

Appendix B

Highway Asset Management Strategy

August 2017



Version number	Revision date	Previous revision date	Summary of changes	Changes marked
Draft	17/07/2017	N/A	V3	N/A

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1. Introduction

1.1. Central Bedfordshire Council (CBC) recognises the importance of its highway infrastructure and how an effectively maintained and managed network contributes to the achievement of its corporate goals, and delivers the required outcomes for residents, businesses and other users. It understands that effective Asset Management is a platform to deliver clarity around standards and levels of service, and to make best use of its available resources.

1.2. An Asset Management Policy has been developed that defines how the implementation of asset management will support CBC in delivering its corporate vision. The Highway Asset Management Strategy (HAMS) sets out how the Council will best manage the Highway Network taking into consideration customer needs, local priorities, asset condition and the best use of available resources. It also ensures that both short and long term needs are appropriately considered, whilst delivering a minimum whole life cost approach to our Highway Assets.

1.4. The Strategy will be used to inform the planning of the programme of highway schemes that are to be implemented under the council's 5 Year Plan.

1.5. This strategy will be used to inform priorities in the Business Planning Process and will be used to support the continuous improvement of our highway asset management by capturing the outcomes of using the optimum treatments or interventions over the whole life cycle of the different asset groups.

2. CBC and Highway Asset

2.1 Central Bedfordshire Council [CBC] was created on 1 April 2009. The unitary council provides over a hundred services to a quarter of a million people, and is responsible for schools, social services, rubbish collection, roads, planning, leisure centres, libraries, care homes and more.

2.4 The highways network is one of the Council's largest assets, and many of the residents use this asset on a daily basis to access education and employment, as well as health, shopping and leisure facilities.

2.5 Central Bedfordshire Highways maintains all of its assets through cyclic, routine and capital maintenance programmes from data collected via on-site inspections. The headline asset figures for the authority are:

A. Road Lengths

	Urban (km)	Rural (km)	Total (km)	Total (Miles)
A Roads	31	123	154	95
B Roads	18	51	69	43
C Roads	86	227	313	194
UC Roads	609	171	780	487
Total	744	572	1,316	819

B. Assets

Bridges [over 1.5m span]	290
Culverts	265
Gullies	43,680
Streetlights	26,390

2.6 In its role as the Highway Authority, the Council has a statutory duty to maintain the highway network in a condition to enable the safe passage of the travelling public. The highway network comprises many diverse assets; this strategy describes how the principles of asset management are applied to all highway infrastructure assets that are the responsibility of the Council.

3. Identifying Stakeholders Needs

3.1 CBC participates in the National Highways and Transportation (NHT) survey which is carried out by an independent organisation nationally on an annual basis. The NHT gathers information from a random selection of residents from Central Bedfordshire on satisfaction and what they consider as important. The figures below provide illustrations from the 2016 survey results. The full results can be found on <https://nhtsurvey.econtrack.com/>

3.2 The NHT survey covers various themes including public transport, accessibility, walking and cycling, tackling congestion, road safety, highways maintenance and enforcement. By identifying what residents consider important themes; Central Bedfordshire is able to establish the main priorities for future budgets.

Figure 1: Compares CBC results of what is important to the result of all other authorities in the survey

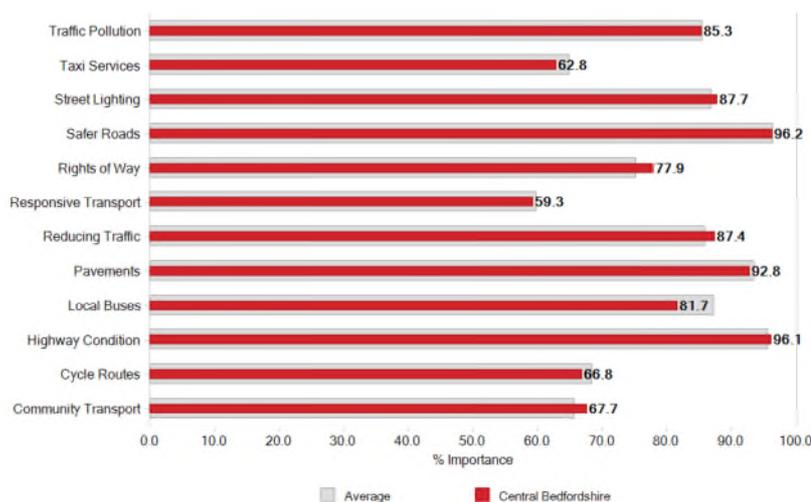
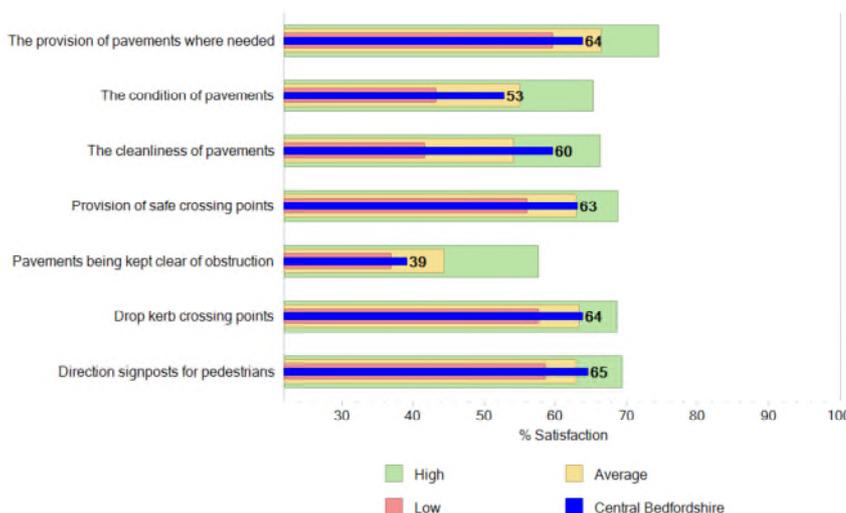


Figure 2: Compares CBC satisfaction results with the average of all other authorities in the survey



3.3 Periodically and when particular issues have been highlighted we undertake focus group sessions to identify what stakeholders thinking is and their how the issue may be addressed. A simple example was the change from marking all defects whether they were to be repaired or monitored to marking only those to be repaired thereby managing stakeholder expectations.

3.4 We also understand the importance of engaging with stakeholders when rolling out specific schemes or work programmes. Examples on our website are the work on the construction of the Woodside Link and Spray Injection Patching programme.

4. Asset Management

4.1 Asset management is defined as:

“A systematic approach to meeting the strategic need for the management and maintenance of highway infrastructure assets through long term planning and optimal allocation of resources in order to manage risk and meet the performance requirements of the authority in the most efficient and sustainable manner”

[Highway Infrastructure Asset Management Guidance – UKRLG/HMEP, May 2013]

4.2 This definition puts emphasis on the systematic approach that asset management plays in managing the strategic needs of highway assets within an organisation and highlights the need for optimal allocation of resources and long term planning.

4.3 The adoption and implementation of asset management principles, strategies and plans provides a means for CBC to face the challenges of managing the highway asset, through the development of a systematic approach. The aim is to deliver the most efficient and effective maintenance regime over the lifecycle of the asset, ensuring that the performance of that asset reflects the requirements of the Council.

4.4 In addition, the adoption of asset management is seen as a tool to enable the Council to establish appropriate budget allocations by demonstrating the effects of under-investment and the implications of not meeting safety and serviceability requirements of the customers using the network.

5. Scope and Structure of the Highways Asset Management Strategy

5.1 This Strategy sits with the Highways Asset Management Policy as the authority's Highways Asset Management Framework in order to deliver corporate priorities through effective, informed and defensible decisions.

5.2 The Policy sets out our primary focus on three main outcomes,

- Delivering Great Highways Services,
- Creating Stronger Communities and
- Becoming a More Efficient and Responsive Highways Service.

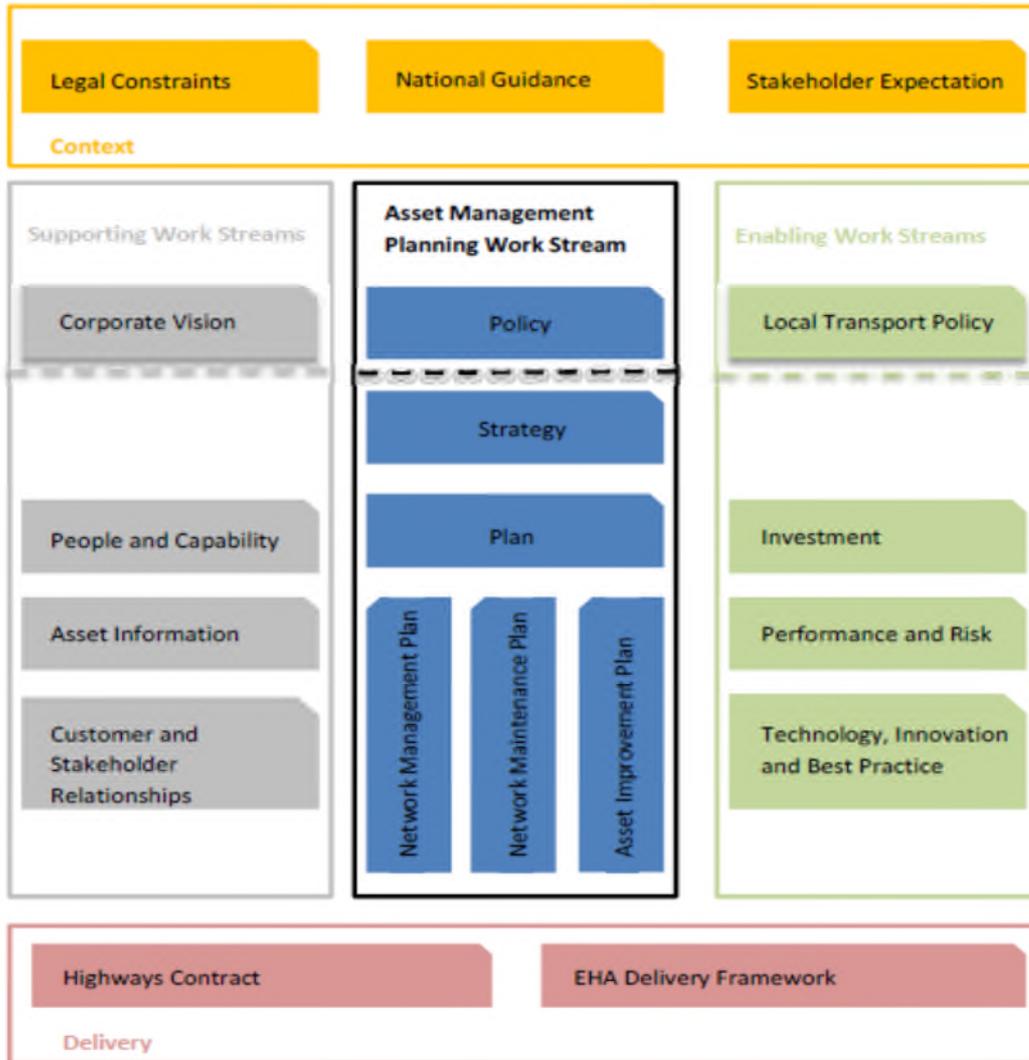


Figure 3: Highway Asset Management Framework

5.3 Encompassed within the framework are a number of key documents including the Council's Highway Asset Management Policy and the Local Transport Plan. These documents reflect national guidance and in particular the following documents:

- Well-managed Highway Infrastructure – A Code of Practice
- Design Manual for Roads and Bridges (DMRB)
- Manual of Contract Documents for Highway Works (MCHW)

5.4 In addition, the Department for Transport has worked with the highways sector to develop the Highway Maintenance Efficiency Programme (HMEP) which allows local highway authorities to connect and share their practices of

'what works' across the sector that will allow CBC to achieve greater efficiency in maintaining its highway infrastructure assets in the future.

5.5 The Council has established an organisational structure that reflects the importance that asset management plays in the delivery of its highways and transport services. This structure enables the development, continual review and embedment of strategic documents and promotes asset management practices.

5.6 This Asset Management Strategy describes the initiatives and processes that enable the implementation of asset management. It also makes reference to the enablers, both tools and information, necessary for delivering the highway service effectively and efficiently.

5.7 CBC has implemented asset management principles for a number of years. This approach is demonstrated by the provision of additional capital funding to support the road asset and demonstrates the council's objective to maintain the highway network in a steady state, providing residents and the economy with a great place in which to live and do business.

5.8 This Strategy sets out how the Council's Highway Asset Management Policy will be achieved. In particular, it describes how the Service continues to work within an asset management approach to the management of the Authority's highway infrastructure and network. It provides the framework for delivering our corporate priorities through effective, informed and defensible decision making.

5.9 This strategy serves as a basis for the development of a detailed Highway Asset Management Plan and its implementation, including enabling the organisation, its technology and its processes to adapt to change.

5.10 This strategy is based on the framework shown schematically in Figure 3, and outlined in the following sections. This framework clearly identifies the relationships between asset management, the influences of corporate and national drivers and internally the Council's Local Transport Strategy and Plans.

5.11 The HAMS will inform priorities in the planning and delivery process and therefore support continual improvement in the management of the highway asset.

5.12 This strategy covers all maintenance led activities including activities funded by capital and revenue streams. Decisions related to capital improvements and the transport needs of the network shall follow the same process.

5.13 This strategy explains how individual asset groups and components fit into the framework, describes how the asset management planning process is implemented and refers to tools currently employed, as well as links to other key documents.

5.14 Finally, the strategy describes how the Council will embed a continuous improvement approach to highway asset management, including how national developments and good practice are taken into consideration, as well as how the work carried out in CBC can influence the regional and national asset management agenda.

6. Strategy for Individual Assets

6.1 As part of the highway asset management framework, and in accordance with other national guidance, the highway infrastructure assets have been divided into individual asset groups. Each group is then broken down into asset components and maintenance activities. The asset groups and components are described in the following sections.

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

- Central Bedfordshire's 5 Year Plan objectives;
- Local Plan;
- Local Transport Plan;
- Local Area Transport Plan
- Service Delivery and Planning; and
- Performance Targets.

6.3 Inherent to this process is a need to understand the influence of budget decisions on customer satisfaction and delivery of the corporate priorities. Furthermore, the impact that investing on one asset component may have on the overall performance of other asset components, as well as the whole asset, is examined.

6.4 In line with national guidance and good practice, CBC uses a lifecycle approach to managing its highway maintenance activities.

6.5 Understanding the individual asset's condition, how long specific maintenance treatments last, the relative cost of these treatments and the levels of service provided are essential pre-requisites to good asset management. CBC's goal is to improve residents' satisfaction with its highway services, whilst maintaining value for money and continuing to provide a safe highway network, in line with corporate priorities and encourage businesses to grow.

6.6 CBC allocates funding through a business case process this financial approach allows the principles of lifecycle management planning and employs a risk management approach.

6.7 This approach allows for the available budgets to be split at a strategic level based on a common set of criteria. Successful implementation of this

approach relies on a good understanding of the asset, its current and future performance, expenditure and customer feedback; as well as an understanding of the various service levels that may be achieved for the different funding options.

6.8 This understanding can only be achieved through reliable, current and robust data. CBC continues to develop a range of data and information capture systems and processes, which prioritises its data collection needs, data management requirements and the IT infrastructure necessary to process, manage and present this information.

7. Asset Groups and Components

7.1 CBC's highway infrastructure has been divided into key assets groups and components as set out below:

Asset Group	Asset Component
All Classification of Roads	Carriageways, footways, off road cycleways, and Rights of Way
Structures	Bridges, Retaining Walls, Culverts, subways, safety barriers, gantries and pumping stations
Street Lighting and Information Systems	Street Lights, Illuminated Traffic Signs and Traffic Bollards, VAS, Traffic signal installations, cctv and other power connections
Surface Water Drainage	Pipes, Gullies, Chambers, Headwalls, Ditches, soakaways
Traffic Signs and Lines	Non-Illuminated Traffic Signs and Traffic Bollards, lining
Environment	Hedges, Trees, Visibility Splays
Emergencies	Weather, road traffic accidents and out of hours

Note the following exclusions as these are managed by other departments: Benches, bins, planters, 3rd party assets, highway verges

7.2 This approach has been adopted to allow a clear understanding of budget allocation across the different asset components and facilitating the recording of where money is invested linked to expenditure to activities.

7.3 Identifying where money is invested, allows the Council to monitor performance against service delivery and the implementation of a continuous improvement process, within the constraints of available funds.

7.4 Dividing the highway infrastructure into component parts and identifying the relative costs and demand for planned, routine and reactive maintenance activities is seen as an essential process upon which future funding decisions can be developed.

8. Asset Management Planning

8.1 The asset management strategy supports continual review and improvement of its processes and procedures, ensuring, as far as possible, that the standards identified in relevant legislation and codes of practice are adopted and that our customers receive a good and efficient service that reflects the resources available.

8.2 At the asset group level the forward looking work programmes are developed and aligned to reflect the Government's Comprehensive Spending Review period, which runs from 2015- 2021. This allows the Council to develop a longer term programme of work, which can be critical where short duration windows of opportunity exists to carry out preventative treatments, such as application of surface dressing treatments or protective coating systems.

8.3 CBC considers that the funding process allows 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 and asset group levels. An overview of the budget allocation process is shown below

- High level budget allocation
- Condition assessment – via various surveys
- Scheme prioritisation
- Budget allocated to schemes
- Performance measures

8.4 This budget allocation approach allows a consistent process and relates high level aspirations to scheme level decisions. At the Strategic Level processes and tools have been developed which allow informed budget allocation decisions to be measured across a range of criteria.

8.5 In broad terms, three treatments sets have been developed for our Asset Groups;

- Planned Maintenance – replace or enhance;
- Preventative Maintenance – arrest deterioration pro-long life cycle; and
- Reactive Maintenance – maintain public safety.

8.6 Targeted investment and informed decisions are therefore encouraged, to deliver the '**right treatment, at the right time, in the right place**', by identifying the level of service that can be achieved for a given budget allocation.

8.7 We utilise the data on our assets to determine the works that need to be undertaken. Immediate safety threats are dealt with first but then lifecycle aspirations are considered and compared with condition targets, budget constraints and stakeholder's wishes, offering options for route and treatment strategies, with the aim of utilising preventative treatments where possible.

8.8 At the Asset Component level packages of information are prepared annually, allowing teams to formulate programmes of work based on the allocations identified in the previous strategic and service level decision phases. The 5 year programme is drawn up from the data available at the time but it is indicative in years 2, 3, 4 and beyond to allow for changes in circumstances

9. Gross Replacement Cost and Depreciated Replacement Cost

9.1 Whole of Government Accounts (WGA) has set requirements for the way the value of the highway asset is reported to HM Treasury in the Authority's audited accounts. When the WGA process has been fully implemented, Authorities will be required to meet the strict requirements for financial reporting of their highway asset.

9.2 For this to be achieved there is a clear need for accurate and detailed inventory information and performance data. This requirement will support asset management by providing an improved understanding of network deterioration and combining that with the levels of service to be achieved.

9.3 A strategy has been developed with the Council's Section 151 Officer to ensure asset management practices are in place to satisfy the financial reporting requirements defined in the Transport Infrastructure Assets Code, published by the Chartered Institute of Public Finance and Accountancy (CIPFA) in May 2010.

9.4 CBC embraces this approach and has developed the processes for collating the data needed to meet the WGA requirements, whilst developing good asset management practices. The service may be refined to reflect any lessons learned.

10. Data Management and Information Systems

10.1 CBC recognises that good and robust data is critical to implementing asset management and delivering potential benefits. However, the Authority believes that the collection, management and use of data need to be based on a process, which identifies and defines the following;

- Ownership;
- Data Requirements;
- Responsibilities; and
- Costs to store, manage and maintain data;

10.2 To this end, CBC has developed a comprehensive asset information system, backed up with condition surveys and data that provide the optimum use of available information. This system covers data collection, highway infrastructure data management, reporting requirements (business information) and corporate IT needs. It is used to inform current data collection needs for both inventory and condition information.

10.3 CBC also recognises that effective asset management and its implementation relies on systems, which can be used as tools to support decision making at all levels. The following tools are currently in use by the Authority:

- Symology Insight Asset Management System - covering most of highway infrastructure management needs, including works order, public enquiries, asset register, street works register and inspection regimes;
- GIS (as the corporate asset management mapping system)
- IMTRAC – Information management for traffic controls

11. Maintainability

11.1 One of the aims of good asset management is to improve co-ordination between highway improvement and highway maintenance schemes. Taking into account the cost and implications of maintaining the asset at the design stage will ensure that whole life costs of schemes are optimised. The HAMS aims to raise awareness of this issue, in accordance with national guidance, by ensuring that any new infrastructure has adopted the most appropriate design option and the most appropriate materials.

11.2 CBC 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 developers or clients and the Council to ensure that asset management principles have been considered and agreed as part of the scheme implementation.

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

12. Good practice and review mechanism

12.1 CBC is committed to the development and implementation of good practice and benefits from lessons learnt at national, regional and local levels. Officers regularly attend and are engaged in the following groups:

- National and regional conferences;
- Eastern Highways Alliance;
- HMEP events; and
- CIPFA Highway Asset Management Updates

- APSE Highways, Street Lighting and Winter Maintenance group
- Institute of Asset Management
- Highways Maintenance Efficiency Programme (HMEP)
- British Standards Institute (BS 11000, BS ISO 55001)
- Regional HAUC meetings

12.2 This strategy will be updated annually with minor amendments if required and fully reviewed on a six yearly basis or more fully in association with changes in corporate objectives or national guidelines/funding streams. This process will be managed and implemented by the Highways Asset Management Team.

13. Benefits of our Highways Asset Management Strategy

13.1 The benefits of implementing the HAMS are summarised as follows:

- 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;
- Efficiencies and Collaboration – better ways of doing things, or improved service, enhancing performance in a challenging environment;
- Improved understanding of customer aspirations and expectations;
- Aids understanding of what we do by identifying, explaining and providing outcomes to key stakeholders; and
- To influence and focus on the better use of resources



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