Hampshire's Highway Asset Management Strategy

1 Implementing Effective Asset Management

1.1 Hampshire County Council recognises the importance of highway infrastructure in the context of the well being of all who use it. The County Council is committed to the good management of the highway asset not only for now but for future generations and recognises that asset management provides the right approach for efficient management of the network to deliver the required levels of service.

1.2 Hampshire has therefore been developing and implementing highway asset management principles over a number of years. A Transport Asset Management Plan (TAMP) was drafted in 2005, linking various key documents to provide a consistent and uniform approach to the management of the highway infrastructure. Hampshire's first Highway Asset Management Policy and Strategy documents were approved by the Executive Member and issued in 2011 and became key to embedding highway asset management principles. In 2013 the Highway Infrastructure Asset Management Guidance (HIAMG) endorsed this approach and presented it as a best practice case study in the Guidance. Since then the documents have been regularly reviewed and updated in line with national guidance and good practice.

1.3 Hampshire's asset management approach gives priority to managing and maintaining asset information, promoting its effective use and developing processes that deliver required outcomes, through the use of appropriate tools. The information, systems and processes in place are used to support investment decisions and help to set levels of service, performance targets and manage risk.

2 Asset Management Framework in Hampshire

2.1 This Asset Management (AM) Strategy sits within the wider asset management framework *(figure 2)* and is one of the key strategic documents related to the delivery of the Council's highway services.

2.2 Encompassed within the AM framework are two key documents; the Council's Highway Maintenance Management Plan (HMMP) and the Traffic Management Policy Guidance (TMPG), both contain the approved and adopted policies and policy guidance in respect to the Council's legal requirements and its service provision. These documents reflect the guidance set down in the national Code of Practice. The original strategy was based on the Code of Practice '*Well-maintained Highways'.* This Code was superceded in October 2016 with 'Well-Managed Highway Infrastructure: A Code of Practice'. One of the key objectives of this strategy is to align with the new Code within the 2 year time

frame and in particular to have developed a 'Risk Based Approach' with supporting evidence to key elements of the highway service, see section 9.

2.3 The Economy Transport and Environment Department has set up an organisational structure that reflects the importance asset management plays in the delivery of highway and transport services. This structure enables; the development, continual review and the embedding and promotion of asset management best practice, described in Figure 1.

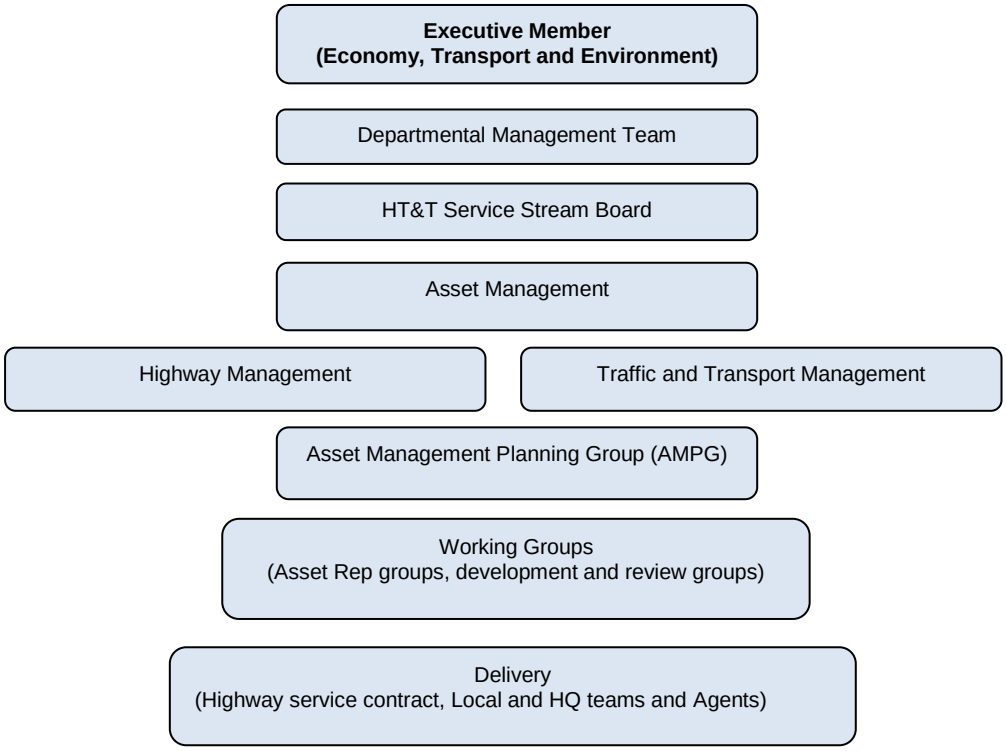

Figure 1: Organisational Structure

2.4 The implementation and management of this strategy is the responsibility of The Asset Management Planning Group (AMPG), whose role is to develop, embed and provide direction for the continuous improvement of asset management practices within the Highways, Traffic and Transport Service Stream. The aim of the Asset Management Team (AMT) is to support the AMPG in promoting the principles of asset management by implementing the Group's associated improvement actions.

2.5 This Asset Management Strategy sets out how the Department's Asset Management Policy is being achieved. In particular, it describes how Hampshire continues to work towards implementing an asset management approach for our highway network. It provides the framework for delivering our corporate priorities through effective, informed and evidence based decision making.

2.6 This strategy serves as a basis for the development of detailed asset management planning and its implementation, including enabling the organisation, its technology and its processes to adapt to change. It is based on the framework shown schematically in Figure 2 and outlined in the following sections. The framework identifies the relationships between asset

management, the influences of corporate and national drivers and the influences of delivery, budget and performance. The Asset Management Strategy informs priorities in the delivery planning process and therefore supports continual improvement in the management of the highway asset.

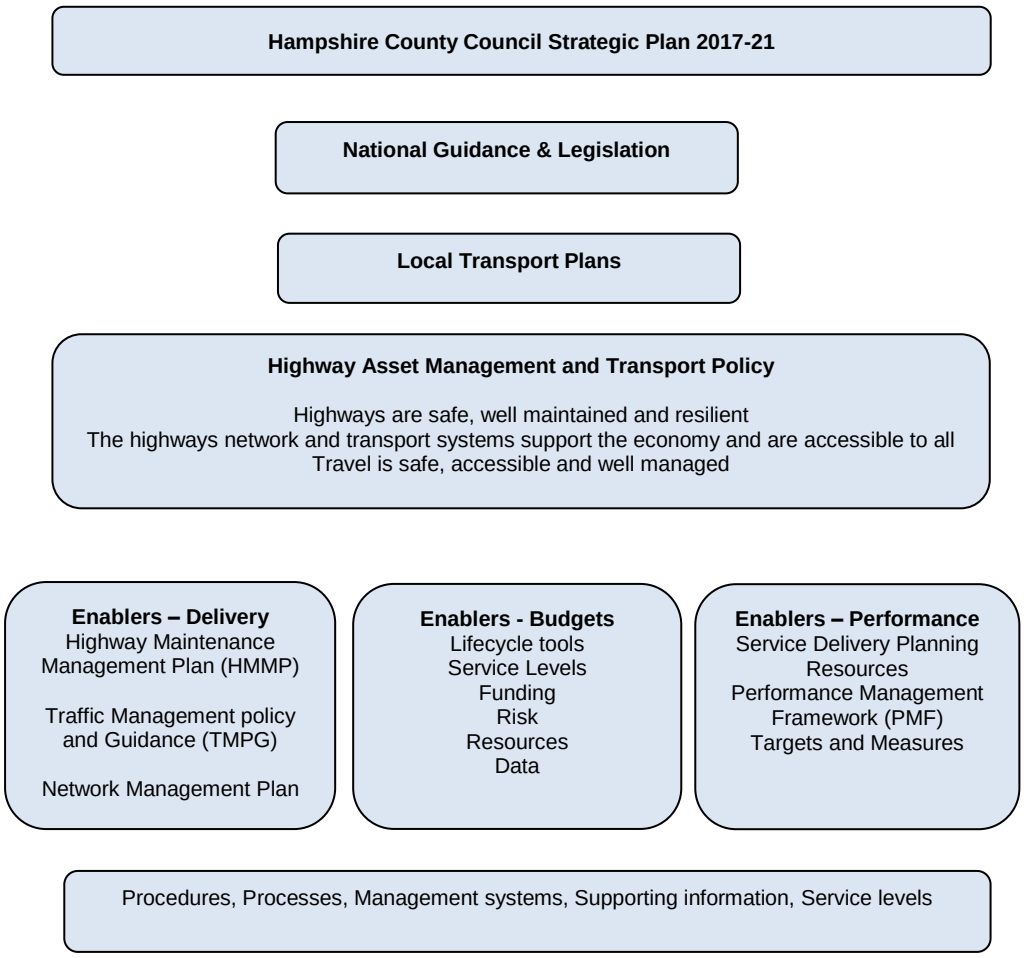

Figure 2: Asset Management Framework

2.7 The framework can be presented in greater detail to illustrate the roles and relationships of groups and teams throughout the department and the Authority. See figure 3 below, Delivering Hampshire Highways Asset Management.

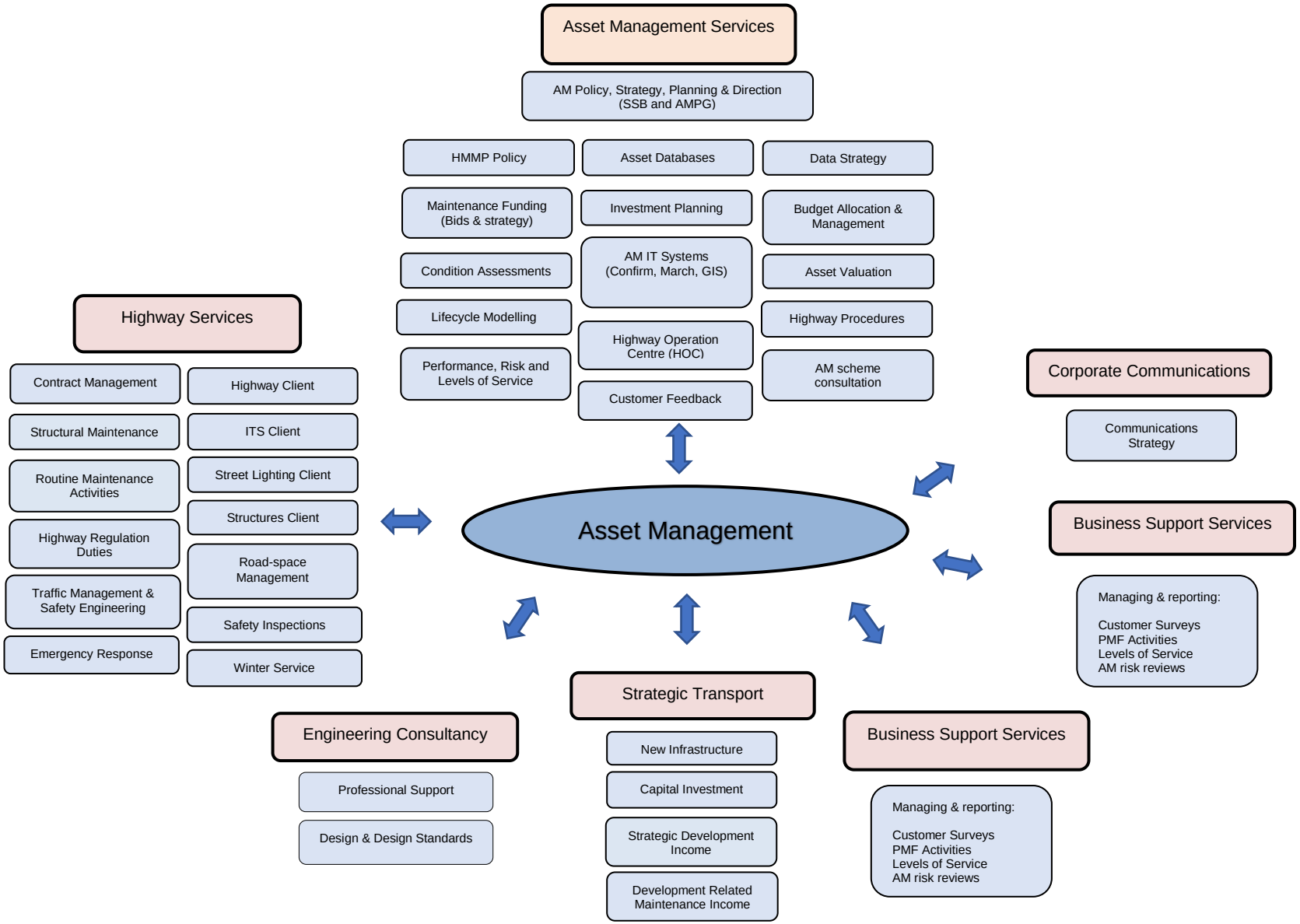

Figure 3: Delivering Hampshire Highways Asset Management Framework

2.8 This strategy covers all maintenance led activities from capital and revenue funding sources. A major review of processes and procedures relating to capital improvements, housing and other highway related development schemes is underway and the concepts of whole life cost and designing for maintenance for new construction are due for implementation in 2018.

2.9 This strategy explains how individual asset groups and components fit in the framework, describing how the asset management planning process is implemented in the Department and refers to the tools currently employed, as well as links to other key documents. Finally, the strategy describes how Hampshire Highways will embed a continuous improvement approach to highway asset management, keeping abreast of, and implementng national developments and good practice and in return helping to advance and influence the national asset management agenda.

3 Highway Asset Management Objectives

3.1 The Asset Management Framework illustrates the relationship between Hampshire County Council's Strategic Plan and the delivery of highway asset management practices. Our highway asset management objectives translate the corporate aims and objectives into asset management terms and these in turn inform the direction for asset management. The objectives described provide direction for; performance management, management of risk, decisions on asset data and information, service delivery, budget allocation and investment planning. The AM objectives are:

Safety: To provide a safe network where accidents and injuries to road users are kept to a minimum.

Condition: To monitor and maintain network condition and deliver long term solutions.

Accessibility: To maintain and where possible improve accessibility for all by minimising disruption and avoiding restrictions on the network.

Customers: To provide customers with accurate and prompt responses to all enquiries and highway related services.

Value for Money: To continue to improve highway asset management practices and use our limited resources efficiently

Sustainability: To promote whole life solutions and reduce waste by increasing the use of recycled materials.

4 Strategy for Individual Assets

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

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

- Strategic Transport objectives (the LTP)
- Investment and service delivery planning
- Performance measures, targets and levels of service (LoS)
- Key risks to the service – both strategic and operational

4.3 Inherent to this process is a need to understand the influence of budget decisions on customer satisfaction and the delivery of corporate priorities. Understanding the impact of investment decisions and their effect on the asset and the people who use it is important when setting maintenance budgets. To this end, a Needs Based Budgeting (NBB) approach has been developed. This approach relates to all highway maintenance budget allocation decisions and is supported using proprietary lifecycle management tools for the major assets.

4.4 For the delivery of the highway service, Hampshire has a Highways (Operations) team, largely based in highway depots, who deliver all operational functions including the delivery of structural maintenance programmes. The Highways (HQ) team, based in Winchester, lead and support all aspects of Asset Management and administer the Hampshire Highways Service Contract.

4.5 Hampshire has adopted a lifecycle approach to managing its highway maintenance activities. Understanding how long specific maintenance treatments last, the relative cost of these treatments and the Levels of Service (LoS) provided are essential pre-requisites to good asset management. Hampshire's goal is to improve public satisfaction with its highway service whilst maintaining value for money and continuing to provide a safe highway network, in line with corporate priorities.

4.6 The scope and depth of information used to support NBB decisions will vary dependent on a number of factors, including: importance, asset value, age, deterioration etc. The asset management objectives and the risk and performance management frameworks then provide evidence to support and inform service delivery planning.

4.7 This approach allows budgets to be split at a strategic level based on a common set of criteria. Successful implementation of this approach relies on good understanding of the asset, its current and future performance requirements, expenditure and customer feedback, as well as an understanding of the various service levels that may be achieved for different funding options.

4.8 This understanding can only be achieved through reliable, current and robust data. Hampshire has developed data and information strategies, which prioritises its data

collection needs, data management requirements and the IT infrasructure necessary to process and present this information, (see Section 7 below).

5 Asset Groups and Components

5.1 Hampshire's highway asset has been divided into key asset groups, components and related activities. This approach has been in place for many years, but it is continually refined to improve our works ordering and budget management processes with the service provider. For instance, in collaboration with the service provider works activities and their records are continuously reviewed and improved. Therefore, expenditure against specific activities can be recorded more accurately and this improves the works ordering processes and budget monitoring. Management reports are more detailed and this in turn supports continuous improvement and investment planning decisions.

5.2 Dividing the asset into component parts and identifying the relative costs and demand for planned, routine and reactive maintenance activities is considered an essential process to achieve continuous improvement in Hampshire's approach to asset management. Asset data is key to supporting any decisions relating to funding and provides essential information for delivering service efficiencies. Continuously improving data collection and data management processes continues to be a key objective, see section 9.

6 Asset Management Planning

6.1 Process and Procedure

The asset management strategy supports continual review and improvement of its policy guidance, processes and procedures ensuring, as far as possible, that the standards identified in relevant legislation and codes of practice are adopted. In addition, this provides our customers with clear and concise information regarding the service that can be expected and the roles, responsibilities and duties that the Highway Authority is required to fulfil.

6.2 Performance, Risk and Service Delivery Planning

To assist and inform the asset management planning process a Performance and Risk Management Framework has been developed. This framework connects strategic aims to a set of targets and measures. It identifies key risks and informs service delivery planning, allowing projects and programme resources to be allocated, reflecting the strategic aims of the service.

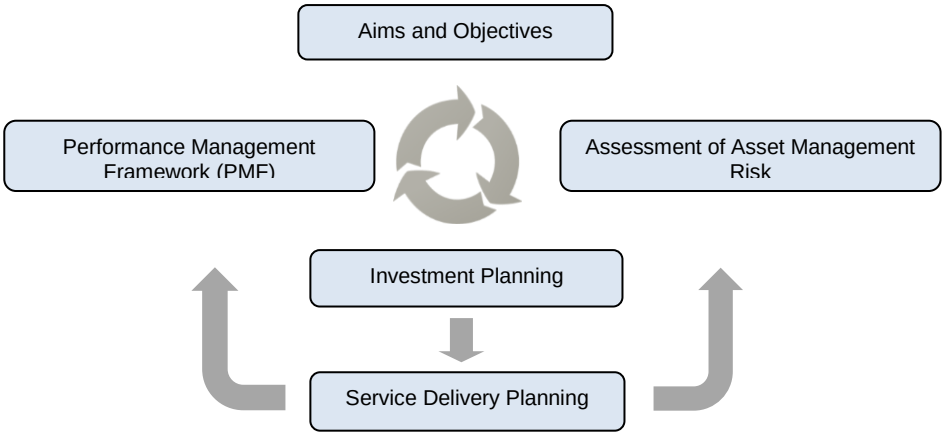

Figure 4: Service Delivery Planning Process

Hampshire currently have 18 strategic measures relating to the asset management objectives of; Safety, Condition, Accessibility, Customers, Value for Money and Sustainability.

Each one of these measures is linked directly to a target. The targets and measures are reviewed regularly by the Highways, Traffic and Transport Service Stream Board to identify and resolve any delivery issues. The measures themselves are reviewed annually to ensure they are current and continue to meet the objectives set out in this strategy. The outputs from this process inform the service delivery planning for the coming year.

6.3 Needs Based Budgeting

Hampshire considers that NBB is fundamental to good asset management planning and robust investment and lifecycle planning decisions. Substantial resources have therefore been focussed on and will continue to support the development of processes and tools to inform budget decisions at strategic, tactical and local levels.

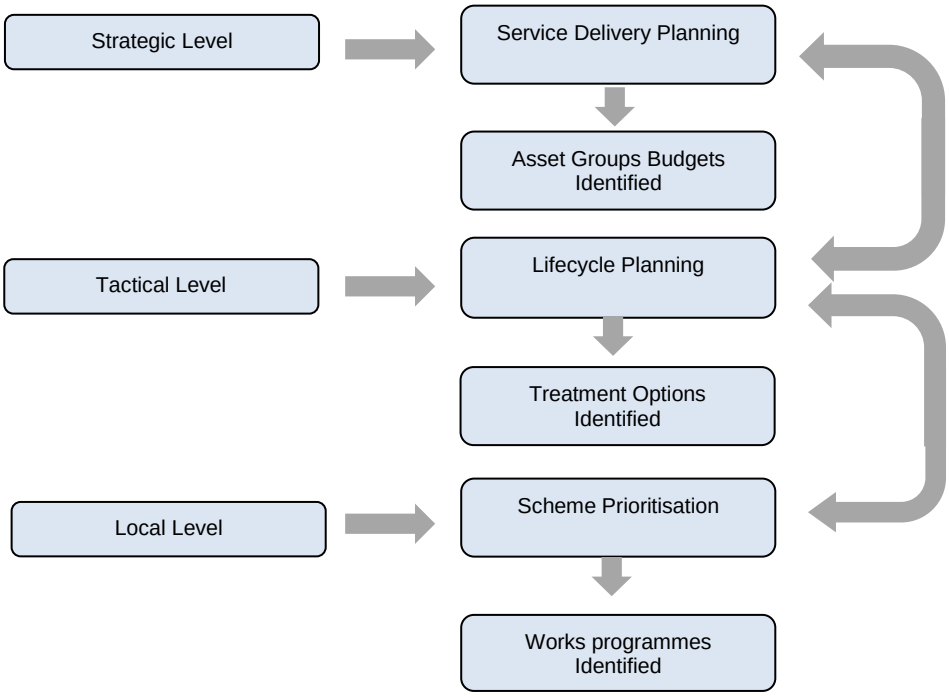

Figure 5: Budget Allocation Process

This approach allows a consistent budget allocation process and relates high level aspirations to scheme level decisions.

6.4 At the **strategic level** the process illustrated in 6.2, uses the information gathered to for the service delivery planning process, Asset Management Objectives and the outputs developed from lifecycle analysis provide information for the senior decision makers to formulate budget allocations across assets.

6.5 The approach is evidence based and relates high level objectives to asset management; objectives, performance, risk and levels of service. It is flexible and allows decision makers to assess the impact of different investment options. Targeted investment and informed decisions are therefore encouraged, by identifying the level of service that can be achieved for a given budget allocation.

6.6 The methods employed to deliver **tactical level and local level** decisions vary. For major assets, such as carriageways and structures, proprietary toolkits with deterioration modelling built into them are used to develop investment options and ultimately maintenance programmes. For smaller or less valuable assets, less sophisticated tools are employed. This may include a combination of lifecycle assumptions based on inventory data, condition and hierarchy. These methods identify the relative maintenance needs of an asset component and provide options which relate to specific budgets and outcomes. However other information including customer feedback, local issues or constraints and engineering judgement will inform and prioritise the final work programmes.

6.7 **Gross Replacement Cost and Depreciated Replacement Cost**

In 2013 CIPFA, supporting HM Treasury policy, released a Code of Practice for valuing Local Authority highway infrastructure assets. The Code set out the processes and requirements that were intended for 2017 reporting to the HM Treasury for Whole of Government Accounts (WGA). In 2017 HM treasury put the process on hold until further notice and there is no current obligation to provide GRC and DRC valuation figures. However the development of the valuation process and the CIPFA guidance did engender good asset management disciplines such as the need for accurate, well-managed and detailed inventory information and performance data. As these principles are now well established Hampshire Highways continue to calculate GRC and DRC figures which can be useful indicators of asset management performance and investment.

6.8 The strategy developed with Finance colleagues for WGA provided useful information for the budget setting process and therefore these valuations continue to be made available.

6.9 Hampshire embraces this approach and has developed the processes for collating the data needed to meet the WGA requirements, whilst developing good asset management practices that support continuous improvement in the delivery of the highway service.

6.10 **Communications and Stakeholder Engagement**

The Communications Plan for highways and highway asset management is available on line and is reviewed annually. Any feedback received in the year is considered at the annual review and, as appropriate, amendments to the plan are incorporated in the document for the following year.

7 Data Management and Information Systems

7.1 Hampshire recognise that good and robust data is key to implementing asset management and delivering potential benefits. However, the Authority believes that the collection, management and use of data needs to be based on a process, which identifies;

- Ownership
- Data Objectives – business case
- Responsibilities
- Costs to manage and maintain data

To this end, an asset information strategy has been established that provides guidance for the optimum use of available data. This information strategy encompasses; data needs (data collection decisions), data management, highway management IT systems, reporting requirements (business information) and corporate IT needs. It will be used to inform current data collection needs for both inventory and condition information. Key drivers for this include:

- The need to provide evidence based decisions
- Business need
- Performance monitoring
- Understanding customer and stakeholders wishes
- Valuation and depreciation of the highway asset
- Providing sufficient data management resources

The process is managed by the AMPG.

7.2 Hampshire recognise that effective asset management and its implementation relies on systems, that can be used as tools to support decision making at all levels. The following tools are currently in use:

- Confirm, highway management system, covering most of highway management needs, including works order, public enquiries, street works, structures, network management, inspection process;
- MARCH - United Kingdom Pavement Management System (UKPMS);
- Hampshire's own carriageway lifecycle modelling tool
- Atkins – Structures toolkit for lifecycle modelling
- ESRI Arcmap GIS (as the core asset management database)
- Hampshire specific tools to support all of these systems

8 Maintainability

8.1 One of the aims of good asset management is to improve co-ordination between highway improvements and highway maintenance schemes. Taking into account the

cost implications of maintaining the asset at the design stage will ensure that the whole life costs of a scheme are optimised. The Asset Management Strategy raises awareness of this issue and in accordance with national guidance, is developing processes for new infrastructure to adopt the most appropriate design option, using the most appropriate materials.

8.2 Hampshire has developed and is implementing a process for incorporating new works into the existing highway network. The process advocates lifecycle management values and introduces early communication between clients and maintaining agents to ensure that asset management principles have been considered and agreed as part of the scheme implementation.

8.3 This process will ensure that all capital and revenue investment options have been considered fully, where new works should only require maintenance in line with expected lifecycles.

8.4 New guidance for developers will be available during 2018. It will provide material and layout options and inform the developer of any associated commuted sum payments that may be applicable should they wish to enhance their design.

9 Aims and Objectives

9.1 This strategy identifies Hampshire's key objectives for implementing a high quality asset management approach and allows progress to be measured by continually reviewing Hampshire's alignment to the recommendations in the Highway Infrastructure Asset Management Guidance (HIAMG) issued in May 2013 and other relevant documents. The foundations for good asset management have been developed and the practices that have been implemented since 2004 include:

- Developing data collection and management processes- Hampshire is embedding an information strategy that informs asset data collection decisions and relates them to business need. As a result, Hampshire can prioritise resources and focus on areas where good data can provide best value.
- Measuring performance against set objectives- Hampshire has developed a Performance Management Framework (PMF), reflecting Corporate aims and related to asset management risk. The targets and measures within the PMF are used to illustrate our levels of service providing a method to report performance against the levels of service.
- Improving the budget allocation process- In recent years lifecycle planning principles have been used to illustrate need and additional funding has been provided from local resources and prioritised for structural repairs. It is intended to develop further processes which align lifecycle planning, performance and service levels with investment planning. Lifecycle toolkits are used to support carriageways and structures investment decisions.
- Setting up formal structures to develop and lead asset management- This formal structure has been in place for over ten years and has overseen asset management development during that time.
- Improving communications – A central operations team has been set up to focus on improving the service to all our customers, making performance, our standards and our policies more accessible.

9.2 This work continues under the direction of the Asset Management Organisational Structure and Hampshire is currently working on a number of key projects which will provide a more efficient service in the coming years, these include:

- Improving our current asset information – Adding to and continually improving our asset data to complement our service delivery and provide efficiencies; informing maintenance contracts, informing the public and delivering online solutions where appropriate.
- Extending lifecycle planning- Continue to develop current lifecycle planning toolkits and expand these principles across all key assets.
- Revising the Current Highway Network Hierarchies – digitised network hierarchies for carriageways, footways and cycleways are being developed and aligned with Structures and ITS assets. These hierarchies will facilitate the application of a risk-based approach across all assets. See '*Applying a risk-based approach'*.
- Identifying a resilient network in the network hierarchy- Using our current Weather Emergency Plan and our knowledge regarding resources in managing extreme weather events in recent years, we will identify the resilient network and apply it to the new hierarchy.
- Applying a risk-based approach – Reviewing Hampshire's current highway maintenance practices and aligning them with the 36 recommendations within the 'Well-Managed Infrastructure: A Code of Practice. The recommendations have been prioritised and an implementation plan to develop and document a risk based approach across all services is progressing.
- Consolidating our investment planning processes- Aligning asset management, performance management, risk and delivery planning processes.
- Designing with maintenance in mind – Reviewing our approach to highway maintenance and highway improvements to ensure that all expenditure on the asset has considered and implemented the most appropriate whole life maintenance solution, keeping future revenue and capital replacement and renewal costs to a minimum.
- Adopting new infrastructure – Improving processes to ensure that asset management principles, the concepts of whole life cost, highway adoption options and material choice are fully understood by all parties therefore minimising future maintenance costs. Ultimately achieving a combined highways and transport approach to asset management. This work is due to be completed and adopted into Hampshire Highways policies and procedures in 2018.
- Communications and stakeholder engagement – continuing to improve engagement with our stakeholders and improve communication across digital platforms.
- Asset management; All Assets – reinforcing a common approach to asset management across all assets, therefore supporting the concepts set out in the Code of Practice.

10 Good Practice

10.1 Hampshire is committed to the development and implementation of asset management good practice and benefits from lessons learnt at National, Regional and Local levels. Officers from Hampshire County Council regularly contribute to, attend or have hosted:

- National and regional conferences
- The Chartered Institute of Public Finance and Accountancy (CIPFA) Highways Asset Management Planning Network
- South East Authorities Service Improvement Group (SEASIG)
- The South East 7

10.2 Furthermore, Hampshire is committed to the sharing of knowledge and experiences in implementing asset management with other Highway Authorities across the Country. To this end, officers from Hampshire present examples of good practice nationally at workshops and conferences and are members of the following groups:

- Highways Asset Management Financial Information Group (HAMFIG)
- UK Roads Board
- Footway and Cycletrack Maintenance Group (Chair)
- Road Condition Management Group (RCMG)
- Visual Surveys Sub Group (VVSG)
- ADEPT/TAG Asset Management Working Group

11 Supporting Documentation

11.1 The Asset Management Strategy refers and is linked to a number of key documents, as listed below in Table 2, that combined facilitate and inform the asset management approach for Highway Infrastructure and support the delivery of the desired levels of service.

National	Hampshire
United Kingdom Roads Liaison Group (UKRLG) Code of Practice Well Managed Highway Infrastructure.	Highway Maintenance Management Plan (HMMP)
CIPFA Highway Infrastructure Code	Local Transport Plan 3
PAS 55 / ISO 55000	Approach to Service Delivery Planning
County Surveyors Society (CSS) Framework for Highway Asset Management	Performance Management Framework (PMF)

Maintaining a Vital Asset	Corporate Strategy
UKRB quick start documents	NBB process and lifecycle planning tools: including strategic, tactical and local.
Highway Infrastructure Asset Management Guidance (HIAMG) May 2013	Traffic Management Policy Guidance (TMPG)
HMEP Good Practice Guides - various	Asset Data Register and Strategy
	Asset Management Risk Management
	Asset Management - Levels of Service
	Asset Management Policy
	Highway Asset Management Communications Plan

Table 2: Supporting Documentation

12 Review Process

12.1 This strategy will be updated annually with minor amendments and reviewed on a three yearly basis to align with the HIAMG and other current national and local good practice requirements. This process will be managed and implemented by the AMPG.

13 Benefits of our Asset Management Strategy

13.1 The benefits of implementing the asset management strategy are summarised below:

- Encourages engagement with other stakeholders, including Elected Members, Senior Officers and the public
- Readiness to respond to changes resulting from climate change, weather emergencies, contractors, resilience and finance
- Close working and integration of efforts with other parts of the Council, including Corporate aims and objectives
- Improved delivery within budget constraints – including procurement
- Efficiencies – better ways of doing things, or improved service, enhancing performance in a challenging environment
- Improved understanding of customer aspirations and expectations
- To influence and focus on the better use of resources