

DERBYSHIRE COUNTY COUNCIL

CABINET

13 October 2015

Report of the Strategic Director – Economy, Transport and Environment

**APPROVAL OF THE HIGHWAY INFRASTRUCTURE ASSET
MANAGEMENT POLICY AND HIGHWAY INFRASTRUCTURE ASSET
MANAGEMENT STRATEGY (HIGHWAYS, TRANSPORT AND
INFRASTRUCTURE)**

- (1) **Purpose of Report** To seek Cabinet approval of the Highway Infrastructure Asset Management Policy (HIAMP) and Highway Infrastructure Asset Management Strategy (HIAMS) which underpin and formalise current practice and to note the ongoing development of a suite of documents to update the Transport Asset Management Plan 2009.
- (2) **Information and Analysis** In 2009, the County Council completed its first Transport Asset Management Plan, undertook a comprehensive inventory survey of its highways asset, described lifecycle plans for each of its assets and set out a process to embed good asset management principles in accordance with guidance available at that time.

Since then, asset management practice has developed considerably with the Department for Transport (DfT) and Highways Maintenance Efficiency Programme (HMEP), recommending its use in the management of all highways and transport assets;

- 2009 - DfT provided funding to enable authorities to develop asset registers and provide an opportunity to bid for additional funding to develop specific projects, as 'Beacon Authorities' in delivering asset management.
- 2010 – The Chartered Institute of Public Finance and Accountancy (CIPFA) published the Transport Infrastructure Code (updated 2013) which looked at asset valuation for the Whole of Government Accounting (WGA) purposes. The key drivers behind this were to encourage highway authorities to take a more detailed look at the financial implications of asset management and to understand how the process can improve their management of assets on a lifecycle basis.
- 2012 - The Pothole Report was published recommending an asset management approach to resolving potholes on a more permanent basis.

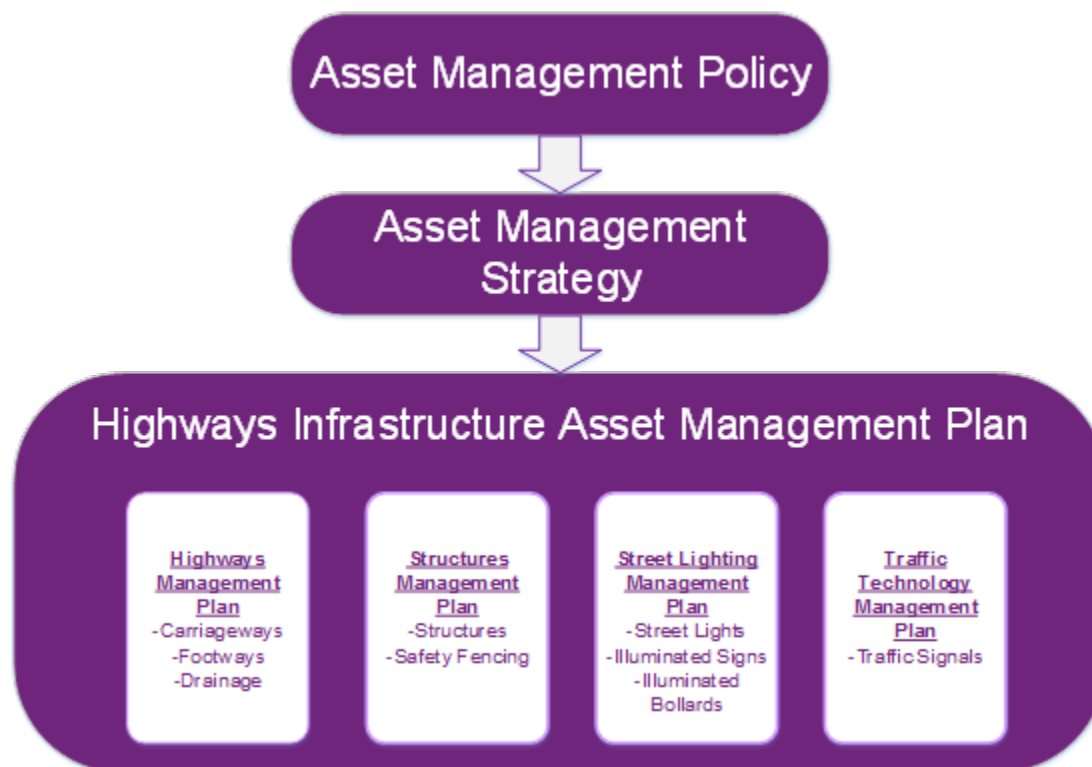
- 2013 - Updated guidance on asset management was produced jointly by DfT, the UK Road Liaison Group and HMEP, setting out a framework approach to asset management.
- 2014 - The Pothole Fund was announced with the aim of funding the reduction in potholes occurring as a result of a series of cold and wet winters, but including questions seeking to identify the progress of highway authorities in engaging in asset management.
- 2014 - The publication of the DfT document “Gearing up for Efficient Highway Delivery and Funding” set the scene for the introduction of the Incentive Fund Self-Assessment. This provides a financial incentive to maintain levels of allocated funding by demonstrating that an asset management approach and process is embedded in the way the highway authority deals with its service delivery.

The County Council has kept pace with developments and the recent Street Lighting ‘Invest to Save’ proposal and Accelerated Highway Maintenance (AHM) programmes, previously approved by Cabinet, both follow strong asset management principles which aim to maximise the lifecycle of the Council’s assets. The AHM programme is aimed particularly at the ‘B’ and ‘C’ roads, to stabilise them and prevent further deterioration, something that was becoming harder to achieve due to the significant reductions in revenue budgets. The outcome of the AHM programme will set these particular assets on a lifecycle for future investment and maintenance requirements.

Other initiatives stemming from the original asset inventory survey include a more structured approach to the management of safety fencing and the development of an intelligent gully cleansing process. The latter has not only enabled the asset to be more effectively managed through a more detailed knowledge of the capacity and condition of the highway drainage network, but has allowed the cleansing schedules to be varied to meet local circumstances, resulting in considerable savings (approximately £100,000 per annum) with still more to be realised.

National Asset Management guidance promotes aligning the Council’s HIAMS with the Council’s goals and objectives, providing a framework for policies detailing how each asset will be maintained in the most effective way. Whilst the County Council has been developing and progressing asset management, it requires formally approved policies and strategies to evidence the process. This report, and the formalising of the HIAMP and HIAMS, will not only meet the prerequisite of retaining the incentive funding highlighted above, but also provide a visible statement of the County Council’s progress and approach to the management of its assets.

The HIAMS for Derbyshire sets out an asset management policy and strategy for maintaining the County’s highways infrastructure assets.



The recent Transport Infrastructure Valuation return to the HM Treasury valued Derbyshire's entire highways asset at a gross Replacement Cost of £7.4 billion.

The table below sets out the gross replacement costs of the key asset groups:

Asset Group	Description	Gross Replacement Cost	% of Total GRC
Carriageways	Adopted Highways	£5,864,667,000	79.4%
Footways	Excluding Rights of Way	£658,833,000	8.9%
Structures	Bridges, subways, culverts and retaining walls (part – further survey work in progress)	£747,102,000	10.1%
Lighting	Street lights and illuminated signs	£85,642,000	1.2%
Traffic Management	Traffic signals, safety cameras and messaging signs	£19,058,000	0.3%
Street Furniture	Signs, safety fencing, etc.	£13,822,000	0.2%
Total		£7,389,124,000	100.0%

Carriageways make up £5.9 billion of the total value of the transport infrastructure in Derbyshire, 80% of the overall asset value. To ensure these assets are efficiently managed, individual plans will sit beneath the HIAMS setting out the management and maintenance of Carriageways, Footways and Drainage, Structures, Street Lighting and Traffic Technology.

These plans will be brought to Cabinet over the next 12 months, commencing with the Highways Infrastructure Asset Management Plan - Carriageways, Footways and Drainage (HIAM(Plan)-CFD). The HIAM(Plan)-CFD will set out the process by which the Council will maintain its assets and will seek to inform and manage the expectations of the public about the likely levels of service, condition and treatments that the Council will be applying across the network.

They will also provide a transparent process for officers to determine treatments and priorities and, by the use of lifecycle planning, will aim to optimise the frequency of maintenance interventions to maximise the lifecycle of all assets. Improved recording of works undertaken through the implementation of a Single Asset Management System (SAMS) for Highways Maintenance will provide sound information on which to base future investment priorities and levels of funding required for the future. The ongoing use of the Plan will provide a more stable and managed highway network for the benefit of residents, businesses and visitors to Derbyshire.

(3) **Financial Considerations** The HIAMS and the underlying suite of HIAM(Plan)'s for Carriageways, Footways and Drainage, Structures, Street Lighting and Traffic Technology will set out the processes which will derive the efficiencies in Capital investment and use of resources will identify the areas' most at risk of further deterioration, which will help to prioritise the County Council's resources in future years. The optimisation and lifecycle planning of highway assets will provide a guide for future investment requirements to sustain agreed levels of service across the network.

(4) **Legal Considerations** The asset management approach will support the Council's responsibilities as Highway Authority in meeting the requirements of the Highways Act 1980.

(5) **Human Resources Considerations** The preparation of the HIAMP and HIAMS has been undertaken with the support of Atkins Consultants and the future development of the individual plans, which sit beneath the HIAMS; Carriageways, Footways and Drainage, Structures, Street Lighting and Traffic Technology will be prepared using existing resources.

(6) **Equality and Diversity Considerations** The development of a road hierarchy, which takes a more pragmatic approach to highways maintenance, based on the use of the road and, in particular, its use by heavy goods and public service vehicles will identify a series of treatments and levels of service. This will mean that not all roads will be maintained to the same levels, but to the level most appropriate for their use. A scoping Equality Impact Assessment (EIA) has been undertaken which supports the approach set out in the HIAM(Plan)-CFD. The scoping EIA raises no concerns with regard to any of the protected characteristic groups.

(7) **Environmental Considerations** The adoption of the HIAM(Plan)-CFD will result in many treatments being less invasive and use of more environmentally friendly treatments. Predominantly, treatments in the lower hierarchy of roads will include surface dressing to maintain the fabric and integrity of the road construction and provide an improved surface.

(8) **Health Considerations** The development of a roads hierarchy based on usage, particularly that of heavy goods and public service vehicles, will be supplemented by the consideration of public transport routes, emergency routes to hospitals, access to schools, services, etc, and will be influenced by the need to maintain a vibrant economy and approach to regeneration across the County.

Other Considerations

In preparing this report the relevance of the following factors has also been considered: prevention of crime and disorder, property and transport considerations.

(9) **Key Decision** No.

(10) **Call-In** Is it required that call-in be waived in respect of the decisions proposed in the report? No.

(11) **Background Papers** Held on file within the Economy, Transport and Environment Department. Officer contact details – Steve Mead, extension 38577.

(12) **OFFICER'S RECOMMENDATIONS** That Cabinet:

12.1 Approves the Highway Infrastructure Asset Management Policy.

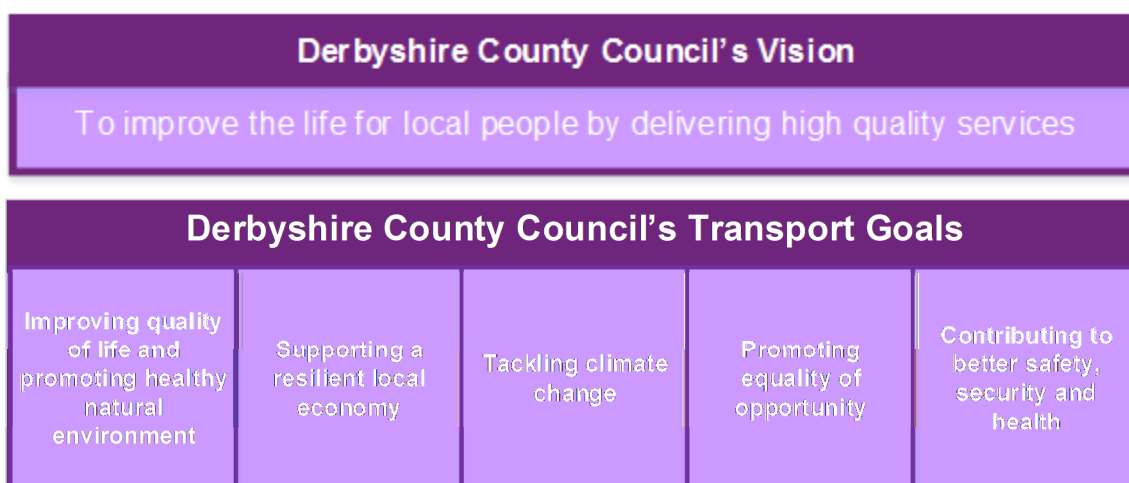
12.2 Approves the Highway Infrastructure Asset Management Strategy.

12.3 Notes the intended development of a Highway Infrastructure Asset Management (Plan), comprising a suite of plans for Carriageways, Footways and Drainage, Structures, Street Lighting and Traffic Technology, to be brought to a future Cabinet for consideration.

Mike Ashworth
Strategic Director – Economy, Transport and Environment

Draft Derbyshire County Council Highway Asset Management Policy

1. Derbyshire County Council recognises the importance of Derbyshire's local highway network. The Council is committed to applying asset management principles to the management of the local highway network and recognises how the network supports the delivery of services and achieving the overarching Council vision and transport goals.



2. Derbyshire County Council is committed to good asset management of highway infrastructure for the benefit of both current and future generations. It is recognised that asset management principles enable informed decisions to be made with regards to:
 - funding of both improvements and maintenance;
 - cost effective resource targeting to achieve the greatest benefit; and
 - improved risk management associated with the Council's statutory duties.
3. Through Derbyshire County Council's Local Transport Plan (LTP3), the Council has developed a series of local transport objectives which further support the delivery of the Council's vision and required duties. The Derbyshire County Council Highway Infrastructure Asset Management Strategy (HIAMS) will support the achieving of these objectives as described in the following:

Supporting a resilient local economy

The HIAMS will provide an approach to asset management that should provide the optimum levels of planned maintenance activities over the lifecycle of highway assets. This should allow for greater coordination of works and the reduction of disruption such as road closures or temporary traffic management. This will allow for improved and sustainable network availability and reliability, supporting the movement of people and goods that are key for the local economy. The reputation of an efficient highway network may help attract businesses to the local area.

Tackling climate change

The HIAMS will set out the framework of how assets will be prioritised and costs will be considered over the lifetime of an asset, by exploring efficient ways of working we will maximise value over the life of the assets and minimise wastage of materials. It will also outline the use of sustainable methods of approaching highway maintenance which will again minimise waste and landfill.

Better safety, security and health

Road safety initiatives to help reduce road traffic collisions will be supported by an effective HIAMS. An effective HIAMS will also prioritise investment where it can most make the difference; an example of this would be investment into heavily used footways which can encourage people to walk, potentially improving users health. Adopting asset management principles should ensure more resilient surfaces which can encourage a great number of cyclists. This will support the Derbyshire Cycle Plan 2015-2025 which aims to double the number of cyclists within Derbyshire by 2025.

Promoting equality of opportunity

In using asset management principles, to ensure that the local highway network is properly maintained, will ensure ease of movement for all people and support services that are required within Derbyshire.

Improving quality of life and promoting a healthy and natural environment

The approach taken by the Council to asset management will ensure that highway assets support the local economy and the delivery of services, taking into account the performance of the asset over a longer period. This will allow optimum delivery of new infrastructure that will have a positive impact on the lives of local people, subject to political approval.

Derbyshire County Council will commit to managing its assets in a sustainable way to ensure that works on the highway will have no negative impact on the natural environment, such as carriageway reconstruction in line with good environmental management practice.

4th DRAFT

Derbyshire County Council
Economy, Transport and Environment
Department

**HIGHWAY INFRASTRUCTURE
ASSET MANAGEMENT STRATEGY**

(AN ELEMENT TO THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM)


Mike Ashworth

Strategic Director of Economy, Transport and Environment

County Hall, Matlock, Derbyshire. DE4 3AG

Contents

Contents.....	0
Introduction	2
I1 Purpose & Delivery of Asset Management Policy	2
I2 Legal Duties on Derbyshire County Council	2
I3 Drivers for Highway Asset Management Strategy	2
SECTION 1 - Asset Management Framework in Derbyshire	3
1.1 Context.....	3
1.2 Framework	3
SECTION 2 – STRATEGY & PLAN PROCESS	5
2.1 Vision	5
2.2 Lifecycle Planning	5
2.3 Risk Management	5
2.4 Forward Work Planning	6
SECTION 3 – STAKEHOLDERS	6
3.1 Officer Workshops	6
3.2 National Highways & Transportation (NHT) Satisfaction Survey	6
3.3 Level of Service	7
SECTION 4 – STRATEGY FOR MAIN ASSET GROUPS	7
4.1 General	7
4.1.1 Carriageways	8
4.1.2 Footways.....	8
4.1.3 Structures.....	9
4.1.4 Highway Drainage.....	10
4.1.5 Street Lighting	10
4.1.6 Traffic Signals	11
4.1.7 Safety Fencing & Vehicle Restraint Systems (VRS)	12
4.1.8 Traffic Signs	12
4.1.9 Street Furniture	13
SECTION 5 – CAPITAL INVESTMENT	14
SECTION 6 – SUDDEN & RAPID ASSET FAILURE	14
SECTION 7 – PLANNING CONSIDERATIONS	14
7.1 Development Impact.....	14
SECTION 8 – ASSET INFORMATION & DATA MANAGEMENT	14
8.1 Data Requirements.....	14
8.2 Data Systems.....	15
SECTION 9 – BEST PRACTICE.....	15
9.1 Commitment Statement	15
9.2 Knowledge Sharing.....	15
9.3 Supporting Documents	16
SECTION 10 – REVIEW & PERFORMANCE MONITORING.....	16
10.1 Review Strategy	16
10.2 Performance Monitoring Guidelines	16

 DERBYSHIRE County Council Improving life for local people	TECHNICAL POLICIES & HIGHWAY INFORMATION Highway Infrastructure Asset Management Strategy	
Issue Date: 30 Sept 2015	Amendment Number: 0 (First Edition) 4th DRAFT	Page 2 of 20

Introduction

I1 Purpose & Delivery of Asset Management Policy

This Strategy sets out how the Highway Asset Management Policy will be achieved. The Policy is a high level document that endorses the County Council's commitment to highway asset management and demonstrates how an asset management approach aligns with the Authority's corporate vision and strategic / Local Transport Plan (LTP) objectives.

Derbyshire County Council has been implementing good Asset Management practices over a number of years, creating a strategy to deliver the asset management policy will build on that work and help to bring improved levels of service to the public.

This Strategy will support the Business Plan for not only the development and continuity of the Asset Management approach but for the long term aims and objectives of the Economy, Transport and Environment Department to be realised.

This document is the basis from which the Council will continually review its approach, develop its asset management practices and, where necessary, identify and quantify improvements.

I2 Legal Duties on Derbyshire County Council

Derbyshire County Council has a number of legal duties, the most relevant to asset management are, but not limited to:

The Highways Act 1980 – This places a duty on the Highway Authority to maintain the public highway network in a condition that is safe for users. The public highway network includes all roads, footways, footpaths and verges, which the highway authority has responsibility for.

The Equalities Act 2010 – A requirement of this Act requires the Council to consider the needs of all individuals in making society fairer by tackling discrimination and providing equality of opportunity for all.


In the context of this document, the Act enacts a duty on the Council to consider the requirements of persons with particular protected characteristics, e.g. Age and Disability, when establishing procedures for the management of assets.

By taking account of the requirements of certain protected characteristics, the Council will be able to ensure, as far as is reasonably practical, continuity of the use of various highway assets throughout the County, whilst providing a safer and more equal environment for all users in terms of the use of the highway network.

I3 Drivers for Highway Asset Management Strategy

There are number of key drivers behind the development of improved highway asset management at Derbyshire County Council, these include:

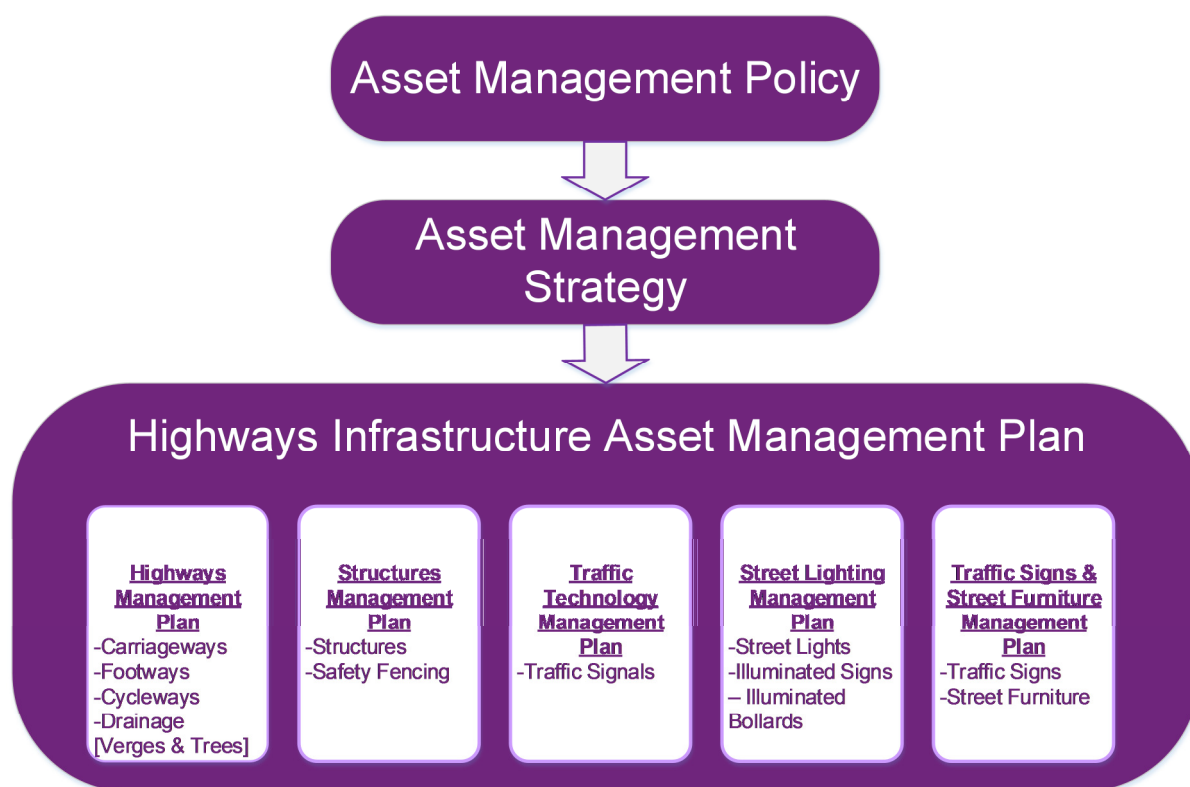
- **Good Practice** - It has been recognised as good practice to use Asset Management principles for managing highway networks.
- **Highways Maintenance Efficiency Programme Guidance**
- **Department for Transport Funding** - £578 million of funding has been set aside for an incentive fund scheme, which rewards councils who demonstrate they are delivering value for money.
- **ISO55000** – International standard for asset management which includes a requirement for asset management policy and strategy for organisations.
- **ISO 140001** – Environmental Management

 DERBYSHIRE County Council Improving life for local people	TECHNICAL POLICIES & HIGHWAY INFORMATION Highway Infrastructure Asset Management Strategy	
Issue Date: 30 Sept 2015	Amendment Number: 0 (First Edition) 4th DRAFT	Page 3 of 20

SECTION 1 - Asset Management Framework in Derbyshire

1.1 Context

- 1.1.1 The Asset Management Strategy sits within a wider collection of Asset Management documents which support the application of asset management principles to managing the local highway network. The diagram below illustrates key documents of this framework.



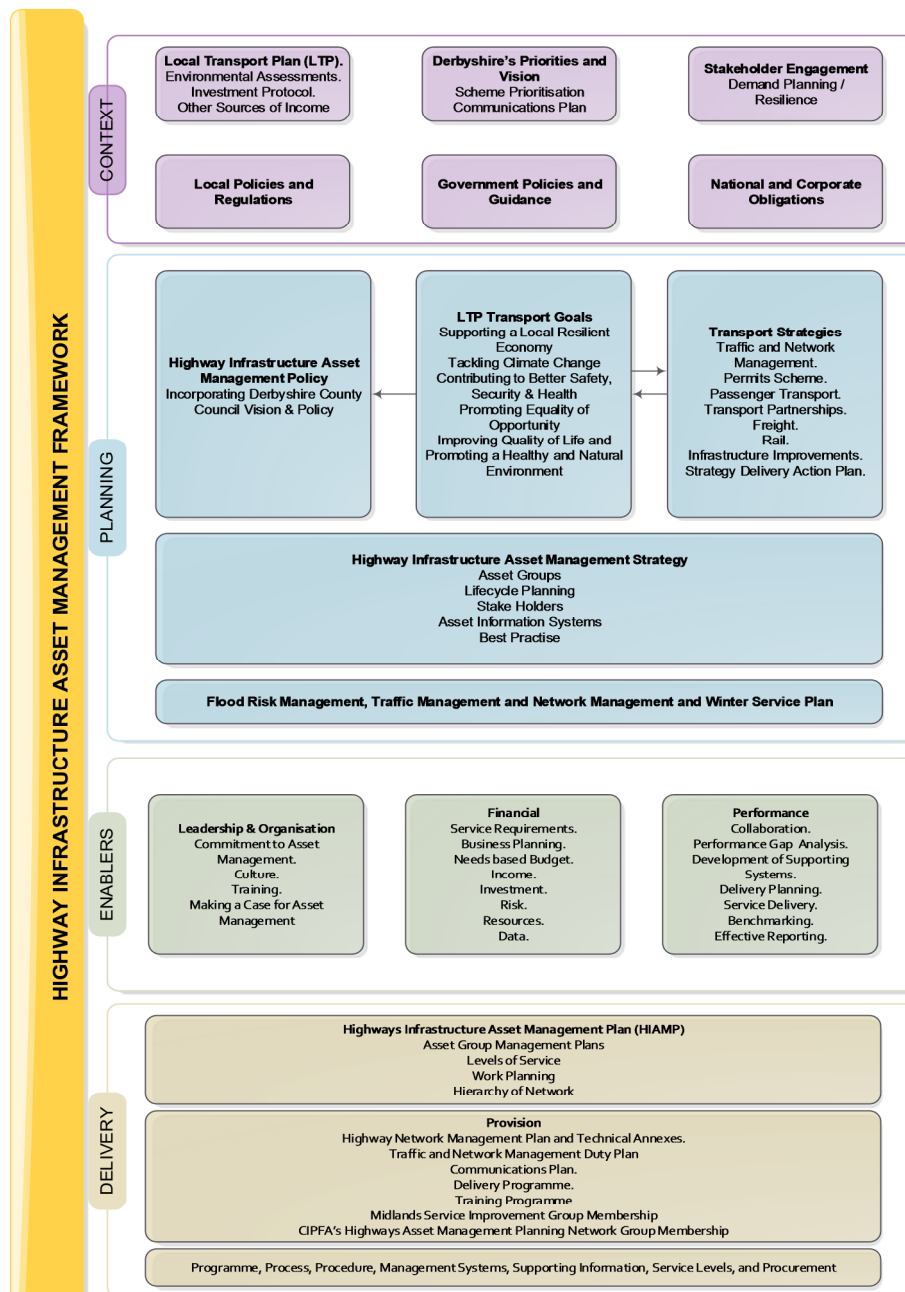
1.2 Framework

- 1.2.1 To support the development of this Asset Management Strategy a framework has been produced, based on good practice guidelines, this framework is shown in 1.2.4.
- 1.2.2 The Framework comprises the activities and processes that are necessary to develop, document, implement and continually improve asset management.
- 1.2.3 The Framework is presented in four parts:
- Context** – This describes the context for highway infrastructure asset management, the Council and the environment, within which the local highway service is delivered.

- b. **Asset Management Planning** – This describes the key activities and processes for asset management planning and shows how these should be applied to highway infrastructure assets.
- c. **Asset Management Enablers** – This describes the enablers that support the implementation of the Asset Management Framework.
- d. **Delivery** – This describes the procedures, processes and systems, etc, that support and provide the delivery of the framework.

1.2.4

The Asset Management Framework below simply identifies the relationships between asset management, national and local influences and dependencies that are in place to deliver these services and support continual improvement in highway asset management.



SECTION 2 – STRATEGY & PLAN PROCESS

2.1 Vision

- 2.1.1 This Strategy aims to align infrastructure asset management with the Council's priorities and organisational vision, and still achieve substantially improved value for money and better maintenance work, when compared to some current practices.

Derbyshire County Council's Vision

To improve the life for local people by delivering high quality services

- 2.1.2 This principally involves the development of a systematic approach to maintenance by investing in the use of the latest asset management techniques.

2.2 Lifecycle Planning

- 2.2.1 In line with current national guidance and good practice, Derbyshire is developing a lifecycle approach to managing its highway maintenance activities. Considering how long specific maintenance treatments last, the relative cost of treatments and the levels of service provided are essential pre-requisites to good asset management.
- 2.2.2 A key component is maximising the life of an asset whilst minimising the budget and resource implications. The lifecycle plans consider the whole of the assets' life and 'cost modelling' maps. The investment required to maintain the asset over a long term period of 15 - 20 years for most highway assets, this will be over a much longer term for Highway Structures.
- 2.2.3 This approach enables planned maintenance to be carried out on the network at the right time in order to achieve value for money, delivering the agreed Levels of Service and achieving the objectives from performance monitoring and continuous improvement.
- 2.2.4 Derbyshire has also developed a systematic approach to assessing whether assets are still appropriate and required, or if they should be decommissioned. This is being done through the Highways Asset Review and Reduction Programme (HARRP), focusing initially on road traffic signs but to be extended to all assets.

2.3 Risk Management

- 2.3.1 An assessment of the risks and consequences, when defining how the highway infrastructure is to be managed, will be undertaken to give an understanding of the risks. This will include establishing of inspection regimes, setting condition standards, determining priorities and programmes for effective asset management, and procuring the services.
- 2.3.2 This Strategy is continually developing to manage these crucially important risks, together with other key risks, which are:
- Network loss or serious failure
 - Asset loss or damage
 - Reputation
 - Operational
 - Environmental
 - Financial
 - Contractual
 - Service reduction or failure
 - Future demand / resilience

2.4 Forward Work Planning

- 2.4.1 This Strategy will enable a 5 – 10 year forward works 'strategic' budget to be identified for all transport assets.
- 2.4.2 It will also provide clear indications as to the nature of planned maintenance required to maintain the network, as a whole, by considering asset condition and lifecycle costs against the provision of the desired levels of service, and ultimately, deliver the budget and works programmes.
- 2.4.3 The Forward Works Plan is currently focused on the Carriageway asset group, Footways and Structures will follow on once this is complete. The Forward Works Plan will provide a work bank that is prioritised in the Annual Service Plan within available budget.
- 2.4.4 The Forward Works Plan will show the collective works backlog, it shall make clear what level of funding is required to reduce the backlog and provide agreed Levels of Service.

SECTION 3 – STAKEHOLDERS

3.1 Officer Workshops

To be held on 5/10/2015

3.2 National Highways & Transportation (NHT) Satisfaction Survey

- 3.2.1 Derbyshire County Council participates in the NHT survey to measure the public's satisfaction with the network and what elements are of greatest importance to them. This Asset Management Strategy will help deliver a good service to the public in the areas felt to be the most important. The top three areas ranked by importance in the 2014 survey were:
- 1) Highway Condition
 - 2) Safer Roads
 - 3) Pavements

3.3 Level of Service

- 3.3.1 The Strategy and Plan develop and document the Levels of Service that support the Council's community outcomes based on customer expectations, statutory requirements and the road user hierarchy of the network which will determine a level of service appropriate to the level of use.
- 3.3.2 Four Key Principles were outlined in the Well Maintained Highways Code of Practice, published in 2005 and updated in 2013. These have been adopted in Derbyshire for highway asset management. To manage our highway assets, these key principles have been developed into aims and levels of service.

Key Principle	Aim	Level of Service
Network Safety	Ensure that all highway assets are in a safe condition whilst reducing road traffic casualties.	To manage the risks associated with using Derbyshire's highway network.
Network Serviceability	To maintain the current network condition and improve, where possible and required to meet Derbyshire County Council's service objectives.	Develop a network to meet local and national needs.
Network Sustainability	To minimise the cost of maintaining and operating the highway network over time, whilst supporting improvements to the environment and local communities.	Provide affordable management of the highway network which reduces impact on the environment.
Customer Service	To deliver best value and locally focused solutions.	Provide informed and timely customer responses suited to the needs of local people.

SECTION 4 – STRATEGY FOR MAIN ASSET GROUPS

4.1 General

In this section, Levels of Service are only described in brief terms, but more concise standards and targets are mentioned in greater detail in each respective asset group in the Lifecycle Plan element of the Highways Infrastructure Asset Management Plan (HIAMP) documents.

Asset Management Principles - All of the major groups will be managed using asset management principles contained within the Well Maintained Highways Code of Practice, published in 2005 and updated in 2013. These are Network Safety, Network Serviceability, Network Sustainability and Customer Service as described in 3.3 Levels of Service.

Preventative Approach to Maintenance – For all asset groups the Council developing a preventative approach to maintenance. This means that rather than reacting to a defect, such as a pothole, the Council is looking to prevent the pothole forming in the first place where possible. This planned preventative approach should deliver greater value for money and is based on asset condition information.

4.1.1 Carriageways

- 4.1.1.1 Derbyshire's carriageways are the largest and most valuable highway asset group, currently valued at £5.9 billion out of a total Highway Infrastructure value of £7.4 billion, the preferred outcome of this Strategy is to improve the overall condition and close the performance gaps, where appropriate.
- 4.1.1.2 The Strategy targets increased investment in carriageways in order to arrest the progressive deterioration that was occurring prior to 2012 / 13.
- 4.1.1.3 **Desired Outcome** - to deliver a sustainable improvement in overall condition, including:
- Priority Investment** – For a preventative strategy to be adopted to deliver the best value for money and budget priority for preventative works. These preventative works will be priorities according to the highway network route hierarchy.
 - Investment that recognises the differences in condition between the various road user hierarchies. This will support the local transport goals for Derbyshire and support the resilient network.
 - Continued investment in drainage maintenance and improvements.
 - Continued investment in safety related asset maintenance and upgrades.
 - The development of a Lifecycle approach for all carriageways.
- 4.1.1.4 **Preventative Methodology** - This will continue to be pursued by investing a greater proportion of the available budget to treat roads in the early stages of deterioration. This will target assets that do not currently need full structural renewal, which should extend the assets whole life by arresting / delaying deterioration.
- 4.1.1.5 **Projected Condition** – The condition profiles, in the Pavement Management System (PMS), assume that a small element of revenue funded works will contribute to the overall condition of the carriageways. An example of revenue work contributing in this way would be locations where machine patching has been undertaken for substantial areas of carriageway repair.

4.1.2 Footways

- 4.1.2.1 Following a four year footway condition survey contract for all Derbyshire County Council footways, data is now available for the entire footway network. This data will be used, as part of the process that determines the hierarchy level of footway network sections, and the appropriate level of service that it is established for them.
- 4.1.2.2 The priority being to address the condition of the higher use footways.
- 4.1.2.3 **Desired Outcome** - To improve the condition of the highest trafficked footways, maintain other footways in a 'steady state', will assess rural footways and their usage to determine whether to maintain or to allow some to move to rural paths, including:
- Priority Investment** – For the investment required to improve the condition of the most heavily used footways.
 - Footway investment on the remaining footways shall be targeted at a 'no worse than at present' condition.

c. A preventative strategy is being adopted by continuing to use various surface treatments where appropriate.

d. The development of a Lifecycle approach for all footways.

4.1.2.4 Investment will be targeted, using a risk based approach, for those footways highest in the footway user hierarchy. Over a five year period, a significant improvement in condition of the highest use footways will be possible.

4.1.2.5 Residual funding is predicted to enable to maintain steady state in the overall condition of the remaining footways by taking advantage of the use of preventative treatments where possible.

4.1.2.6 **Preventative Methodology** – The majority of the County's footways have a bituminous surface. A system of preventative treatments such as slurry sealing, offers the opportunity to deliver improved condition at a lower cost. A programme of preventative treatment will form part of this Strategy and will ultimately be incorporated into the Footway section of the Highway Infrastructure Asset Management Plan (HIAMP).

4.1.2.7 **Projected Condition** – The condition profiles, from the surveys undertaken, assume that a small element of revenue funded works will contribute to the overall condition.

4.1.3 Structures

4.1.3.1 **Desired Outcome** – To maintain the structure stock such that it is safe for use and fit for purpose, based on the principles of the UK Bridges Board Code of Practice – *'Management of Highway Structures'*.

4.1.3.2 The Strategy used to achieve the desired outcome will be based on Asset Management principles aimed at making the best use of resources in delivering service requirements on an aging infrastructure.

4.1.3.3 **Inspection** – The condition of highway structure stock will be managed and monitored through a regime of General, Principal and Special inspections.

4.1.3.4 The use of an asset management system tool, specific to the highway structure stock will be key in assessing the condition of the stock using accredited inspectors and nationally agreed condition indicators.


4.1.3.5 **Priority Investment** – The inspection regime will assist to prioritise available funding by using a combination of condition indicators, route hierarchy and strategic importance of the structure.

4.1.3.6 This will enable schemes and works to be identified that are required to maintain the structure stock. It will include; routine and preventative maintenance at a sustainable level to reduce the rate of any decline in the condition of the structure stock and developing a Lifecycle approach for all structures.

4.1.3.7 **Structural Assessment** – The bridge stock will be managed for structural capacity through structural assessments and monitoring of abnormal loads. There are bridges that are classed as sub-standard in their load carrying capacity and these are managed through a monitoring regime and, where appropriate, with weight restrictions.

4.1.3.8 It is intended to reduce the number of bridges defined as sub-standard through a strengthening programme.

4.1.3.9 **Reactive Maintenance** – Funding will be made available for reactive and emergency repairs to the structure stock as the need arises. These works will be identified through the inspection regime, but

 DERBYSHIRE County Council Improving life for local people	TECHNICAL POLICIES & HIGHWAY INFORMATION Highway Infrastructure Asset Management Strategy	
Issue Date: 30 Sept 2015	Amendment Number: 0 (First Edition) 4th DRAFT	Page 10 of 20

also from reports from users of the network and accident damage. This will be based on safety and fit for purpose principles.


- 4.1.3.10 **Design** – Where appropriate, we will provide a design capability for any new structures and maintenance of structural elements required as an integral part of highway schemes containing multiple asset groups.

4.1.4 Highway Drainage

- 4.1.4.1 For approximately 20 years, scientists have been forecasting the possible effects of climate change, which includes possible increases in flood events in the UK. The severe flooding events in 2000, 2007, 2009 and 2012 are a reminder of the risks posed by flooding, not only to residential and commercial properties, but also to some of the Council's own assets.
- 4.1.4.2 It is recognised that the Authority's drainage systems do not operate in isolation and interact with drainage systems and watercourses, which are operated and maintained by others. Therefore, the Council has to be aware of and manage a more complex set of systems and relationships than simply its own.
- 4.1.4.3 Derbyshire County Council has adopted an optimised approach to managing drainage assets. It has developed an Intelligent Gully programme which has seen a step change in how information is gathered and used to manage its drainage asset. In 2012, the Highways Maintenance Efficiency Programme (HMEP) published Guidance on the management of highway drainage asset. In this, they provided 12 recommendations for implementation by Local Highway Authorities. Derbyshire has sought to align their maintenance to these recommendations.
- 4.1.4.4 This Strategy will continue to provide annual investment in drainage improvement and inventory data collection by recognising that positive drainage systems will help to prevent flooding and prolong the life of other assets like carriageways.
- 4.1.4.5 This investment will provide a mechanism to manage flooding issues and develop solutions for reducing risk that will be capital funded and assist in the development of a Lifecycle approach for all highway drainage assets.

4.1.5 Street Lighting

- 4.1.5.1 The prime focus for street lighting is to ensure that all lighting, which the Council maintains, is regularly inspected for correct operation. The Council also seeks to deliver a sustainable improvement in the overall condition of the asset through investment to identify and replace those assets which have deteriorated and are at the greatest risk of collapse.
- 4.1.5.2 The Council will:
- Focus 'invest to save' funding on LED lights and dimming technology to reduce energy consumption (by 30 per cent of 2013 levels by 2018) and increase the lifecycle / reduce maintenance of its street lighting lanterns.
 - Focus capital spending on the replacement of columns at risk of collapse over 6m in height on a 10 year programme.

 DERBYSHIRE County Council Improving life for local people	TECHNICAL POLICIES & HIGHWAY INFORMATION Highway Infrastructure Asset Management Strategy	
Issue Date: 30 Sept 2015	Amendment Number: 0 (First Edition) 4th DRAFT	Page 11 of 20

- c. Focus 'invest to save' funding for the replacement of columns at risk of collapse in the 5m and 6m height range (by 2018).
- d. The development of a Lifecycle approach for all street lighting.

4.1.6 Traffic Signals

- 4.1.6.1 A number of traffic signal installations that have, or soon will have, reached the end of their life have been identified and they form the basis for the traffic signals strategy.
- 4.1.6.2 **Desired Outcome** – To retain a reliable and safe traffic signals inventory, including:
 - a. **Priority Investment** – Highway priority junctions and signal controlled crossings that are in need of replacement.
 - b. **Refurbishment Programme** – On-going replacement needs are driven by age of site, outdated equipment and deterioration of condition / reliability. Current funding levels allow for the retrofitting of LED units onto existing equipment. Sites around 12 years old do not benefit from this as the anticipated 20 year Lifecycle does not make it viable. The refurbishment programme will include a review of whether traffic signals are still required, this review will be a laid out process to ensure consistency.
 - c. The development of a Lifecycle approach for all signals.
- 4.1.6.3 **Reliability** – The reliability of the traffic signal inventory will continue to be met by a regime of inspections and reactive repair.
- 4.1.6.4 **Refurbishment Programme** – A programme of refurbishment will address sites where, due to age or outdated equipment, the future reliability of the site could be at risk. This list also includes sites where there is a need to upgrade in order to improve traffic flows through the junction. The programme has been prioritised as follows:
 - a. **Priority One Works - Junctions and Communications Works** – Essential communications cabling replacement works plus refurbishment of high priority junctions.
 - b. **Priority One Works – Signal Controlled Crossings** – High use crossings where work has been identified to provide added value.
 - c. **Desirable Reliability Works** – Junctions that are not priority one works, but have been identified as needing attention over others, including signal controlled crossings, because they are a rare controller or because there is added value, such as the possibility of adding in an additional stage to the sequence.
 - d. **Priority Two Junction Works** – The remaining junction sites that are at or near to the end of their lifecycle or will exceed 20 years old by 2020.
 - e. **Priority Two Signal Controlled Crossing Works** – These are the remaining signal controlled crossings that are not included above.
- 4.1.6.5 This Strategy is designed to complete priority one works within 10 years' time.
- 4.1.6.6 All new signal installations will be ELV / LED technology.

4.1.7 Safety Fencing & Vehicle Restraint Systems (VRS)

4.1.7.1 **Desired Outcome** – To maintain Safety Fencing and VRS systems that are fit for purpose.

4.1.7.1.1 The Strategy used to achieve the desired outcome will be based on asset management principles aimed at making the best use of resources in delivering service requirements on an aging infrastructure.

4.1.7.2 The use of an asset management system to record inspections will be key in assessing the condition of the stock using accredited inspectors and nationally agreed condition indicators.

4.1.7.3 **Priority Investment** – The inspection regime will assist to prioritise available funding by using a combination of condition indicators, route hierarchy and accident history. The Road Restraints Risk Assessment Process (RRRAP) process will be used to assess the requirements for VRS systems and whether they are required or appropriate as they reach their next maintenance intervention.

4.1.7.4 This will enable schemes and works to be identified that are required to maintain the Safety Fencing and VRS stock, and will include; routine and preventative maintenance at a sustainable level to reduce the rate of any decline in the condition of the stock and developing a Lifecycle approach for all assets.

4.1.7.5 The Safety Fencing and VRS stock will be assessed in accordance with national recommendations and risk assessments to ensure it is appropriate to the location and the road hierarchy.

4.1.7.6 **Reactive Maintenance** – Funding will be made available for reactive and emergency repairs to the Safety Fencing and VRS stock as the need arises. These works will be identified through the inspection regime, but also from reports from users of the network and accident damage. This will be based on safety and fit for purpose principles.

4.1.7.7 **Design** – Where appropriate, we will provide a design capability for any new Safety Fencing and VRS and maintenance / review of systems required as an integral part of highway schemes containing multiple asset groups.

4.1.8 Traffic Signs

4.1.8.1 **Desired Outcome** – To maintain a system of traffic signs that accord with national guidance and provide information to users to optimise safe use of the road network.

4.1.8.2 The Strategy used to achieve the desired outcome will be based on asset management principles aimed at making the best use of resources in delivering service requirements on an aging infrastructure.

4.1.8.3 **Priority Investment** – Will be addressing those parts of the network where significant changes or an increased level of risk to the safety of users, has been identified.

4.1.8.4 **Highway Asset Review and Reduction Programme** – In order to reduce the environmental impact of traffic signs, Derbyshire have begun a programme to review transport assets, such as traffic signs, to decide whether they are still necessary. If they're not necessary, they will be removed, or if they are to be kept we will check whether they can be moved or changed / reconfigured to reduce their impact on the environment and improve their effectiveness.

4.1.8.5 **Investment** – Will be the on-going review of all traffic signs to ensure they are appropriate and provide clear and concise information to the network user and in accordance with DCC's environmental code of practice for highway signs.


- 4.1.8.6 **Refurbishment Programme** – On-going replacement needs are driven by age of site, outdated signage and deterioration of condition.
- 4.1.8.7 **Reliability** – The reliability of the traffic sign inventory will continue to be met by a regime of inspections and reactive repair.
- 4.1.8.8 **Design** – Where appropriate we will provide a design capability for any new signing and maintenance / review of systems required as an integral part of highway schemes containing multiple asset groups.

4.1.9 Street Furniture

- 4.1.9.1 **Desired Outcome** – To maintain pedestrian barrier / restraint systems that are fit for purpose.
- 4.1.9.2 The Strategy used to achieve the desired outcome will be based on asset management principles aimed at making the best use of resources in delivering service requirements on an aging infrastructure.
- 4.1.9.3 **Priority Investment** – The inspection regime will assist to prioritise available funding by using a combination of condition indicators, route hierarchy and accident history
- 4.1.9.4 This will enable schemes and works to be identified that are required to maintain pedestrian barrier / restraint stock and will include; routine and preventative maintenance at a sustainable level to reduce the rate of any decline in the condition of the stock and developing a Lifecycle approach for all assets
- 4.1.9.5 **Reactive Maintenance** – Funding will be made available for reactive and emergency repairs to the Safety Fencing and VRS stock as the need arises. These works will be identified through the inspection regime, but also from reports from users of the network and accident damage. This will be based on safety and fit for purpose principles.
- 4.1.9.6 **Design** – Where appropriate we will provide a design capability for any new pedestrian barrier / restraint systems and maintenance / review of systems required as an integral part of highway schemes containing multiple asset groups.

4.2.0 Public Rights of Way

- 4.2.0.1 The Strategy targets investment in rights of way in order to arrest the progressive deterioration of the asset
- 4.2.0.2 **Desired Outcome** - to deliver a sustainable improvement in overall condition, including
- Priority Investment** – For a preventative strategy to be adopted to deliver the best value for money and budget priority for preventative works. These preventative works will be priorities according to the rights of way hierarchy.
 - Investment that recognises the differences in condition between the various user hierarchies. This will support the local transport goals for Derbyshire..
 - Continued investment in drainage maintenance and improvements.
 - The development of a Lifecycle approach for all rights of way.
- 4.2.0.3 **Preventative Methodology** - This will continue to be pursued by investing available budget to treat rights of way assets in the early stages of deterioration, which should extend the assets whole life by arresting / delaying deterioration.

 DERBYSHIRE County Council Improving life for local people	TECHNICAL POLICIES & HIGHWAY INFORMATION Highway Infrastructure Asset Management Strategy	
Issue Date: 30 Sept 2015	Amendment Number: 0 (First Edition) 4th DRAFT	Page 14 of 20

- 4.2.0.4 **Projected Condition** – Condition profiles assume that a small element of revenue funded works will contribute to the overall condition of the rights of way.

SECTION 5 – CAPITAL INVESTMENT

This Strategy and others that support the HIAMS and the HIAMP will allow a more co-ordinated approach to the provision of capital improvement and highway maintenance schemes. This will ensure that maximum value is achieved from various capital and revenue investments throughout the lifecycle of new and existing assets.

SECTION 6 – SUDDEN & RAPID ASSET FAILURE

Whilst this Strategy endorses a planned and risk based approach to asset management, there may be exceptional circumstances in which an individual asset or group of assets fail very rapidly that is beyond prediction. If this event should occur, then any planned activities will be reprioritised across all asset groups in order to expedite the inclusion of additional schemes within the respective programmes as appropriate and necessary to ensure the Council's Goals and Objectives continue to be realised.

Each asset will be looked at in greater detail as part of the HIAMP.

SECTION 7 – PLANNING CONSIDERATIONS

7.1 Development Impact

- 7.1.1 The Council recognises the importance of a thriving local economy and sustainable local communities and the effects that growth and redevelopment have on Derbyshire and its economy. However, there is a need to ensure that any new development / change of use, which is promoted through the planning process, fully considers the impact on the existing highway network and the resultant future maintenance requirements.
- 7.1.2 The Council will need to review the highway network hierarchy, where a part of the network is affected by any significant new development. This review may require part of the network to be promoted within the highway network hierarchy, the level of service provided may change in line with this.

SECTION 8 – ASSET INFORMATION & DATA MANAGEMENT

8.1 Data Requirements

- 8.1.1 Derbyshire County Council has developed the requirements for a Single Asset Management System (SAMS) which is currently being implemented. Some key functionality requirements are listed below.
- Stage Gate system – All orders will have a series of checks to ensure they align with asset management policies and priorities prior to being undertaken.
 - Information Requirement – It will ensure all the required information is present before processing orders, such as Statutory undertaker plans or pre-construction information.

- c) Asset Inventory – The system will hold the Council’s master asset inventory, this will be updated based on works orders, as built drawings, site specific surveys and a phased approach to asset audit / update.
- d) Finance – The system will have a live interface with the Council SAP system so all work costs will be visible.
- e) Customer Enquiries – These will be captured and assigned using the single asset management system.
- f) Performance Management – Internal and External Benchmarking will be undertaken in order to realise maximum efficiencies in service delivery.

8.2 Data Systems

- 8.2.1 The SAMS makes use of the ‘CONFIRM’ system and is currently being implemented by Pitney Bowes.

SECTION 9 – BEST PRACTICE

9.1 Commitment Statement

- 9.1.1 Derbyshire County Council is committed to the development and implementation of asset management good practice. The Council will look to lessons learned at a local and national level, officers from the Council will also attend:

- Midlands Service Improvement Group (MSIG)
- Conferences
- Highways Asset Management Financial Information Group (HAMFIG)
- The Chartered Institute of Public Finance & Accountancy(CIPFA) Seminars
- CIPFA Highway Asset Management Planning (HAMP) Network Seminars

9.2 Knowledge Sharing

- 9.1.2 Derbyshire is also committed to sharing knowledge of implementing asset management systems with other highway authorities. Knowledge will be shared where of interest and the Council will look to participate in working groups such as:
- Highways Asset Management Financial Information Group (HAMFIG)
 - UK Roads Board
 - Highways Maintenance Efficiency Programme (HMEP) – Connect and Share

9.3 Supporting Documents

9.3.1 There are a number of national and local documents which support this Asset Management Strategy:

National	Derbyshire
<i>UK Roads Liason Group - HMEP Highways Infrastructure Asset Management Guidance Document</i>	<i>DCC - Council Plan 2014 – 2017 – 'A Fair Deal for Derbyshire Building a Better Future Together'</i>
<i>ISO 55000 - Internation Asset Management Standard</i>	<i>DCC - Transport Asset Management Plan 2008</i>
<i>CIPFA - Code of Practice on Transport Infrastructure Assets</i>	<i>DCC - Local Transport Plan 2011- 2026</i>

SECTION 10 – REVIEW & PERFORMANCE MONITORING

10.1 Review Strategy

10.1.1 The Asset Management Policy and Strategy will be reviewed regularly. The next review will be in 2017, to ensure alignment to current national and local policies. It shall also document the current approach to asset management by the Council.

10.1.2 The Highways Asset Management Team shall be responsible for these updates.

10.2 Performance Monitoring Guidelines

10.2.1 Performance monitoring shall be detailed in the individual asset group management plans which collectively form the HIAMP.

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**Derbyshire County Council
County Hall
Matlock
Derbyshire
DE4 3AG**

Call Derbyshire: 01629 533190

Text us: 86555

contactcentre@derbyshire.gov.uk

www.derbyshire.gov.uk