the subject matter and to provide an opportunity for all non-executive Members of the Council to contribute, the Committee resolved to hold a standalone Spotlight Review meeting to:

- consider the Council's revised Asset Management Policy, Strategy and Plan;
- consider how the Council should measure the performance of its Highway Assets in the future against the levels of service set out in the asset strategy;
- make recommendations to Cabinet on the key performance indicators to be used in the Highway Asset Management Strategy and Plan.

The Spotlight Review meeting was held on 13th October at the Devon Travel Academy, Westpoint.

2. The Council's Asset Management Approach

Good asset management takes a 'whole life' approach to determine how to invest limited resources, to get the most efficient and effective maintenance of the asset. In practice this means that roads which appear to be in good condition are surfaced dressed, preserving them for the long term, at a much smaller cost than it would be to repair them once their condition had visibly deteriorated. Due to diminishing capital funding over a number of years, and previous strategies which did not follow the asset management approach, some roads have deteriorated further and are in visibly poor condition. These roads are costly to fully repair, and therefore due to financial limitations, some roads may at this time only be patched, in order to make them safe for users.

Members were supportive of the Council's asset management approach and the proposed levels of service, however emphasised the challenge in explaining this approach to members of the public and suggested that the Council could do more to promote public understanding.

3. Measuring the Performance of our Highway Assets Recommendations to Cabinet

Measuring the performance of the Council's Highways Assets is key to understanding whether the Asset Management Policy, Strategy and Plan is operating as it should. The Council is looking to develop around 10-15 key performance indicators (KPIs) which will give a clear understanding of how each asset is performing.

Members considered proposed KPIs for a number of highway assets (as attached). It was felt that KPIs should be clear and meaningful and able to be understood by the public, and should focus on monitoring the key assets which keep the county moving, including drainage systems. Monitoring the way that the Council works with communities, the support offered and the uptake of community support schemes was also felt to be important.

In light of this, the Spotlight Review group makes the following Recommendations to Cabinet:

- (a) That the proposed indicators and measures for Carriageways, Footways & Cycleways, Structures, Highway Lighting and Public Rights of Way be supported;
- (b) That one or more KPIs be created to monitor the performance of gullies and drainage systems;
- (c) That a KPI be created to monitor the Council's engagement and work with communities in respect of self-help schemes, road and snow warden schemes and in other areas such as grass cutting and/or wild flower verge planting.

4. Membership

The Spotlight Review was chaired by Councillor Ray Radford, Chairman of the Place Scrutiny Committee. Councillors Rufus Gilbert, Robert Vint, Jonathan Hawkins, Chris Clarence, Gordon Hook, Kevin Ball, Richard Edgell, Jeremy Yabsley and Claire Wright all attended and contributed to the review.

Asset Group Levels of Service

Level of service		Safe	Connected	Healthy	Prosperous	Resilient	Sustainable
Overarching	Use an asset management 'whole life' approach to scheme prioritisation to ensure effective and efficient management of the asset.	✓	✓	✓	✓	✓	✓
	Continue the development of community schemes such as the Community Road Warden Scheme (CRWS), Parish Paths Partnerships (P3), snow wardens, grass cutting, wild flower verge planting and similar community schemes to support sustainable communities.	✓	✓	✓	✓	✓	✓
	Inspect highways at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	✓	✓		✓		✓
	Continue the development of the Community Road Warden Scheme (CRWS) by providing training, equipment and materials to local volunteers to assist with repairing non-safety defects and carrying out minor amenity maintenance activities.		✓			✓	✓
	Respond within 2 hours to any occurrence or incident that poses a threat to life or renders the highway unusable or unsafe.	✓	✓		✓		✓

	Using road condition data develop and deliver an annual programme of carriageway structural maintenance repairs including resurfacing, patching and surface dressing to maintain roads within available budgets.	✓	✓		✓		✓
	Survey skidding resistance on A roads and investigate, monitor and repair deficiencies and/or put up slippery road warning signs.	✓	✓		✓		✓
	Operate a winter service of precautionary salting and snow clearance on strategic roads and when possible on secondary routes as laid out in our Winter Service and Emergency Plan.	✓	✓	✓	✓	✓	
	Support communities in their efforts to salt local roads and footways by providing support and training to snow wardens as well as equipment and bagged salt where applicable.	✓	✓	✓	✓	✓	
Footways & cycleways	Inspect footways and cycleway at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	✓	✓	✓	✓		✓
	Develop and deliver an annual programme of footway and cycleway maintenance repairs.	✓	✓	✓	✓		✓

Structures	Carry out structures inspections in accordance with the national code of practice.	✓	✓		✓		✓
	Monitor those structures considered to be below standard.	✓	✓		✓		✓
	Using condition data develop and deliver an annual programme of bridge and retaining wall maintenance and structural repairs to maintain structures within available budgets.	✓	✓		✓		✓
	Target structures which are in the Poor/Very Poor condition band where this has a potential impact on safety.	✓	✓		✓		✓
Drainage	Investigate reports of highway flooding and damaged or blocked highway drains and take appropriate measures to get water off of the highway, alleviate or mitigate flooding as appropriate.	✓	✓		✓		✓
	Cleanse gullies on the salting network and in rural areas on an annual basis; and all others on a three year rolling programme or at required enhanced frequency.	✓	✓		✓		✓
	Jet drainage systems on a reactive basis as they are reported or found through inspection.	✓	✓		✓		✓
	Carry out a annual programme of grip cleaning and cutting.	✓	✓		✓		✓

Safety Fencing	Assess safety fences when they are knocked down or damaged and repair or replace as required.	✓	✓		✓		✓
Highways Lighting	Respond within 2 hours to reported traffic accidents involving lighting columns or other lighting emergencies.	✓	✓	✓	✓		✓
	Develop and deliver a programme of column repair and replacement in order to maintain the street lighting asset and reduce the risk of column failure.	✓	✓	✓	✓		✓
Public Rights of Way	Carry out regular ease of use inspections on footpaths.	✓	✓	✓		✓	✓
	Continue the development of the Parish Paths Partnerships (P3) by providing support, training, equipment, materials and funding to enable volunteer maintenance of footpaths.			✓	✓	✓	✓
Traffic management systems	Respond within 4 hours to signal failures.	✓	✓		✓		✓
	Operate an annual inspection, electrical testing and repair regime for all traffic signals and pedestrian crossings.	✓	✓		✓		✓

Street Furniture	Repair or replace any safety signs knocked down or damaged by routine traffic collisions.	✓	✓		✓		✓
Land	Carry out annual programme of grass cutting to maintain safe visibility at junctions and visibility splays.	✓	✓		✓		✓
	Inspect highways trees and prioritise repairs to safety defects in accordance with the Tree Inspection Policy.	✓	✓		✓		✓

Levels of Service Key Performance Indicators

Performance indicators have not been identified against each level of service as the selected indicators represent a strategic set of performance measures.

Level of service		Strategic Indicator	Means of Measurement	Indicator reported	Target	Performance Level			
						Excellent	Good	Fair	Poor
Overarching	Use an asset management 'whole life' approach to scheme prioritisation to ensure effective and efficient management of the asset.	The backlog value of the highway asset reported to Government is being maintained or decreasing	The accumulated depreciation as a percentage of Gross Replacement cost	Annual		<14 %	14-16%	16-20%	>20 %
	Continue the development of community schemes such as the Community Road Warden Scheme (CRWS), Parish Paths Partnerships (P3), snow wardens, grass cutting, wild flower verge planting and similar community schemes to support sustainable communities.	Number of parishes, town councils or community groups taking up the schemes	As reported by Neighbourhood teams	Annual					

Carriageways	Inspect highways at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	Completion of Safety Inspections on time	% of safety inspections completed on time	Monthly	100%	100 %	90-99%	80 - 89%	>80 %
	Continue the development of the Community Road Warden Scheme (CRWS) by providing training, equipment and materials to local volunteers to assist with repairing non-safety defects and carrying out minor amenity maintenance activities.								
	Respond within 2 hours to any occurrence or incident that poses a threat to life or renders the highway unusable or unsafe.	Response to emergency call outs within policy timescales	% of callouts responded to within timescales	Monthly		90-100 %	90-80%	80-75%	>75 %
	Using road condition data develop and deliver an annual programme of carriageway structural maintenance repairs including resurfacing, patching and surface dressing to maintain roads within available budgets.	The condition of the road network is nationally recognised as good	National Road Condition Index Percentage of network requiring planned maintenance	Annual	Minimise decline to stay in top quartile performance nationally	A	5-6%	6-10%	<10 %
						>4%	5 - 6%	6-10%	<10 %
B						13-15%	15-20%	<20 %	
>4%						13-15%	15-20%	<20 %	
Survey skidding resistance on A roads and investigate, monitor and repair deficiencies and/or put up slippery road warning signs.	Skid resistance surveys indicate high levels of skid resistance	Percentage of A roads in satisfactory condition	Annual		>90 %	90-85%	85-80%	<80 %	

	Operate a winter service of precautionary salting and snow clearance on strategic roads and when possible on secondary routes as laid out in our Winter Service and Emergency Plan.	Precautionary gritting	% of routes started within the agreed start time (+/- 15 mins)	Monthly during winter	>95%	95 - 100 %	95- 90%	90- 85%	>85 %
	Support communities in their efforts to salt local roads and footways by providing support and training to snow wardens as well as equipment and bagged salt where applicable.								
Footways & cycleways	Inspect footways and cycleway at set frequencies and prioritise repairs to safety defects in accordance with the Highway Safety Inspection Policy.	The condition of the Primary footway network is nationally recognised as good	Footway Network Survey. The percentage of footways in structurally unsound	Annual		< 4%	5- 6%	6- 10%	>10 %
	Develop and deliver an annual programme of footway and cycleway maintenance repairs.								
Stru	Carry out structures inspections in accordance with the national code of practice.	The condition of bridges is nationally recognised as good	Report on Bridge stock using the County Surveyors Society Bridge Condition Indicator	Annual	Maintain condition index score within the 'good' range	100 - 95	94 - 90	89 - 80	<79
	Monitor those structures considered to be below standard.								

	Using condition data, develop and deliver an annual programme of bridge and retaining wall maintenance and structural repairs to maintain structures within available budgets.								
	Target structures which are in the Poor/Very Poor condition band where this has a potential impact on safety.								
Drainage	Investigate reports of highway flooding and damaged or blocked highway drains and take appropriate measures to get water off the highway, alleviate or mitigate flooding as appropriate.								
	Cleanse gullies on the salting network and in rural areas on an annual basis; and all others on a three year rolling programme or at requested enhanced frequency.	Percentage of annual/triannual cleans completed on time.	Contractors cyclical maintenance returns reporting number of gullies cleansed and percentage of programme completed	Quarterly	95% of programme completed on time	100 - 95	94 - 90	89 - 80	<79
	Jet drainage systems on a reactive basis as they are reported or found through inspection.								
	Carry out an annual programme of grip cleaning and cutting.								

Safety Fencing	Assess safety fences when they are knocked down or damaged and repair or replace as required.								
Highway Lighting	Respond within 2 hours to reported traffic accidents involving lighting columns or other lighting emergencies								
	Develop and deliver a programme of column repair and replacement in order to maintain the street lighting asset and reduce the risk of column failure.	Highway street lighting is in good condition	The percentage of columns older than their recommended design life	Annual	5% of columns are older than their recommended design life	< 5%	5- 8%	8- 12%	>12 %
Public Rights of Way	Carry out regular ease of use inspections on footpaths	The public rights of way network is easy for people to use	Former best value indicator 178. The percentage of PROW which are easy to use.	Annual	90% of PROW are easy to use	>92 %	92- 90%	90- 80%	<80 %
	Continue the development of the Parish Paths Partnerships (P3) by providing support, training, equipment, materials and funding to enable volunteer maintenance of footpaths.								

Traffic management systems	Respond within 4 hours to signal failures.	Response to emergency call outs within contract timescales	% of callouts responded to within timescales	Monthly		90-100%	90-80%	80-75%	>75%
	Operate an annual inspection, electrical testing and repair regime for all traffic signals and pedestrian crossings								
Street Furniture	Repair or replace any safety signs knocked down or damaged by routine traffic accidents								
Land	Carry out annual programme of grass cutting to maintain safe visibility at junctions and visibility splays								
	Inspect highways trees and prioritise repairs to safety defects in accordance with the Tree Inspection Policy.								