Central Bedfordshire Council
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Central Bedfordshire Local Transport Plan: Appendix J Part 1

Network Maintenance Management Plan

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Version Control

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1.0 - Executive Summary

The scope of this Network Maintenance Management Plan is to provide and maintain a highway network, which supports the transport needs of Central Bedfordshire's communities and businesses and enhances the local environment.

The aim is to deliver Best Value in highway maintenance.

The outcome of the service is to:

- Improve travelling conditions for all highway users;
- Provide a safer highway network; and
- Give greater consideration to the local environment.

The objectives of this plan are as follows:

- To encourage the development, adoption and regular review of policies for highway maintenance, consistent with the wider principles of integrated transport, sustainability and Best Value.
- To act upon the needs of users and the community by involving them in the development of works programmes.
- To adopt an efficient and consistent approach in the collection, processing and recording of highway inventory, highway condition and status information for the purpose of asset assessment, management and local benchmarking.
- To encourage a risk management approach in the determination of technical and operational standards

2.0 - Introduction

The transport infrastructure asset is one of the most important assets owned by the authority. Being able to conveniently and safely use the local transport network is vital to the authority's plans for economic growth. It is used to access local services important to maintaining a good quality of life, and is a link between local communities and more strategic transport assets, such as motorways or the rail network. It is therefore essential that the local transport infrastructure is managed effectively.

In exercising its duties to maintain, operate, and improve the local transport network, the authority needs to consider a number of different challenges:

- Limited resources compared to the levels of work, particularly in terms of finance, staff, and skills;
- A significant backlog of maintenance works arising from an ageing transport network;
- Increasing levels of public expectations and awareness, particularly on the maintenance of the local road network;
- Increased level of accountability of statutory bodies to local people;
- White maintenance and the unpredictability of weather patterns.

Efficient management of the highway can improve the quality of life for the travelling public and the residents of Bedfordshire, whilst reducing the environmental impact of works.

This Network Maintenance Management Plan is designed to show how Central Bedfordshire Council (CBC) will manage the maintenance of the highway asset in accordance with the principles of Best Value. This Plan identifies the targets, sets out the policy and strategy and details the process by which Central Bedfordshire Council will deliver and develop its Highway Maintenance service. Central Bedfordshire Council, as the Highway Authority, has a duty to maintain and has powers to make improvements to the adopted highway network, all as defined by the Highways Act 1980.

The following hierarchy of documents incorporated into this Plan show Central Bedfordshire Council's intention for achieving efficient and effective management of its highway asset.

1. Well-Maintained Highways, 2005 and amendments
2. Well Lit Highways, 2004 and amendments
3. Management of Highways Structures, 2005
4. CIPFA Transport Infrastructure Assets Code of Practice 2010
5. CBC LTP3 and associated Appendices
6. CBC Transport Asset Management Plan 2010
7. CBC Highways Maintenance Service Plan (merged into current NMMP)
8. Winter Service Operational Plan 2013
9. Central Bedfordshire Council Resilience Plan
10. Connecting Spaces: Rights of Way, Taking you through the landscape (Outdoor Access Improvement Plan) 2013 to 2031 (2013)

11. Associated Acts and Documents:

- Highways Act (1980)
- New Roads and Streetworks Act (1991)
- Traffic Management Act (2004)
- Local Government (Miscellaneous Provisions) Act (1953)
- Countryside and Rights of Way Act (2000)
- Wildlife and Countryside Act (1981)
- Flood and Water Management Act (2010)
- Manual for Streets 2, (2010)
- Shared Space advisory leaflet, (2011)
- Amey Bridge Management Procedure (Adopted by CBC March 2011)

This Plan is to be reviewed on an annual basis.

3.0 - Structure of the Network Maintenance Management Plan

The Network Maintenance Management Plan is split into annexes which cover specific assets; this draws all relevant information on that asset into one reference point.

The structure is as detailed below:

1. Introduction to Network Maintenance Management (this document)
2. Annex A: Carriageways, Road Markings and Studs
3. Annex B: Footways, Cycleways and Public Rights of Way
4. Annex C: Bridges, Highways Structures and Safety Fencing
5. Annex D: Street Lighting
6. Annex E: Signals, Pedestrian and Cycle Crossings
7. Annex F: Soft Estate and Drainage
8. Annex G: Traffic Signs, Bollards and Street Furniture
9. Annex H: Embankments and Cuttings
10. Annex I: Winter Maintenance
11. Annex J: Regulatory Functions

4.0 - Network Maintenance Overview

Network Maintenance is embedded into the Central Bedfordshire Highways Contract. The day to day responsibility for the monitoring of minor maintenance and basic maintenance work is devolved to our partners within Central Bedfordshire Highways. Partner staff manage devolved budgets and monitors expenditure to ensure that accounts are balanced at the end of the financial year.

CBC are members of the East of England Directors of Environment and Transport (EEDET). Our partners, through this organisation and across the country, monitor innovation and best practice to ensure that we provide the best possible service for the residents of Central Bedfordshire. From this work, policies are developed jointly with client officers, most notably the Head of Highways which encompasses the Traffic Manager role.

Some network maintenance functions are delegated to Town and Parish Councils. Town and Parish Councils are given the option of maintaining urban highway grass. Where possible the Council will consider the devolvement of functions to local councils to enable community decision making under the Localism Agenda.

CBC does not have responsibility for the trunk roads (M1, A1, A5 and A421) in Central Bedfordshire; these are within Highways Agency Area 8.

5.0 - Community Services Policy and Strategy

5.1 – Council Vision, Priorities and Values

Council Vision:

The Council's vision drives the work of the entire council. It describes our overall objectives as a council and the type of place we want Central Bedfordshire to be – "a great place to live and work".

Council Priorities:

The Council has clear and explicit ambitions for Central Bedfordshire, informed by our residents' views:

- Enhancing your local community – creating jobs, managing growth, protecting our countryside and enabling business to grow.
- Improved educational attainment
- Promote health and well being and protect the vulnerable
- Better infrastructure – improved roads, broadband reach and transport
- Great universal services – bins, leisure and libraries
- Value for money – freezing council tax

Council Values:

The council's values describe the type of organisation we want to be and the principles that will guide us in achieving our priorities and vision. These set out the way we will work and interact with our customers, members and each other.

Our values are:

- Respect and empowerment – we will treat people as individuals who matter to us
- Stewardship and efficiency – we will make the best use of the resources available to us
- Results focused – we will focus on the outcomes that make a difference to people's lives; and
- Collaborative – we will work closely with our colleagues, partners and customers to deliver on these outcomes

5.2 - Medium Term Financial Plan

This document is a live document which dictates budgetary levels available for network maintenance. This is reflected in the budgets provided to undertake maintenance on a yearly basis.

5.3 - Local Transport Plan (Core Strategies)

The Local Transport Plan 3 (LTP3) under the title of My Journey, was adopted on 1st April 2011 and sets out a long term framework for investment in transport across Central Bedfordshire.

It establishes a strategic approach to deal with key transport issues, a series of objectives, and broad areas of intervention through which schemes are identified and improvements made to the transport network.

The long term approach of the plan supports the Council by taking the vision "a great place to live and work" as a long term goal and splitting this into a shorter term, three year implementation plan, detailing specific initiatives and areas in which capital investment will be made.

There are various appendices which affect the highways service and how it manages the asset, ranging from the capital improvements scheme identification and programme of works, to maintenance requirements for certain assets on the network. The following appendices of LTP3 contain recommendations for the maintenance of the highways network and associates assets.

5.3.1 - Freight Strategy (LTP Appendix D)

The Freight Strategy provides a policy framework to support the management of freight transport in Central Bedfordshire, and addresses the carriage of freight by roads, rail and pipeline. The strategy references the spatial planning documents for the area, as generated by the Local Development Frameworks (LDF) to ensure a coherent strategic approach to transport planning.

The Freight Strategy examines key freight issues under five themes:

- Managing freight on roads;
- Freight facilities for road based transport;
- Servicing and deliveries;
- Information and working with stakeholders; and
- Non-road freight modes

For each of these themes a series of policies has been produced to set out the Authority's approach to managing freight.

These policies should be given due consideration in the Network Maintenance Management Plan (NMMP) as they will affect how the network is managed and repair works prioritised, the main policy affecting network management and maintenance is:

"Maintain a Designated Road Freight Network (DRFN) of primary and secondary routes, in order to protect the safety of other road users, the amenity of communities and their local environments, and the integrity of highways infrastructure. In managing the route the Authority will identify diversionary routes during road works and traffic incidents."

5.3.2 - Walking strategy (LTP Appendix E)

The Walking Strategy provides a policy framework to support improvements to the level, frequency and safety of walking as a sustainable mode of

transport in Central Bedfordshire, and addresses key issues such as access to facilities and promotion of health in the communities of Central Bedfordshire. The strategy references the spatial planning documents for the area, as generated by the Local Development Frameworks (LDF) to ensure a coherent strategic approach to transport planning.

5.3.3 - Cycling Strategy (LTP Appendix F)

The Cycling Strategy provides a policy framework to support improvements to the level, frequency and safety of cycling as a sustainable mode of transport in Central Bedfordshire, and addresses key issues such as access to facilities and promotion of health in the communities of Central Bedfordshire. The strategy references the spatial planning documents for the area, as generated by the Local Development Frameworks (LDF) to ensure a coherent strategic approach to transport planning.

5.3.4 - Road Safety Strategy (LTP Appendix I)

The appendix focuses on the principles of design and the identification of solutions to safety issues and therefore generally affects design practices only, there are no specifications for the maintenance level included in this document.

The safety of road users will be considered in the general maintenance practices which the Council undertakes on the network, and will be considered when looking to categorise and prioritise highway defects and repairs.

6.0 - Customer Service and Liaison

6.1 - Introduction

As a front line and customer focussed service, contact and communication with the residents of Central Bedfordshire is vital. The council's Customer First initiative aims to offer a fist class customer service experience that enables residents to interact with the council conveniently, simply and quickly. Using modern technology to allow residents to access key council services online and continuing to serve the public through traditional face to face telephone channels.

6.2 - Procedures for Customer Feedback

6.2.2 - Standards for Customer Feedback

These standards and processes allow the engineers enough time to deal with enquiries and to ensure that the customer's needs are met effectively.

6.2.3 - Standard Feedback timescale

Once the contact centre receives and registers a request for service the relevant Engineer has 10 working days to assess and update the Contact Centre and customer accordingly.

Should this not occur the following procedure for non-response to customers will be followed:

Stage	Action Required	Time-scale
1. No update after 10 working days	Reminder sent to the relevant officer to assess & update customer	5 working days
2.Still no update after 15 working days	Referred to Area Manager	5 working days
3. Still unresolved	Pass to Contract Manager	5 working days. Notify the customer if longer is required

6.2.4 - Emergency Events - Feedback timescale

Once the contact centre receives and registers a request for an emergency response, the relevant Engineer has 1 working day to assess and update the Contact Centre and customer accordingly.

Should this not occur the following procedure for non-response to customers will be followed:

Stage	Action Required	Time-scale
1. No update after 1	Reminder sent to the	1 working days

working days	relevant officer to assess & update customer	
2.Still no update after 1 working day	Referred to Area Manager	1 working days
3. Still unresolved	Pass to Contract Manager	3 working days. Notify the customer if longer is required

6.2.5 - Reporting

The Contact Centre will advise customers at the point of initial contact that the Engineer has 10 working days to deal with a standard request for service and 1 day for an emergency request.

Should the customer contact after this period and not have an update, the Engineer will be informed (as per Stage 1 above).

An automatic reminder will be sent to the relevant Engineer if the Report is not updated within 10 days for a standard request (as per Stage 1 above). Automatic triggers will also occur at Stage 2 & 3 if no response is recorded.

It is the responsibility of Contractor's management to ensure that their employees are adhering to the above procedure as a general policy.

Central Bedfordshire Council will monitor this procedure to ensure targets are kept and there will be an agreed format for informing the contractor where targets are being missed.

6.2.6 - Customer Complaints
There are 2 types of complaint:

- Formal complaints
- Escalations

Formal Complaints

These are where a customer specifically stipulates they wish to make a formal complaint. This procedure links in with Central Bedfordshire Council's complaint procedure and timescales.

- When can a customer make a formal complaint?

Central Bedfordshire Highways needs time to resolve enquiries.
A complaint form will therefore not be sent out until *after* the initial assessment period (10 working days) and stage 1 above (5 working days) have been completed.
If, after 15 working days, the customer wishes to make a formal complaint a complaints form will be sent to them. Once returned the formal complaint will be logged.

- The process will then be as follows:

Stage	Action Required	Time-scale
1. Complaints form received	Passed to Central Bedfordshire Highways area manager to contact customer and resolve	5 working days – If longer required customer will be advised by phone or letter
2. No resolution	Passed to Central Bedfordshire Highways contract manager	15 working days – If longer required customer will be advised by phone or letter
3. Customer still not satisfied	Passed for independent review by Central Bedfordshire Council	15 working days – If longer required customer will be advised by phone or letter

This procedure can make the customer feel that their issue has been taken seriously, that they are kept informed and that reasonable responses/timescales/decisions have been given to them.

It should be noted that satisfactorily dealing with a formal complaint does not *always* mean giving the customer exactly what they want.

6.2.7 - Escalations

These are when a customer is unhappy with progress or a decision and wishes to escalate this but does not stipulate it as a *formal* complaint.

- This will follow stages 1 & 2 of the formal complaints procedure above but will not be logged as a formal complaint in the Contact Centre.
- If these complaints are still unresolved after stage 2, they will be referred to independent review

6.2.8 - Town & Parish Council Liaison Meetings
6.2.8.1 - Introduction

In order to build closer working relationships with Town & Parish Councils, Central Bedfordshire Highways will meet with each Council in Bedfordshire to discuss highway issues.
The aim is to gain a greater understanding of the concerns of local councils, together with giving Town & Parish Councils an appreciation of budgets, workloads and intervention levels.

6.2.8.2 - Procedure

The following procedure has been agreed with all Town & Parish Councils.

- The Town or Parish Council nominates a ‘highways’ representative to act as the focal liaison point with Central Bedfordshire Highways.

- Central Bedfordshire Highways will inspect all areas of concern, with the Town/Parish representative.
- Central Bedfordshire Highways will identify and record all issues that are discussed.
- Central Bedfordshire Highways will write to the representative of the Town or Parish Council within 15 working days of the visit to advise of all outcomes and agreements and to confirm exactly what maintenance work will be undertaken and at what timescale. A copy of this letter will be sent to the Town / Parish Council Clerk.
- Regular contact will be made with the Town / Parish Council to keep them informed of the progress of promised work. If any delays are anticipated to the timescales agreed, Central Bedfordshire Highways will inform the Town / Parish Council immediately and advise on a revised date/
- It is important to note that not all expectations will be able to be fulfilled via the implementation of this procedure. Central Bedfordshire Highways will give detailed reasons if any requested work cannot be undertaken.

6.3 - User & Community Response

6.3.1 - Reactive

Having confirmed that a defect that represents an immediate or imminent hazard (category 1 defect), action necessary to rectify the defect shall be undertaken. Having ensured that effective action is underway, if the events may lead to significant local interest, then the Local Council Member(s), Executive Member (Community Services and operational issues) and, Local Town or Parish Clerks and or Town/Parish Highway Representatives should be informed of the event.

If the event requires publicity, then this shall be entered into, all in accordance with CBC's External Communications Protocol.

In any event, if the originator of the defect report had requested feedback upon the Council's action this shall be done at the earliest practicable opportunity and at least within 14 days.

6.3.2 - Routine

Council Members and local Town/Parish Council Clerks shall be informed of the nature of routine maintenance via an annually updated Central Bedfordshire Highways Member Guide and CBC Highway Representative Guide.

If individual elements of work require publicity, then this shall be entered into in accordance with CBC's External Communications Protocol.

Central Bedfordshire Highways shall undertake satisfaction survey work throughout the year, typically via Town/Parish Councils, Officer and elected Members' questionnaires. These surveys shall raise the issues of:

- Perception of Value and Service Delivery
- Adequacy of communication
- Quality of the finished product
- Perceptions upon overall condition of the highway network

The results shall be used to inform and improve service delivery and will be shared with the CBC Service Delivery Team to help inform future policies and strategies.

6.3.3 - Programmed

The annual defined Programme of Works shall be supplied to Council Members, and Town and Parish Councils.

If individual elements of work require publicity, then this shall be entered into in accordance with CBC's External Communications Protocol

The Service will undertake customer survey work throughout the year; these surveys shall raise the issues of:

- Perception of Value
- Adequacy of communication
- Quality of the finished product
- Suggestions for service improvement

The results shall be used to inform and improve service delivery and will be shared with the CBC Contract Management team to help inform future policies and strategies.

7.0 - Network Maintenance – Asset Register and Management Systems

Bedfordshire Highways utilises an asset register, currently 'Insight' from Symology. The system is used to manage the road network using a hierarchical system with all highway inventory, inspections, surveys and customer complaints referenced to the appropriate highway asset. This approach allows comprehensive reporting of data at all levels to monitor performance and cost to derive maintenance programmes.

The asset inventory allows for warranty information to be held against items such as street lights and vehicle actuated signs, and when failure occurs within warranty this shall be acted on. Inventory data can be automatically updated, for example as the result of a bulk lamp change operation with respect to street lighting.

The modules which identify how best to invest in maintaining roads are used to produce a four year programme for structural maintenance of highways and footways. This will enable funding to be targeted to sites that give the best improvement in condition.

Insight is used to manage the following:

Core Element	Sub-section
Asset Register	Standard UKPMS inventory
	Structures
	Street Lighting
Streetworks and utility works management and control	
Customer Complaints and correspondence (through linking the service providers systems with the Council's Highways Help Desk)	Response times for dealing with complaints
	Actions undertaken recorded in system
	Linked to the service providers works order system
Inspection and Cyclic Maintenance Management	Programme and record outcome of safety/service inspections
	Create appropriate works orders
	Defence against 3rd party claims
Works management	All works ordered and tracked within Insight
	Works orders automatically notified to the street works module
	Performance indicators for completion of Category 1 defects
	Roadworks bulletins & bulletins to Parishes and Authority Councillors
UKPMS Surveys	CVI/DVI, SCANNER SCRIM and Deflectograph

8.0 - Network Maintenance – The Winter Service

The winter service of salting and snow clearing is a key element of network maintenance. The service affects the safety of the travelling public and the availability and reliability of the network throughout the winter period. The defined season for the delivery of this service Set out in Appendix I of this Network Maintenance Management Plan.

Due to the complex and detailed nature of this part of network maintenance, a separate Winter Service Operational Plan is produced by the provider annually before the start of the winter maintenance season. Elements of this Plan, including what the service involves including which routes receive treatments, along with advice for driving in winter are reproduced on the CBC website.

The current Winter Service Plan can be found in Appendix I.

9.0 - Network Maintenance – Weather and other Emergencies

During such weather and emergency events the Reactive process (as described for various assets in their prescribed section and the specification) shall typically be adopted to manage the immediate effects of the weather and other emergencies.

Outside normal office hours the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

In the event of severe flooding in Central Bedfordshire, procedures defined in the Central Bedfordshire Resilience Plan shall apply. CBC will respond alongside other organisations.

The role of Central Bedfordshire Highways is to continue to provide its range of services at times of severe weather events and other emergencies, whilst simultaneously providing support along side voluntary agencies.

Central Bedfordshire Highways will also liaise with utility companies and national agencies, including Government, when necessary.

Bedfordshire and Luton Emergency Response Plan

In the event of a major emergency affecting Central Bedfordshire the procedures defined in the Bedfordshire and Luton Emergency Response Plan shall apply. The Council will respond alongside other organisations, the role of the Service is summarised below:

- Provide staff, equipment, transport, plant and other resources
- Maintain essential routes and bridges
- Provide geographical and technical information
- Carry out enforcement duties
- Implement elements of the relevant Emergency Plans

Following such events and where the opportunity exists to do so, the Council shall seek to obtain Government grant aid to

- Meet the cost of reactive measures
- Provide alleviation works

Where successful in its application, the Council shall direct resources obtained in accordance with spending instructions. Highway maintenance, routine and programmed works will be delivered compliant to these instructions, to mitigate the long-term effects upon the highway network.

10.0 - Network Maintenance – Environmental and Sustainable Development

10.1 - Central Bedfordshire Council's Policies in relation to the Environment

Central Bedfordshire Council is committed to the protection and the enhancement of its natural and built environment, people's health and well-being. It recognises that the Council can have significant impacts on the environment, both the delivery of services and as a major employer and landowner.

CBC also recognises its ability to encourage and influence others in the community to improve their environmental performance, the need to work in partnership with others in the pursuit of this, and the need to consult widely on proposals and report publicly on our achievements.

CBC and its partners are committed to preventing pollution and managing our policies and practices to achieve a continual improvement in our environmental performance. In doing so we will ensure the Council meets all relevant environmental legislation and regulations, and other voluntary requirements to which we subscribe.

In setting and reviewing our environmental objectives and targets we will address:

- The sustainable use of renewable natural resources and the conservation of non-renewable resources such as bituminous materials, water and energy;
- The minimisation of environmental impacts associated with highways and transport;
- The protection and enhancement of natural species and habitats;
- The conservation of cultural heritage
- The minimisation of waste, and the re-use or recycling of materials
- The purchase of supplies, services and equipment in ways which minimise adverse environmental impacts;
- Improved public access to information we hold on CBC's environment and environmental performance.

Central Bedfordshire's Local Transport Plan sets out ambitious objectives for sustainable travel via a four-year programme of works, involving many types of project aiming to promote modal shift away from the private motor vehicle.

Appendix K of the "Well Maintained Highways" Code of Practice, contains a maintainability and sustainability checklist, which considers not only the whole life cost of the products and materials used, but also the effects on highway users, future maintenance of materials and the re-use and re-cycling of materials, so as to reduce environmental impact, improve the community value of the works, and maximise any environmental contribution the

maintenance works may contribute to towards, as well as considering whether key objectives identified through LTP 3 can also be contributed towards.

10.2 - The conservation of non-renewable resources.

Highway maintenance uses large quantities of aggregates each year. However, modern materials allow greater percentages of recycled materials within the asphalt mix.

The Council use local materials and providers where ever possible, to reduce transportation cost and impact upon the environment, and will also use recycled materials wherever practicable for all types of highway assets.

10.3 - Quality Management.

The quality of materials and workmanship can have a great bearing on the sustainability and environmental impact of maintenance schemes. If material or workmanship is of a poor quality, then this could mean additional works to remediate, meaning additional visits to site, wasted material and additional inconvenience to road users. It should therefore be ensured that not only are the council's quality management procedures met through such procedures as Quality Assurance, Environmental Management and certification such as Investors in People, but only quality materials and products are used which can be identified by certification such as HAPAS.

10.4 - The conservation of the highway's natural habitat.

Roadside verges are important for animals and birds to feed and for flora to grow. There are a number of lengths of verge in Central Bedfordshire that are either designated as Roadside Nature Reserves or Sites of Special Scientific Interest (SSSIs). These are sign posted on site, and are available on GIS overlay. These verges are only cut at the end of the summer under the direction of CBC's Ecologist.

The planting of trees in suitable locations is encouraged, however if planted too near to roads and footways, they can cause damage and third party claims. Where a Town / Parish Council or land owner wishes to plant trees within the highway verge, the CBC Arboricultural Officer is consulted in order that damage can be minimised. All third party work in planting within the highway is carried out under a Licence under Section 153 of the Highways Act 1980.

10.5 - Waste Management

Wherever possible the Council will reduce and recycle the by-products of its highways maintenance works. This will include but is not limited to:

- Retaining and re-using materials on site;

- Maximising the value of re-used material rather than only for low grade fill;
- Make use of in-situ recycling in appropriate situations;
- Wherever possible look to a procurement process to include procurement of recycled material; and
- Ensure that where waste products cannot be reduced or recycled that waste is disposed in a responsible way.

10.6 - Pollution Control

Numerous processes that are used to maintain and repair highways and associated assets have the potential to cause pollution, which could be via, noise, air or water.

Advice should be sought from the relevant Environmental Health Department or EA to look to reduce and mitigate the impacts wherever possible. Consideration should also be given to storing contaminating materials such as Diesel in appropriate containers in bunded areas to ensure that spillages during storage do not spread. Where materials are being taken out of these areas, mitigation should be provided to ensure that any spillage can be contained, or prevented from entering any drainage system or waterway.

10.7 – Environmental Impact Assessments (EIA)

Environmental Management Issues shall be addressed by the use of an Environmental Impact Assessment (EIA).

The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 stipulates the requirements for the production of EIA's at threshold levels. Schedule 2 stipulates in table 10 part (f), for the scheme to be classified as a Schedule 2 development:

(f) Construction of roads (unless included in Schedule 1)	The area of works exceeds 1 hectare.

The "area or works" is defined as "including any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps or other facilities or stores required for construction or installation."

Schemes which are exempt from this criterion and will need an EIA are classes as Schedule 1 development. Schedule 1 paragraphs 7 (b) and (c):

"(b) Construction of motorways and express roads;
(c) Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road would be 10 kilometres or more in a continuous length."

11.0 - Network Maintenance – Programming

Definition of the 4 Year Works Programme
The Central Bedfordshire Council 4 Year Works Programme is a prioritised list of Integrated Maintenance Schemes (as identified in the Local Transport Plan), Structural Maintenance Schemes (carriageway resurfacing), Street Lighting, Drainage, Major Schemes and Routine Maintenance Activities that are intended to be undertaken by Central Bedfordshire Highways over the next 4 years. The programme will reflect CBC's highway policies and objectives and will feed into the Annual Works Programme which is a definitive list of schemes and targets that are scheduled to be completed in the current year.

Aim of the 4 Year Works Programme Development Process

- To enable all the main interested parties to work together to identify and prioritise the works to be done, reflecting the requirements of both BH and CBC;
- To gather a definitive list of all schemes to be undertaken, no matter how small or insignificant or how long they have awaited completion, including noting any commitments that have been made in the past;
- To identify basic information on each scheme (e.g. location, parish, nature of work, estimated cost of design and works and preferred dates for completion);
- To formally discard any schemes that do not merit completion or meet the minimum priority criteria;
- To give a weighting for each of the key CBC objectives to all the acceptable and prioritised schemes with (see below);
- To allocate the annual CBC budget to each objective and category of scheme as necessary;
- To feed back to CBC where it may be appropriate to realign CBC budgets to achieve the desired outcomes.

12.0 - Network Maintenance – Delivery

12.1 - Client Staff Structure

The staffing structure of Highways and Transport, and its support teams, are as follows:

The Assistant Director for Highways and Transport reports to the Director of Community Services with overall professional responsibility for work carried out through the contract.

The Highway Service Delivery Team is responsible for the operational management of the Highway. The Head of the Highways role includes Traffic Manager status.

Supporting teams with a bearing on the public highway or its users are as follows:

- Development Control – Manages the highway aspects of new developments and highway adoptions.
- Land Drainage – Dealing with risks from land drainage issues.
- Resilience – Dealing with the Council's ability to discharge its services in the event of major national, international or local incidents
- Public Relations – Dealing with media and key outgoing messages to the public.

12.2 – Normal Office Hours

Where discussed in this document, normal office hours shall be defined as 8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays.

12.3 - The Local Government Community

To ensure wider understanding and appreciation of the highways service, Central Bedfordshire Highways will provide support for Council Members, Town and Parish Councils. This shall take the form of a handbook for Members and Highways Representatives, as nominated by Town and Parish Councils. Day-to-day advice, comments and collaboration is integral to Central Bedfordshire Highways and encouraged via the Area Teams.

12.4 - Other partners within the wider community

The following are acknowledged as key influences and stakeholders to Central Bedfordshire Highways:

- Various special interest groups and statutory consultees,

- Environment Agency, Internal Drainage Boards, riparian owners – liaison with respect to environmental impact assessments, consents and drainage.
- Statutory Undertakers – co-ordination of works, liaison with respect to emergencies and improvements affecting the network.
- English Heritage – liaison with respect to environmental impact assessments
- English Nature – liaison with respect to environmental impact assessments and consents.
- Police – close contact on a variety of issues particularly traffic management, highway safety, crime prevention and emergency planning.
- Network Rail, Office of Rail Regulators (ORR)
- Public Transport Providers
- Bedfordshire Nature Trust – maintain special interest roadside sites.
- Business Chamber of Commerce – information and monitoring of proposals.
- Primary Care Trust – Health Improvement Plan (road safety).
- Neighbouring authorities and the sub-region.

12.5 - Claims Management

Central Bedfordshire Highways minimises the risk of claims by applying the procedures detailed in this Plan.

It is recognised that a claims management approach will not prevent claims from being pursued; Central Bedfordshire Highways will therefore record service requests, complaints, claims and compliments, together with its actions, including no action where appropriate, so that it may offer a proper defence against claims.

It is not the intention to be overly defensive but focus resources upon delivery of the highway maintenance duty, reduce risk to highways users and offer a financially-sustainable position to Central Bedfordshire Council.

13.0 – Network Maintenance - Holistic principles in reactive maintenance

To ensure a holistic approach and achieve best value it will normally be appropriate to conduct additional highway repairs to a stretch of as far as reasonably practicable in a single visit to site. The public indicate that they cannot support multiple visits when it is reasonable to assume that an adjacent defect, not scheduled for repair at that time, will inevitably deteriorate; thus causing another visit in a short period of time. This appears very inefficient to the public.

This Plan permits officers to consider ordering repair to other defects in the course of their assessment.

It is necessary to provide guidance as to the level of defects which might reasonably be addressed at the same time as the callout.

Where an officer has cause to visit site, e.g., to assess a reported Cat1 defect, he or she will assess the likely traffic management provision required to safely make the repair. The officer will also decide whether it is appropriate and economic to undertake repairs, under the same works order, to other defects within and adjacent to the carriageway (e.g. signage) utilising the opportunity afforded by the traffic management measures to be put in place.

This will require the officer to use his/her reasonable judgement as to the rate at which Cat2 defects may reasonably deteriorate. It is reasonable to assume that deterioration will be faster with the trafficking speed, volume and HGV content likely on classified roads, that the rate of deterioration will be faster in cold or inclement weather, or if the defect is located in a high-stress area, say a junction or in areas of HGV slewing. Officers are encouraged to consider these influences in their decision when to order works to additional defects.

Carriageway Classification	Guide Distance	Response time period
2	10m	5d
3a	10m	5d
3b	10m	5d
4a & 4b	10m	5d

Footway Classification	Guide Distance	Response time period
1(a)	10m	5d
1	10m	5d
2	10m	5d
3	10m	5d
4	10m	5d

Cycle track Classification	Guide Distance	Response time period
A	10m	5d
B	10m	5d
C	10m	5d

The distance may be linear (i.e. 25m either side of the reported defect, on both sides of the carriageway) or a radius, using the reported defect as the centre. The distance is not confined to the carriageway. Furthermore, if the defect is nearby but on another road say, another leg of a junction, this too should be considered.

If an operative observes a defect which has occurred or deteriorated beyond the officer's forecast, in the period between the officer ordering works and arrival of the gang onsite, he or she should refer back to that officer.

Permanent repair is favoured at all times. The aim is to reduce repeat visits to site. Also, it is foreseeable that holistic working might require gangs with plant, labour and materials suited to multiple repair techniques in the same site visit.

Holistic working is not confined to one team, discipline or budget. It is an ethos all officers should observe. Therefore if defects are found on other assets they too should be considered for repair in the same traffic management. This will require close liaison, including programmed works.

Holistic working does not absolve officers of proper budget management. Resilience against claims must be maintained: budget pressure may dictate that only a cat1 repair can be delivered at times during the financial year.

14.0 - Network Maintenance – Defect Category Identification

A ‘risk matrix’ shall be used to classify the degree of risk posed by all identified defects. The matrix shall serve to quantify the probability of an incident occurring and level of severity of the harm or damage that would occur.

As the impact is likely to increase with increasing speed, the amount of traffic, types of user, the classification of footway, footpath or cycle track and the proximity of these to certain classifications of carriageway are clearly important factors in the assessment.

The probability shall be quantified by assessing the likelihood of user, which is likely to increase with increasing vehicular and pedestrian flows. The network hierarchy and defect location are therefore, important considerations in the assessment.

The risk factor for a particular risk is the product of the risk impact and the risk probability, and is therefore in the range of 1 to 25. It is this factor that identifies the overall seriousness of the risk and consequently the appropriateness of the speed of response to remedy the defect. Accordingly, the priority response time for dealing with a defect can be determined by correlation with the risk factor, as shown in the Risk Matrix below.

Probability → Impact ↓	Very Low (1)	Low (2)	Medium (3)	High (4)	V. High (5)
Negligible (1)	1	2	3	4	5
Low (2)	2	4	6	8	10
Noticeable (3)	3	6	9	12	15
High (4)	4	8	12	16	20
V. High (5)	5	10	15	20	25
Response Category	Category 2 (L) Response	Category 2 (M) Response	Category 2 (H) Response	Category 1 Response	Category 0 Response

Where two or more defects are in close proximity (within a radius of 1m from another defect) they shall be classified as a cluster. Where normally these defects would be given an individual risk factor and therefore Degree of Deficiency, thought should be given to the validity of this risk factor, and whether it should be increased, due to the effects of the clustered defect affecting a larger area and therefore having a higher Risk Probability.

15.0 - Network Maintenance – Highways Contract Performance

15.1 - Performance Indicators

The Highways Contract operates a series of Partnership Performance Indicators (PPI), which are reviewed on an annual basis.

Typically, the annual PPI set includes road and footway condition, measures for road safety outturns (Killed and Seriously Injured (KSI)), lengths of road resurfaced per annum, streetlight outages, bridges assessed and cost outturn performance.

In combination, other performance measures are reported informally via regular Contract review Meetings, and therefore do not require a dedicated PPI.

PPI annual targets are recommended by the Head of Highways Contract and the Service Provider's Account Director and approved by Partnership Board. In combination they offer a performance 'dashboard, which quickly conveys an overview of the performance of the Highways.

16.0 - Co-ordination of Standards

The following process shall apply to all annexes of this Network Maintenance Management Plan as well as this part.

16.1 - Reactive

If for reasons of necessity, and/or valid engineering reasoning, processes that differ from those within this Plan or National update (e.g. TSRGD, Chapter 8 et. al.) are entered into, then a procedure note should be prepared as an addendum to this Plan detailing the following:

- The actual process undertaken
- The time scale of response
- Reasoning
- Comment upon its success
- Implication on others

16.2 - Routine

If for reasons of necessity, and/or valid engineering reasoning, processes that differ from those within this Plan or National update (e.g. TSRGD, Chapter 8 et. al.) are entered into, then a procedure note should be prepared as an addendum to this Plan detailing the following:

- The actual process undertaken
- The time scale of response
- Reasoning
- Comment upon its success

16.3 - Programmed

If for reasons of necessity, and/or valid engineering reasoning, processes that differ from those within this Plan or National update (e.g. TSRGD, Chapter 8 et. al.) are entered into, then a procedure note should be prepared as an addendum to this Plan detailing the following:

- The actual process undertaken
- Reasoning
- Comment upon its success

Appendix A: References

National Guidance

- PAS55-1: Specification for the Optimised Management of Physical Assets (2008)
- PAS55-2: Guidelines for the Application of PAS55-1 (2008)
- Highways risk and liability Claims 2nd edition (July 2009)
- Highways risk and liability Claims 2nd edition section 4.3 (February 2011)
- Well Lit Highways (***13th August 2012*** Rev)
- Well Maintained Highways (***18th September 2013*** Rev)
- Design Manual For Roads and Bridges
- Code of audit practice 2010 Local Government Bodies (2010)
- Manual for Streets 2
- BS 7669-3: Part 3: Guide to the installation, inspection and repair of safety fences (1994)

CBC Strategy Documents

- LTP3;
- LTP3 Appendix D: Freight Strategy;
- LTP3 Appendix E: More People Walking;
- LTP3 Appendix F: More People Cycling;
- LTP3 Appendix G: Public Transport Strategy (Under Development – August 2014);
- LTP3 Appendix H: Car Parking Strategy;
- LTP3 Appendix I: Road Safety Strategy;
- LTP3 Appendix J: Transport Asset Management Plan (Framework – August 2014);
- Central Bedfordshire Community Engagement Strategy 2013-2016;
- Community Services Service Plan;
- Central Bedfordshire Council Design Guide

Central Bedfordshire Council
www.centralbedfordshire.gov.uk

Network Maintenance Management Plan

Annex A:

Carriageways, Road Markings and Studs

Part 1: Carriageway Maintenance

A.1.1 - Introduction

As detailed in the Highway Asset Management Plan, Central Bedfordshire Council manages 1315 route km of carriageway. This asset consists of Strategic Routes, Main and Secondary Distributor Roads, Link Roads and Local Access Roads, in both urban and rural environments.

The condition of the carriageway fabric contributes to objectives as follows:

Objective	Contribution
Safety & Serviceability	Nature, extent and location of surface defects
	Nature and extent of edge defects
	Nature and extent of surface skidding resistance
	Ride quality of the surface
Sustainability	Surface noise attenuation characteristics

When planning repair and renewal treatments, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users (where not mentioned in this plan, these users will be taken as those that need to be considered in all works).

A.1.2 - Network Hierarchy

A hierarchy is the foundation of a coherent, consistent and auditable network maintenance strategy. It is important that the hierarchy adopted reflects the needs, priorities and actual use of each road in the network; these may be determined by importance, by environment or by non-vehicular traffic factors for example. The functionality, traffic flows and risk assessments of any part of the network shall be the basis of local priorities.

Central Bedfordshire Council Highways operates a detailed network inventory which is regularly updated in response to any new works and is stored / maintained via a compliant Insight UKPMS supplied by Symology.

In accordance with the recommendations of Well Maintained Highways, and taking into account Council policy documents, the Council has adopted the following network hierarchy.

Category	Hierarchy Description	Type of Road General Description	Detailed Description
2	Strategic Route	Principal 'A' roads between Primary Destinations	Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
3a	Main Distributor	Major Urban Network and Inter-Primary Links. Short - medium	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas

		distance traffic	speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety such as pedestrian crossings.
3b	Secondary Distributor	Classified Road (B and C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions	In rural areas these roads link the larger villages and HGV generators to the Strategic and Main Distributor Network. In built up areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons
4a	Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two way traffic. In urban areas they are residential or industrial interconnecting roads with 30 mph speed limits random pedestrian movements and uncontrolled parking
4b	Local Access Road	Roads serving limited numbers of properties carrying only access traffic	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.

A route or section of a route may be reallocated within the hierarchy in response to a change in local circumstances of a relatively permanent nature, any review shall take into account increases in traffic flow by analysis of traffic flow data or modelled traffic flow data from development. A hierarchy review to include such circumstances may be delegated to the Service Provider by the Traffic Manager.

It is important that hierarchies are regularly reviewed to reflect changes in network characteristics and functionality, so that maintenance policies, practices and standards reflect the current situation.

Permanent alteration of a route's status within the network hierarchy shall take place following the annual review.
Examples of permanent alterations include:

- Adoption of new roads;
- Special environmental considerations;
- Special traffic zones;
- Winter service routes;
- Vulnerable users or with special needs;
- Freight routes;

- Public transport routes; and
- Cycle routes
- New restrictions and TRO's

Temporary alterations of a route's status within the network hierarchy shall only take place for short periods (not longer than 18 months) at the discretion of the Traffic Manager and will not be changed within the hierarchies. All temporary alterations shall be documented centrally by the Traffic Manager and disseminated to stakeholders by the service provider.

A.1.3 - Network Inspections

A.1.3.1 - Introduction

The Network Inspection regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results is crucial for defending the authority against third party claims.

The Network Inspection Regime shall be subject to annual review.

A.1.3.2 - Safety Inspections

Safety inspections shall be undertaken to identify defects likely to create danger or serious inconvenience to users of the network or the wider community. The risk of danger is assessed on site and categorised so as to allow for an appropriate priority response.

Policy NMPA1: Frequency of Safety Inspections for Carriageways

The frequency of periodic, programmed inspections shall be:

Feature	Category	Frequency	Method
Roads	2	1 month	Driven *
	3a	1 month	Driven *
	3b	1 month	Driven *
	4a	3 months	Driven *
	4b	annually	Driven *

* Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections. As found in the case of Day v Suffolk County Council, any inspection shall be carried out slowly enough for defects to be seen.

Where carriageway and footway/footpath hierarchies intersect, for example at defined crossing points at junctions, the footway/footpath hierarchy shall always take precedence in determining the inspection frequencies, defect definition and responses. This principle shall also apply to intersections between carriageways and cycle tracks and between cycle tracks and footways.

Additional, ad-hoc inspections may be undertaken in response to community concern, as a result of incidents or extreme weather conditions, or in light of monitoring information, such as an abnormally high occurrence of damages claims or if the particular characteristics make a carriageway more likely to deteriorate than other similar assets in the allocated category. These may be identified through the risk management process.

A higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers. Consideration of increased frequency of inspection should also occur on access routes to various features which will draw additional traffic; these features include but are not limited to:

- Access to schools, hospitals and medical centers;
- Vulnerable users or people with special needs; and
- Ceremonial routes and special events.

Safety inspectors shall keep a diary, and record daily which sections of the network have been and whether they have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Policy NMPA2: Carriageway Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Roads	Surface Defects
	Edge Defects
	Surface skid resistance – visual assessment
	Missing or loose covers
	Dangerous utility apparatus, including covers

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

Any defect with utility apparatus assessed as Cat 1 shall require the utility provider to be notified immediately and requested to attend or make the defect safe within 24 hours. This shall be undertaken with reference and in accordance with Section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. As a general guide defectiveness of a scale less than the following can be considered defendable in any actions brought against highway authorities.

Policy NMPA3: Definition of CAT 1 Carriageway Defect

Road surface defects – A hole in the bituminous surface with approximately vertical sides, where material has been lost, and where any surface dimension in two directions exceeds 150mm and depth exceeds 50mm. Missing or collapsed ironwork, sunken covers more than 50mm.

It should however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

Where a promoted cycle route runs on the carriageway the category 1 defect criteria will be as defined in Policy NMPB7 in annex B of this Network Maintenance Management Plan for the full width of carriageway.

A.1.3.3 - Service Inspections

Service inspections should be strongly focused on ensuring that the network meets the needs of users and comprise more detailed specific inspections of particular highways elements, to ensure that they meet the levels of service defined in the HAMP.

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. These can be split into the following:

- Network Integrity Inspections;
- Regulatory inspections (as detailed in the “Regulatory Functions” chapter of the Introduction to Network Maintenance Management)

Generally, the frequency of Service Inspections shall be as the frequencies defined in the Safety Inspection section of the same asset.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Roads	Nature and extent of surface defects
	Ride quality of the surface

Network Integrity Inspections
All components across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.

Opportunities shall be taken to address integrity issues identified by the survey, for example:

- Replacing signs and re-lining;
- Installing dropped kerbs and texture paving;
- Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.
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A.1.4 - Network Surveys

A.1.4.1 – Network Survey Types

SCANNER and MRM
Surface Condition Assessment of the National Network or Roads (SCANNER) and Multi Functional Road Monitor (MRM) are automated condition surveys. Specially adapted vehicles record longitudinal and transverse profile, rut depth, texture depth, gradient, cross fall and radius of curvature. In addition a SCANNER survey also records the extent of surface cracking.

SCANNER surveys are carried out by the Provider and are mandatory on Category 2, 3a and 3b Roads for Local Transport Plan (LTP) purposes.
Note: The data is used in the calculation of LTP indicators. Full network coverage is achieved over a four year rolling survey period with Category 2 roads surveyed annually.

The SCANNER outputs are also used extensively with other testing and surveys to determine areas of further investigation for inclusion in the structural maintenance programme.

SCANNER data shall also be used to determine the depreciated value of the network (DRC). Methodologies have been developed by CIPFA and endorsed by HM Treasury and are mandatory reporting requirements.

Course Visual Inspections
Course Visual Inspections (CVI) will be carried out by the Provider. The surveys are carried out annually on Classification 4a and 4b roads.

The CVI outputs are also used to determine areas of further investigation for inclusion in the structural maintenance works programme.

Detailed Visual Inspection
A detailed visual inspection is a visual inspection carried out by a highway inspector while on foot. The inspection will look at the carriageway as a whole, and will record any defect which is visible to the inspector; this not only covers surface and carriageway defects, but will also look at assets associated with the highway, such as signage, street lighting, drainage and other assets which are identified in this plan and the HAMP.

Sideways-Force Coefficient Routine Investigation (SCRIM)
A Sideways-force Coefficient Routine Investigation Machine automatically measures wet road skidding resistance. This can then be compared to investigatory levels. It should be noted that there is no value at which a surface passes from being safe to unsafe; however some sites due to geometric or other constraints often require higher levels of skidding resistance to reduce accident risk. This data is a prime factor in determining maintenance requirements on the Classification 2, 3a and 3b Road Network.

SCRIM surveys will be carried out and assessed using advice contained within Volume 7, Section 3, Part 1 of the Highways Agency Design Manual for Roads and Bridges and SCRIM Policy HD28/04. This can be found be following the web link;
http://www.dft.gov.uk/ha/standards/dmrb/vol7/section3.htm

Site category investigations will also be carried out as part of the SCRIM survey to determine investigatory levels.

All Category 2 Roads will be inspected annually and one ¼ of the total 3a and 3b carriageway lane kilometers will be surveyed each year, repeated every four years.

The items for inspection shall be

Feature	Inspection Item
Carriageway	Surface skid resistance

	Macro texture

The investigatory levels as set out in HD28/04 are as indicated in the following table:

Site Category and Definition		Investigatory level at 50km/h							
		0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65
B	Dual Carriageway non-event								
C	Single Carriageway non-event								
Q	Approaches to and across minor and major junctions, approaches to roundabouts								
K	Approaches to pedestrian crossings and other high risk situations								
R	Roundabout								
G1	Gradient 5-10% longer than 50m								
G2	Gradient > 10% longer than 50m								
S1	Bend radius <500m – dual carriageway								
S2	Bend radius <500m – single carriageway								

Investigatory levels are for the mean skidding resistance within the appropriate average length
Investigatory levels for site categories A, B and C are based on 100m (50m for some Overseeing Organisations) averaging lengths or the length of the feature if it is shorter.
Investigatory levels and averaging lengths for site categories Q,K, G and S are based on the 50m approach to the feature but this shall be extended when justifies by local site characteristics.
Investigatory levels for site category R are based on 10m lengths
Residual lengths less than 50% of a complete averaging length may be attached to the penultimate full averaging length, providing the site category is the same.
As part of the site investigation, individual values within each averaging length should be examined and the significance of any values which are substantially lower than the mean value assessed.
Following structural condition surveys, dependent upon the degree of deficiency, each identified site shall be assessed for action through
The darker shaded areas in the table above will be the level for roads which carry significant traffic levels
The lighter shaded areas in the table above will be the level for low risk situations, where traffic flow is low or where risks have been mitigated.

Advice on early life skid resistance is specifically excluded from HD28/04 but is addressed in IAN 49/13 and should be referred to in the instances of laying new surfacing.

The investigatory levels shall be reviewed on an annual basis along with the Skid Resistance Strategy produced as part of the HAMP.

Results of investigations should include whether further action is required and should be documented and retained

Where skid resistance is considerably below investigatory levels, ‘Slippery Road’ signs should be erected as a matter of urgency. Following remedial action, and the maintenance engineer is satisfied that the issue has been rectified, the ‘Slippery Road’ signs should be removed as soon as possible

A.1.4.2 – Network Survey Frequencies

Policy NMPA4: Carriageway Network Survey Frequencies

The frequency of inspection shall be:

Survey	Category	Frequency
SCANNER	2 Roads 3a Roads 3b Roads	Annually Annually Every 2 Years
Coarse Visual Inspection (CVI)	4a and 4b Roads	Annually
Detailed Visual Inspection (DVI)	All roads indicated by SCANNER or customer requests	As required for 5 year Structural Maintenance programme Every 2 Years All LAA/COP hierarchy 1 & 2
Sideways-Force Coefficient Routine Investigation (SCRIM). To assess carriageway skid resistance.	2 Roads 3a Roads 3b Roads 4a and 4b Roads	Annually Every 4 Years Every 4 Years Where 3 or more wet skidding accidents have occurred in the previous 12 months

A.1.4.3 – United Kingdom Pavement Management System (UKPMS)

UKPMS is a central government accredited computer database used to analyse and manage a variety of structural condition surveys listed above.

A.1.4.4 – Maintenance Audit

It is necessary to carry out a maintenance audit on highway improvement works (e.g. LTP works); this is to ensure that improvement works are carried out having considered the following:

Area	Description
Safety:	The work should be carried out considering the safety of all users of the public highway. Consideration should be given to pedestrians, cyclists, horse riders etc, not just the vehicular road user. Although safety is covered as part of a safety audit, other

	maintenance factors such as street lighting should also be considered as part of the safety considerations of the maintenance audit.
Serviceability:	Are the works fit for its proposed purpose? All maintenance and improvement works shall be easily accessed by the user of the public highway i.e. There is little point in installing a sign that will be readily obscured by overhanging vegetation.
Sustainability:	Are the maintenance/improvement works necessary and will these works be easily maintained in the future. There must be an emphasis on reusing/recycling materials

This also has safety benefits in designing out long-term risk

The results of the maintenance audit are to be communicated to the Service Delivery Team for integration into the maintenance programme. If the identified maintenance items are not contained in the 4 year programme, then the rectification costs shall be included in the improvement scheme budget.

A.1.5 - Network Maintenance Types

A.1.5.1 - Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.

In the case of dangerous defects to utility apparatus or trenches the responsible officer shall make the utility responsible aware by logging a

telephone call (under S81 of the NRSWA91) describing the nature of the inadequacy.

The responsible officer shall instigate measures to render the site safe if:

- the identity of the utility responsible is unknown;
- the utility responsible cannot be contacted
- the utility cannot make the inadequacy safe within 2 hours
- no response is received from the undertaker within 2 hours of the logged telephone call

The costs of rendering the defect safe shall be borne by the utility concerned.

Information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

A.1.5.2 - Emergency Reactive Maintenance

Outside normal office hours the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

Upon identifying the need for an emergency reactive response, either by description or by inspection, the responsible officer shall instigate measures to render the site safe within 2 hours.

Measures taken will wherever practicable, take the form of a permanent repair to avoid the necessity to revisit the site in the short term. Where this is not possible a temporary make safe repair will be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, will be put into place.

A.1.5.3 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways and is targeted at two areas:

- meeting the need identified through highway inspections
- preventative maintenance, working ahead of highway inspections when budgets allow to address defects while they are in their 'infancy'.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

Where an identified defect falls outside the described types the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

A.1.5.4 - Programmed Maintenance

Bedfordshire Highways will operate a rolling four-year programmed of maintenance to its highway network.

In establishing and updating the programme, account will be taken of:

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section of the Network Maintenance – Environmental and Sustainable Development chapter in the Introduction to Network Maintenance Management and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011

In all other cases account will be taken of the advice given in the BRE publication:
'Guidance on specifying recycled content in Local Authority contracts for highway maintenance'

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

"Total package" thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

A.1.6 - Network Maintenance Standards Carriageways

A.1.6.1 – Reactive Works

Potholes

Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:

- Clean and cut back to a solid construction, square and backfill with hot bituminous material;

- A cold lay material may be used as a temporary measure, provided that a permanent patch repair is undertaken as part of programmed routine works. (Where defects with potentially serious consequences for network safety are made safe by means of temporary repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.)

Edge Damage
Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:

- Clean and cut back to solid construction, square and backfill with hot bituminous material. For an un-kerbed carriageway, if necessary, full depth construction may be required.

- A cold lay material may be used as a temporary measure, provided that a permanent patch repair is undertaken as part of programmed routine works. (Where defects with potentially serious consequences for network safety are made safe by means of temporary repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.)

The duties of maintaining the public highway applies to the existing fabric of the highway, there is no duty to surface verges that are being over-run, this would constitute improvement and not maintenance work *(see Alan Kind v Newcastle upon Tyne Council 2001)*. Therefore, care shall be taken to ensure that the original edge of carriageway is reinstated and that there is no local widening of the carriageway in the area of reinstatement that abruptly terminates, or encourages vehicles to over-run the verge.

Collapse
Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:
Traffic control measures shall be put into place to guide vehicular and pedestrian traffic safely around the collapse. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure. A physical barrier shall be erected around the hazard. The means of permanent repair shall then be assessed.

Kerb Defects
Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:

- Re-set kerbs or replace missing kerbing with fast setting mortar or similar. Reinstate both carriageway and behind with appropriate permanent materials.

- A cold lay material may be used as a temporary measure, provided that a permanent repair is undertaken as part of programmed routine works. (Where defects with potentially serious consequences for network safety are made safe by means of temporary repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.)

Inspection Covers

Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:

- Traffic control measures shall be put into place to guide traffic or pedestrians safely around the defect. This may be by the use of traffic signals or an emergency road closure. A physical barrier shall be erected around the hazard.

- Reset/replace cover using fast setting mortar or similar. Reinstate carriageway with appropriate materials.

- A cold lay material may be used as a temporary measure, provided that a permanent repair is undertaken as part of programmed routine works. (Where defects with potentially serious consequences for network safety are made safe by means of temporary repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.)

Mud and other deposits

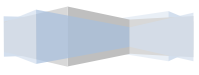
Category 1 defects (representing an immediate or imminent hazard) shall be rectified as follows:

- The deposit shall be removed within 24 hours. Under Section 149 of the Highways Act 1980 the Council, as the Highway Authority, may recover any expenses reasonably incurred from the person by whom it was deposited.

A.1.6.2 - Routine Works

Potholes

Potholes shall be repaired by cutting back to solid construction, square and backfill with hot bituminous material.



Edge Damage

Edge damage shall be repaired by patching or reconstructing the edge of the carriageway back to solid construction, square and backfill with hot bituminous material.
Care shall be taken to ensure that the original edge of carriageway is reinstated and that there is no local widening of the carriageway in the area of reinstatement that abruptly terminates, or encourages vehicles to over-run the verge.

Kerb Defects
Kerb defects shall be repaired by resetting/replacing existing kerbing and reinstating the carriageway with a permanent material.

Inspection Covers
Inspection cover defects shall be repaired as follows:

- If the apparatus is the responsibility of the Highway Authority then a permanent repair shall be made within 28 days.

- If the apparatus is the responsibility of a statutory undertaker, the defect shall be referred to the utility. The request shall be made that a repair be made within 10 working days and in any case prior to the defect becoming an imminent hazard. The defect will be monitored to ensure it does not worsen or begin to cause hazard.

Mud and other deposits
Deposits that do not represent an immediate hazard to users of the highway shall be repaired as follows:

- Many construction and agricultural activities can result in mud or other deposits being brought on to the highway. Such deposits can only be tolerated provided that they do not present an immediate danger to users of the highway. Those who have caused the deposit must also demonstrate reasonable process is in place to manage the risks they may cause. This may include warning signage or wheel washes.

Where such a deposit occurs, an approach to those causing the deposition will be made, insisting that they comply with Section 149 of the Highways Act 1980. If reasonable measures are not undertaken to rectify the situation, then the deposition shall be removed by the Highway Authority as soon as reasonably practicable and any expenses reasonably incurred will be recovered.

Part 2: Road and Cycleway Markings and Stud Maintenance

A.2.1 - Introduction

Many road markings are used to give effect to regulatory provisions and it is important that their legal status is not affected by undue wear or damage, a high proportion of markings are essential for road safety or fundamental to the implementation of an integrated transport policy. If such markings are not kept in good order the measures may lose effectiveness and the success of transport integration compromised.

The condition of the road markings and studs can contribute to key objectives as follows:

- Route delineation in darkness and bad weather
- Potential for damage and injury if loose
- Traffic control
- Ease of use in darkness and bad weather
- Edge delineation to reduce edge damage

A.2.2 - Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

A.2.3 - Network Inspections

A.2.3.1 – Introduction

The Network Inspection regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results is crucial for defending the authority against third party claims.

This regime shall be subject to annual review.

A.2.3.2 - Safety Inspection

Safety inspections for markings and studs shall be undertaken at the same time as the carriageway Safety Inspections as outlined in section A.1.3.2 above.

Policy NMPA5: Frequency of Safety Inspections for Road Markings and Studs

The following is a list of examples of category 1 defects which can be used as examples for using the risk matrix in A.1.3.2:

Feature	Category	Frequency	Method
Road Markings	Stop, Give Way or Slow markings	At time of inspection for asset it is marked upon	Driven
	Road Studs	At time of inspection for asset it is based within	Driven

Policy NMPA6: Road Markings and Studs Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Road Markings	Stop, Give Way and Slow markings 30% worn or missing
	Poor route delineation in darkness and poor weather
	Loose studs with consequent potential for damage and injury
	3 or more adjacent studs in any line missing

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

A.2.3.3 - Service Inspection

For paint markings and for thermoplastic markings the service inspection shall consider wear, spread, colour, skid resistance and retro-reflectivity. Inspection shall be conducted at a frequency determined by risk assessment, or by default annually for paint markings and bi-annually for thermoplastic markings. Inspections for reflective conspicuity shall be conducted during the hours of darkness and programmed such that maintenance works can be completed before the onset of winter.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Road Markings	Ease of use in darkness and bad weather

White line markings on strategic and main distributor roads and sites of high safety risk or with a relevant accident record should be renewed when they are no longer adequate for their intended purpose.

A.2.4 - Network Surveys

The current Network Survey method does not include for the condition of markings or studs. Condition will be noted based upon the directions contained within the Safety Inspections section for the Road Markings and Studs asset.

A.2.5 - Network Maintenance Types

A.2.5.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

Reactive maintenance shall be as section A.1.5.1 of this document.

A.2.5.2 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways.

Routine maintenance shall be as section A.1.5.3 of this document.

A.2.5.3 - Programmed

Works to road and cycleway markings and studs shall only be undertaken through reactive and routine works

A.2.6 - Network Maintenance Standards Road Markings and Studs

A.2.6.1 - Reactive

Road and Cycleway Markings

Category 1 defects (representing missing or damaged road and cycle way markings presenting an immediate or imminent hazard) shall be rectified as follows:

- ‘No Road Marking’ signage shall be placed at the site. The re-marking of ineffective road and cycleway markings shall then be enacted as soon as practicable. The long-term re-marking requirements will then be assessed. These shall be considered for inclusion within future routine works.

Road Studs

Category 1 defects (representing missing or damaged road and cycleway markings presenting an immediate or imminent hazard) shall be rectified as follows:

- 'No Road Marking' signage shall be placed at the site. The replacement of road studs shall then be actioned as soon as practicable. The long-term re-marking requirements will then be assessed. These shall be considered for inclusion within future routine or programmed works.

A.2.6.2 - Routine

Road and Cycleway Markings

Category 2 defects (of a non-hazardous nature) shall be collated and replacement or repair works ordered in batches.

Road Studs

Road stud defects of a non-hazardous nature shall be collated and replacement or repair works ordered in batches.

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

Central Bedfordshire Council
www.centralbedfordshire.gov.uk

Network Maintenance Management Plan

Annex B:

Footways, Footpaths, Cycle Tracks and Public Rights of Way

Part 1: Footway and Footpath Maintenance

B.1.1 - Introduction

As detailed in the Highway Asset Management Plan, Central Bedfordshire Council looks after 2472km of metalled/surfaced footways and footpaths (including shared use facilities for pedestrians and cyclists), in both urban and rural environments.

The condition of footways and footpaths can contribute to key objectives of the council as follows:

Objective	Contribution
Safety	Nature, extent and location of surface defects
	Nature and extent of kerb and edging defects
Serviceability	Nature and extent of surface defects
	Extent of encroachment and weed growth
	The slipperiness of the surface
	The quality of the surface
	Integrity of the network
Sustainability	Convenience and ease of use
	Nature, extent and location of surface defects
	Extent of damage by over-running and parking

Unless remedied, damage or wear to footway and footpath surfaces will allow ingress of water and vegetation growth. Both will accelerate the deterioration of the surface and wearing courses and lead to the disintegration of the path.

B.1.1.1 - Walking strategy (LTP Appendix E)

The Walking Strategy provides a policy framework to support an increase in walking as a sustainable mode of transport in Central Bedfordshire, addressing key issues such as access to facilities and promotion of health in local communities. The strategy references the spatial planning documents for the area, as generated by the Development Strategy to ensure a coherent strategic approach to transport planning.

The Walking Strategy aims to promote an increase in the number of people walking by looking at three objectives:

- Improve the quality of the pedestrian environment;
- Improve the safety of pedestrians; and
- Increase awareness of the benefits of walking
- For each of these objectives a series of policies has been produced to set out the Authorities approach to promoting walking.

These policies shall be given due consideration in the NMMP as they will affect how the network is managed and repair works prioritised, the main policies affecting network management and maintenance are:

"Policy WS2: Network Hierarchy:
The network hierarchy shall form the basis for investing to improve pedestrian provision in Central Bedfordshire with a focus on ensuring:

- *The continuity of the route network (ensuring sections are connected and accessible)*
- *The safety of the route network and in particular routes serving schools (with appropriate crossing facilities and road speeds)*
- *The quality of paving and lighting (to create an amenable environment)*
- *The routes ability to contribute towards wider objectives"*

"Policy WS3: Maintenance of the Network:
Maintenance of footways shall be the responsibility of Central Bedfordshire Highways. Where a footway also forms part of a Public Right of Way then responsibility of its maintenance may be shared with the Rights of Way team. The allocation of resources to the maintenance of the network will be on the basis of the Network Hierarchy"

B.1.2 - Network Hierarchy

A network hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy and its definition should reflect the needs, priorities and Levels of use of each route within the network and in particular the needs of vulnerable users such as children.

Central Bedfordshire Council Highways operates a detailed network inventory which is regularly updated in response to any new works and is stored / maintained via a compliant Insight UKPMS supplied by Symology.

In accordance with the recommendations of Well Maintained Highways, and taking into account Council policy documents, the Council has adopted the following network hierarchy.

Category	Category Name	Description
1(a)	Prestige Walking Zones	Areas of towns that attract high levels of pedestrian traffic and that have a high public space and street scene contribution.
1	Primary Walking Routes	Busy urban shopping and business areas and main pedestrian roads/ streets serving schools and colleges (which have the designation of 'safer route').
2	Secondary Walking Routes	Routes through local areas feeding into primary routes, local shopping centres etc. that have reasonable usage.
3	Link Route	Linking local access footways and footpaths through urban areas and busy rural footways.
4	Local Access Route	Footways and footpaths associated with short estate roads and cul-de-sacs that have little pedestrian traffic.

A route or section of a route may be reallocated within the hierarchy in response to a change in local circumstances of a relatively permanent nature.

A hierarchy review to include such circumstances may be delegated to the Service Provider by the Traffic Manager.

Permanent alteration of a route's status within the network hierarchy shall take place following the annual review.

Temporary alterations of a route's status within the network hierarchy shall only take place for short periods (not longer than 18 months) at the discretion of the Traffic Manager and will not be changed within the hierarchies. All temporary alterations shall be documented centrally by the Traffic Manager and disseminated to stakeholders by the service provider.

B.1.3 - Network Inspections

B.1.3.1 - Introduction

The Network Inspection regime shall have three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from network inspections, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

The Network Inspection Regime shall be subject to annual review.

B.1.3.2 - Safety Inspections

Safety inspections shall be undertaken to identify defects likely to create danger or serious inconvenience to users of the network or the wider community. The risk of danger is assessed on site and categorised so as to allow for an appropriate priority response.

Policy NMPB1: Frequency of Safety Inspections for Footways and Footpaths

The frequency of programmed inspections shall be:

Feature	Category	Frequency	Method
Footways	1(a)	1 month	Walked
	1	1 month	Walked
	2	3 months	Driven/Walked
	3	6 months	Walked
	4	1 year	Walked

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways and footpaths, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections. As found in the case of Day v Suffolk County Council, any inspection shall be carried out slowly enough for defects to be seen.

Where carriageway and footway/footpath hierarchies intersect, for example at defined crossing points at junctions, the footway/footpath hierarchy shall always take precedence in determining the inspection frequencies, defect definition and responses. This principle shall also apply to intersections between carriageways and cycle tracks and between cycle tracks and footways.

Additional inspections may be necessary for specific routes in response to user or community concern, as a result of incidents or extreme weather conditions, or in light of monitoring information, such as an abnormally high occurrence of defects reported by users or if the particular characteristics (such as flooding) make a footway more likely to deteriorate than other similar assets in the allocated category. These may be identified through the risk management process. An increase in the frequency of inspection may be recommended by the Council's Insurance Officers.

Safety inspectors shall keep a diary, and record daily which sections of the network have been and whether they have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

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Policy NMPB2: Footway Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Footways and Footpaths	Surface defects including holes, cracks, ridges, penetrating weeds and roots, steps, etc.
	Kerbs and edge defects
	Overhanging and encroaching vegetation restricting usable height/width (impeding use of wheelchairs, baby buggies, etc.) or restricting sight lines (raising the risk of collisions).
	Missing, loose or inappropriate covers e.g. domestic grade or incorrect gulley covers for situation, lose slabs and setts etc.
	Dangerous utility apparatus, including covers e.g. exposed wiring, low cables, etc.
	Missing or damaged guard rails
	Obstructions including A-boards, bins, etc.
	Ponding water
	Inappropriate cambers and excessive slopes
	Damaged or inappropriate access control barriers
	Dangerous debris on the surface

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

Any defect with utility apparatus assessed as Cat 1 shall require the utility provider to be notified immediately and requested to attend or make the defect safe within 24 hours. This shall be undertaken with reference and in accordance with Section 81 of the New Roads and Streetworks Act 1991.

A ‘risk matrix’ shall be used to classify the degree of risk posed by all identified defects as identified in the “Network maintenance Management

Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. As a general guide defectiveness of a scale less than the following can be considered defendable in any actions brought against highway authorities.

Policy NMPB3: Definition of a CAT 1 Footway Defect

Footway/ footpath surface defects – A hole in the bituminous surface with approximately vertical sides, where material has been lost, and where any surface dimension in two directions exceeds 100mm and depth exceeds 20mm

OR

A difference in vertical level between adjacent slabs, or between adjacent slabs and other projections such as surface boxes and the like, exceeding 20mm, including slabs which rock dangerously, missing or collapsed ironwork, sunken covers more than 20mm.

Other defects which may constitute a category 1 response include but are not limited to:
Cracks in footways that are greater than 25mm in width;
Kerbs that are missing or broken; and
Damaged pedestrian guard rails, barriers or fences damaged or constitute a danger.

It shall however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

When considering the risk factor, the inspector shall also consider whether the defect is in an unlit location. In this instance the probability of the defect causing an incident should be increased proportionately to account for poor visibility of the defect by users.

B.1.3.3 - Service Inspections

Service inspections should be strongly focused on ensuring that the network meets the needs of users and comprise more detailed specific inspections of particular highways elements, to ensure that they meet the levels of service defined in the HAMP.

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. These can be split into the following:

- Network Integrity Inspections;
- Regulatory inspections (as detailed in the “Regulatory Functions” chapter of the Introduction to Network Maintenance Management document)

Generally, the frequency of Service Inspections shall be as the frequencies defined in the Safety Inspection section of the same asset.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Footways and footpaths	Nature and extent of surface defects
	Extent of encroachment and weed growth
	Slipperiness of the surface
	Quality of the surface
	Cleanliness of surface
	Number of obstructions
	Integrity of the network

Network Integrity Inspections
All components across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.
-
- Opportunities shall be taken to address integrity issues identified by the survey, for example:
  - Replacing signs and re-lining;
  - Installing dropped kerbs and texture paving;
  - Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

B.1.4 - Network Surveys

B.1.4.1 – Network Survey Types

Footway Network Survey (FNS)

Footway Network Surveys (FNS) will be carried out by an accredited sub contractor and will be done as a walked inspection on all footways. The surveys will be carried out annually on all footways both remote and beside the carriageway.

The FNS outputs shall be used to determine whether a Detailed Visual Inspection (DVI) follow-up is required on impaired sections – required for – a footway/footpath to be included within the structural maintenance works programme.

Detailed Visual Inspection

A Detailed Visual Inspection shall be undertaken on foot following Footway Network Survey to further investigate the severity of defects identified and to provide evidence for four year structural maintenance programme process.

B.1.4.2 – Network Survey Frequencies

Policy NMPB4: Footway Network Survey Frequencies

The frequency of inspection shall be:

Survey	Category	Frequency
Footway Network Survey (FNS)	Footways and footpaths	25% of network each year
Detailed Visual Inspection (DVI)	Footways and footpaths	As required as a result of FNS surveys

B.1.4.3 – United Kingdom Pavement Management System (UKPMS)

UKPMS is a central government accredited computer database used to analyse and manage a variety of structural condition surveys listed above.

B.1.4.4 – Maintenance Audit

In order to ensure that the maintenance implications arising from highway improvement schemes are optimised during the design process a maintenance audit process shall be carried out.

It is necessary to carry out a maintenance audit on highway works, this is to ensure that improvement works are carried out having considered the following:

Area	Description
Safety:	The work should be carried out considering the safety of all users of the public highway. Consideration should be given to pedestrians, cyclists, horse riders etc., not just the vehicular road user. Although safety is covered as part of a safety audit, other maintenance factors such as street lighting should also be considered as part of the safety considerations of the maintenance audit.
Serviceability:	Are the works fit for its proposed purpose? All maintenance and improvement works shall be easily accessed by the user of the public highway i.e. There is little point in installing a sign that will be readily obscured by overhanging vegetation.
Sustainability:	Are the maintenance/improvement works necessary and will these works be easily maintained in the future. There must be an emphasis on reusing/recycling materials

The results of the maintenance audit are to be communicated to the Service Delivery Team for integration into the maintenance regime.

B.1.5 - Network Maintenance Types

B.1.5.1 - Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.

In the case of dangerous defects to utility apparatus or trenches the responsible officer shall make the utility responsible aware by logging a telephone call (under S81 of the NRSWA91) describing the nature of the inadequacy.

The responsible officer shall instigate measures to render the site safe if:

- the identity of the utility responsible is unknown;
- the utility responsible cannot be contacted
- the utility cannot make the inadequacy safe within 2 hours
- no response is received from the undertaker within 2 hours of the logged telephone call

The costs of rendering the defect safe shall be borne by the utility concerned.

Information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

B.1.5.2 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Central Bedfordshire Highways and is targeted at two areas:

- Meeting the need identified through highway inspections;
- Preventative maintenance, working ahead of highway inspections when budgets allow; addressing defects while they are in their ‘infancy’.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

Where an identified defect falls outside the described types the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

B.1.5.3 - Programmed Maintenance

Where an inspection identifies issues which cannot be resolved by reactive works these shall be recorded and shall be put forward for inclusion within the four year maintenance programme of works.

It is the aim of the service to establish a four year programme taking in to account the criteria of:

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Introduction to Network Maintenance Management document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

In all other cases account will be taken of the advice given in the BRE publication:
“Guidance on specifying recycled content in Local Authority contracts for highway maintenance”

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

“Total package” thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

B.1.6 - Network Maintenance Standards Footway and Footpaths

B.1.6.1 - Reactive

Footways Surface Defects

Category 1 defects to a metaled footway / footpath (representing an immediate or imminent hazard) shall be rectified as follows:

- Clean and cut back to a solid construction, square and backfill with hot bituminous material;

- A cold lay material may be used as a temporary measure, provided that a permanent patch repair is undertaken as part of programmed routine works.

- Where defects with potentially serious consequences for network safety are made safe by means of temporary repair a special inspection regime shall be put in place to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.

Collapse

Category 1 defects to a metaled footway / footpath (representing an immediate or imminent hazard) shall be rectified as follows:

- Traffic control measures shall be put into place to guide pedestrian traffic safely around the collapse. This may be by the use of an emergency road closure. A physical barrier shall be erected around the hazard. The means of permanent repair shall then be assessed as appropriate.

- A cold lay material may be used as a temporary measure, provided that a permanent patch repair is undertaken as part of programmed routine works.

- Where defects with potentially serious consequences for network safety are made safe by means of temporary repair a special inspection regime shall be put in place to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.

B.1.6.2 - Routine

Footway and Footpath Surface Defects

Routine footway surface defects shall be repaired by cutting back to solid construction, square and backfill with hot bituminous material.

Part 2: Cycleway Maintenance

B.2.1 - Introduction

Central Bedfordshire Council manages 32km of off road metalled cycle tracks in both urban and rural environments. Almost all of these cycle tracks are shared use tracks.

The condition of cycle tracks can contribute to key objectives of the council as follows:

Objective	Contribution
Safety	Nature, extent and location of surface defects
	Nature and extent of kerb and edging defects
Serviceability	Nature and extent of surface defects
	Extent of encroachment and weed growth
	The slipperiness of the surface
	The quality of the surface
	Integrity of the network
Sustainability	Convenience and ease of use
	Nature, extent and location of surface defects
	Extent of damage by over-running and parking

Unless remedied, damage or wear to the surface of the cycle tracks will allow ingress of water and vegetation growth. Both will accelerate the deterioration of the surface and wearing courses and lead to the disintegration of the track.

B.2.1.1 - Cycling Strategy (LTP Appendix F)

The Cycling Strategy provides a policy framework to support improvements to support an increase in cycling as a sustainable mode of transport in Central Bedfordshire. The strategy references the spatial planning documents for the area, as generated by the Development Strategy to ensure a coherent strategic approach to transport planning.

The Cycling Strategy aims to promote an increase in the number of people cycling by looking at four objectives:

- Improve the quality of the cycling environment;
- Improve the safety and perceived safety of cycling;
- Increase awareness of the benefits of cycling; and
- Increase access to a bicycle

For each of these objectives a series of policies has been produced to set out the Authorities approach to promoting Cycling.

These policies shall be given due consideration in the NMMP as they will affect how the network is managed and repair works prioritised, the main policies affecting network management and maintenance are:

"Policy CS2: Network Hierarchy:
Investment into the provision of new cycle infrastructure will be subject to a route's position within the network hierarchy. Urban areas will be prioritised over more rural locations and route treatments applied commensurate with the characteristics of the particular link being developed"

"Policy CS3: Maintenance of the Network:
Maintenance of the cycle network is the responsibility of Central Bedfordshire Council. Priority for the maintenance of the network will be determined by the hierarchy of routes and will involve resurfacing and filling in potholes, the cutting back of planting and gritting in winter months, where necessary."

B.2.2 - Network Hierarchy

A network hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy. It is important that the hierarchy adopted reflects the needs, priorities and actual use of each component within the network; these may be determined by importance, by environment or by non-vehicular traffic factors for example. The functionality, traffic flows and risk assessments of any part of the network should be the basis of local priorities.

The strategic cycle network hierarchy adopted by Central Bedfordshire Council reflects the potential number of movements over the component routes.

Central Bedfordshire Council Highways operates a detailed network inventory which is regularly updated in response to new works ground and is stored / maintained via a compliant Insight UKPMS supplied by Symology.

In accordance with the recommendations of Well Maintained Highways, and taking into account Council policy documents, the Council has adopted the following network hierarchy.

Category	Description
A	Promoted cycle route utilising the carriageway. The route can be identified by signage and lining, either in the form of cycle symbols or advisory cycle lanes. There may also be specific measures at junctions to give advantage to cyclists.
B	Cycle tracks routing over metalled footways and footpaths that may or may not be contiguous with the carriageway. The use of all cycle tracks is shared with pedestrians and there may be segregation through lining or kerbing.
C	Cycle tracks running over non-metalled paths that are not contiguous with a carriageway. Such tracks may not be designated as public highway but are maintained by the authority.

B.2.3 - Network Inspections

B.2.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

B.2.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

Policy NMPB5: Frequency of Safety Inspections for Cycle Tracks

The frequency of inspections shall be:

Feature	Category	Frequency	Method
Cycle tracks	A	As per road	Driven
	B	6 months	Walked
	C	1 year	Walked

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways and cycle tracks, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Where carriageway and footway hierarchies intersect, for example at defined crossing points at junctions, the footway hierarchy should always take priority in determining the inspection frequencies, defect definition and responses. This principle should also apply to intersections between carriageways and cycle routes and between cycle routes and footways.

Additional inspections may be necessary in response to user or community concern, as a result of incidents or extreme weather conditions, or in light of monitoring information, such as an abnormally high occurrence of damages claims or if the particular characteristics make a cycleway more likely to deteriorate than other similar assets in the allocated category. These may be identified through the risk management process. A higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers. Consideration of increased frequency of inspection should also occur on access routes to various features which will draw additional traffic; these features include but are not limited to:

- Access to schools, hospitals and medical centres;
- Vulnerable users or people with special needs; and
- Ceremonial routes and special events.
-

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Policy NMPB6: Cycle Track Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Cycle tracks	Surface defects
	Kerbs and edge defects
	Overhanging and encroaching vegetation impeding use of wheelchairs and baby buggies
	Missing or loose covers
	Dangerous utility apparatus, including covers

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

Any defect with utility apparatus assessed as Cat 1 shall require the utility provider to be notified immediately and requested to attend or make the defect safe within 24 hours. This shall be undertaken with reference and in accordance with Section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. As a general guide defectiveness of a scale less than the following can be considered defendable in any actions brought against highway authorities.

Policy NMPB7: Definition of a CAT 1 Cycle Track Defect

Cycle track surface defects – A hole in the bituminous surface with approximately vertical sides, where material has been lost, and where any surface dimension in two directions exceeds 100mm and depth exceeds 20mm

OR

A difference in vertical level between adjacent slabs, or between adjacent slabs and other projections such as surface boxes and the like, exceeding 20mm, including slabs which rock dangerously, missing or collapsed ironwork, sunken covers more than 20mm.

Other defects which may constitute a category 1 response include but are not limited to:

- Cracks in footways that are greater than 25mm in width;
- Kerbs that are missing or broken; and
- Damaged pedestrian guard rails, barriers or fences damaged or constitute a danger.

It shall however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

When considering the risk factor, the inspector shall also consider whether the defect is in an unlit location. In this instance the probability of the defect causing an incident should be increased proportionately to account for poor visibility of the defect by users.

Where a promoted cycle route runs on the carriageway the category 1 defect criteria will be as defined in Policy NMPB7 in this annex for the full width of carriageway.

B.2.3.3 - Service Inspections

Service inspections should be strongly focused on ensuring that the network meets the needs of users and comprise more detailed specific inspections of particular highways elements, to ensure that they meet the levels of service defined in the HAMP.

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. These can be split into the following:

- Network Integrity Inspections;
- Regulatory inspections (as detailed in the “Regulatory Functions” chapter of the Introduction to Network Maintenance Management)

Generally, the frequency of Service Inspections shall be as the frequencies defined in the Safety Inspection section of the same asset.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Cycle Tracks	Nature and extent of surface defects
	Extent of encroachment and weed growth
	Slipperiness of the surface
	Quality of the surface
	Integrity of the network

Network Integrity Inspections

All components across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;

- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.
-
- Opportunities shall be taken to address integrity issues identified by the survey, for example:
    - Replacing signs and re-lining;
    - Installing dropped kerbs and texture paving;
    - Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

B.2.4 - Network Surveys

B.2.4.1 – Network Survey Types

Footway Network Survey (FNS)

Footway Network Surveys (FNS) will be carried out by an accredited sub contractor and will be done as a walked inspection on all footways. The surveys will be carried out annually on all footways both remote and beside the carriageway.

The FNS outputs shall be used to determine whether a Detailed Visual Inspection (DVI) follow-up is required on impaired sections – required for – a footway/footpath to be included within the structural maintenance works programme.

Detailed Visual Inspection

A Detailed Visual Inspection shall be undertaken on foot following Footway Network Survey to further investigate the severity of defects identified and to provide evidence for four year structural maintenance programme process.

Detailed Visual Inspections (DVI) will be carried out by an accredited sub contractor on foot.

B.2.4.2 – Network Survey Frequencies

Policy NMPB8: Cycle Track Network Survey Frequencies

The frequency of inspection shall be:

Survey	Category	Frequency
Footway Network Survey (FNS)	Cycle track	25% of network each year
Detailed Visual Inspection (DVI)	Cycle track	As required as a result of FNS surveys

B.2.4.3 – United Kingdom Pavement Management System (UKPMS)

UKPMS is a central government accredited computer database used to analyse and manage a variety of structural condition surveys listed above.

B.2.4.4 – Maintenance Audit

In order to ensure that the maintenance implications arising from highway improvement schemes are optimised during the design process a maintenance audit process shall be carried out.

It is necessary to carry out a maintenance audit on highway works, this is to ensure that improvement works are carried out having considered the following:

Area	Description
Safety:	The work should be carried out considering the safety of all users of the public highway. Consideration should be given to pedestrians, cyclists, horse riders etc., not just the vehicular road user. Although safety is covered as part of a safety audit, other maintenance factors such as street lighting should also be considered as part of the safety considerations of the maintenance audit.
Serviceability:	Are the works fit for its proposed purpose? All maintenance and improvement works shall be easily accessed by the user of the public highway i.e. There is little point in installing a sign that will be readily obscured by overhanging vegetation.
Sustainability:	Are the maintenance/improvement works necessary and will these works be easily maintained in the future. There must be an emphasis on reusing/recycling materials

The results of the maintenance audit are to be communicated to the Service Delivery Team for integration into the maintenance regime.

B.2.5 - Network Maintenance Types

B.2.5.1 - Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

B.2.5.2 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Central Bedfordshire Highways and is targeted at two areas:

- Meeting the need identified through highway inspections;
- Preventative maintenance, working ahead of highway inspections when budgets allow; addressing defects while they are in their ‘infancy’.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

Where an identified defect falls outside the described types the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

B.2.5.3 - Programmed Maintenance

Where an inspection identifies issues which cannot be resolved by reactive works these shall be recorded and shall be put forward for inclusion within the four year maintenance programme of works.

It is the aim of the service to establish a four year programme taking in to account the criteria of:

- Safety
- Serviceability

- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Introduction to Network Maintenance Management document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

In all other cases account will be taken of the advice given in the BRE publication:
"Guidance on specifying recycled content in Local Authority contracts for highway maintenance"

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

"Total package" thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

B.2.6 - Network Maintenance Standards Cycle Tracks

B.2.6.1 - Reactive

Cycle Track Surface Defects

Category 1 defects to a cycle track (representing an immediate or imminent hazard) shall be rectified as follows:

- Clean and cut back to a solid construction, square and backfill with hot bituminous material;

- A cold lay material may be used as a temporary measure, provided that a permanent patch repair is undertaken as part of programmed routine works.

- Where defects with potentially serious consequences for network safety are made safe by means of temporary repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the repair is maintained, until a permanent repair can be made.

Encroaching Vegetation

Shrubs, brambles and branches are inspected and cut back as necessary to prevent obstruction to passage and to sight lines (see Annex F Part 1)

Signs and markings
Signs that give direction or warnings to cyclists are maintained as to be clearly visible. Surface markings should be replaced as soon as their visibility is less than 75% of the original surface area.

B.2.6.2 - Routine

Cycle Track Surface Defects
Routine cycle track surface defects shall be actioned by cutting back to solid construction, square and backfill with hot bituminous material.

Part 3: Public Right of Way Maintenance

B.3.1 - Introduction

Public rights of way form part of the highway network. The Council, as Highway Authority, has a statutory responsibility to assert and protect the rights of the public to use the public path network.

Central Bedfordshire Council has 829 miles of public rights of way (PROW) network, which act as vital links for residents and visitors to access the countryside from their communities and further afield. A well as having a leisure purpose, they also connect residents to local amenities such as shops and schools, as well as linking neighbouring communities.

This Part should be read in conjunction with the document “Rights of Way Maintenance and Improvement Policy”, for information on the routine and programmed maintenance works and construction specifications.

Central Bedfordshire’s documents:

- “Rights of Way Maintenance and Improvement Policy”; and
- “Connecting Spaces: Rights of Way”

shall be read in conjunction with this part for additional details on the legal background, division of responsibilities between and the council’s improvement strategy for Rights of Way.

B.3.2 - Network Hierarchy

A network hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy. It is important that the hierarchy adopted reflects the needs, priorities and actual use of each road in the network; these may be determined by importance, by environment or by non-vehicular traffic factors for example. The functionality, traffic flows and risk assessments of any part of the network should be the basis of local priorities.

The following table illustrates the split of the public rights of way network into right of way type.

ROW Type	Distance miles (Km)	User allowed
Footpath (FP)	603 miles (971km)	A public right of way on foot only (with/without a dog or pushchair)
Bridleway (BW)	210 miles (338km)	A public right of way on foot, riding or leading a horse, or bicycle
Byways Open to All Traffic (BOAT)	16 miles (26km)	A public right of way on foot, riding or leading a horse, bicycle or in any road-legal vehicle driven by a legally entitled driver

B.3.3 - Network Inspections

B.3.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

Central Bedfordshire Highways provides support to the Central Bedfordshire Council Rights of Way team when requested to do so, as part of this, Central Bedfordshire Highways inspects some structures on the Right of Way network.

The Council has a programme of bridge inspections and associated repair or replacement of structures which has been running since 2006/7. All of the structures on or adjacent to the RoW network are classified via the classification mechanism in the "Rights of Way Maintenance and Improvement Policy". The larger structures or those structures which accommodate vehicular access shall inspected by Central Bedfordshire Highways at the request of the RoW team, and the remainder shall be inspected by RoW Officers or trained volunteers. Those structures designated as being inspected by Central Bedfordshire Highways shall be inspected at the instruction of the Rights of Way team and as defined in the "Rights of Way Maintenance and Improvement Policy", the type of inspection as described in section C.1.3 of Annex C (Bridges, Highways Structures and Safety Fencing) of this Network Maintenance Management Plan, shall be specified and confirmed at the time of instruction.

B.3.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

Policy NMPB9: Frequency of Safety Inspections for Public Rights of Way

The frequency of inspections shall be:

Feature	Category	Frequency	Method
Public Rights of Way	BOAT	1 Year	Driven
	BW	Responding to Notification	Walked
	FP	Responding to Notification	Walked

Where carriageway and footway hierarchies intersect, for example at defined crossing points at junctions, the footway hierarchy should always take priority in determining the inspection frequencies, defect definition and responses. This principle should also apply to intersections between carriageways and cycle routes and between cycle routes and footways.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways and cycle tracks, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Additional inspections may be necessary in response to user or community concern, as a result of incidents or extreme weather conditions, or in light of monitoring information, such as an abnormally high occurrence of damages claims or if the particular characteristics make a cycleway more likely to deteriorate than other similar assets in the allocated category. These may be identified through the risk management process. A higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers. Consideration of increased frequency of inspection should also occur on access routes to various features which will draw additional traffic; these features include but are not limited to:

- Access to schools, hospitals and medical centres;
- Vulnerable users or people with special needs; and
- Ceremonial routes and special events.
-

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Policy NMPB10: Public Right of Way Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Cycle tracks	Surface defects
	Edge defects
	Overhanging and encroaching vegetation impeding use of wheelchairs and baby buggies
	Missing or loose covers
	Dangerous utility apparatus, including covers

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

Any defect with utility apparatus assessed as Cat 1 shall require the utility provider to be notified immediately and requested to attend or make the defect safe within 24 hours. This shall be undertaken with reference and in accordance with Section 81 of the New Roads and Streetworks Act 1991.

A ‘risk matrix’ shall be used to classify the degree of risk posed by all identified defects as identified in the “Network maintenance Management Plan: Introduction to Network Maintenance Management” Section 14 “Network Maintenance – Defect Category Identification”.

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. As a general guide defectiveness of a scale less than the following can be considered defendable in any actions brought against highway authorities.

Policy NMPB11: Definition of a CAT 1 Public Right of Way

Public Right of Way surface defects – A hole in the surface, where material has been lost, and where any surface dimension in two directions exceeds 100mm and depth exceeds 20mm

OR

A difference in vertical level creating projections such as surface boxes and the like, exceeding 20mm. Missing or collapsed ironwork, sunken covers more than 20mm.

It shall however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

When considering the risk factor, the inspector shall also consider whether the defect is in an unlit location. In this instance the probability of the defect causing an incident should be increased proportionately to account for poor visibility of the defect by users.

B.3.3.3 - Service Inspections

Service inspections should be strongly focused on ensuring that the network meets the needs of users and comprise more detailed specific inspections of particular highways elements, to ensure that they meet the levels of service defined in the HAMP.

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. These can be split into the following:

- Network Integrity Inspections;
- Regulatory inspections (as detailed in the “Regulatory Functions” chapter of the Introduction to Network Maintenance Management)

Generally, the frequency of Service Inspections shall be as the frequencies defined in the Safety Inspection section of the same asset.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Public Rights of Way	Nature and extent of surface defects
	Extent of encroachment and weed growth
	Slipperiness of the surface
	Quality of the surface
	Integrity of the network

Network Integrity Inspections
All components across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.
-
- Opportunities shall be taken to address integrity issues identified by the survey, for example:
  - Replacing signs and re-lining;
  - Installing dropped kerbs and texture paving;
  - Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

B.3.4 - Network Surveys

B.3.4.1 – Network Survey Types

Footway Network Survey (FNS)
Footway Network Surveys (FNS) will be carried out by an accredited sub contractor and will be done as a walked inspection on all footways. The surveys will be carried out annually on all footways both remote and beside the carriageway.

The FNS outputs will also be used to determine whether a follow up Detailed Visual Inspection (DVI) is required on sections where there are major impairments and analysed for inclusion in the structural maintenance works programme.

Detailed Visual Inspection
Detailed Visual Inspections are undertaken following Footway Network Survey, to further investigate defects which have been identified through the FNS process and to feed into the five year structural maintenance programme.

Detailed Visual Inspections (DVI) will be carried out by an accredited sub contractor on foot.

B.3.4.2 – Network Survey Frequencies

Policy NMPB12: Public Right of Way Network Survey Frequencies

The frequency of inspection shall be:

Survey	Category	Frequency
Footway Network Survey (FNS)	Public Right of Way	25% of network each year
Detailed Visual Inspection (DVI)	Public Right of Way	On all footways identified with Major Impairment from FNS if required

B.3.5 - Network Maintenance Types

The extent of the duty to maintain (HA80 s41) requires that rights of way should be kept in such a state as to be safe and fit for ordinary traffic which could reasonably be expected to use it. In practice, the decision as to what surface to provide, if any, will be the level of use and its legal status. There is no obligation to provide a metalled surface or similar on a byway to enable the public to use the route with vehicles.

Some PROW are privately maintainable to a higher status. Dual liability can exist where the Highway Authority is only responsible for maintenance of the PROW to the public status. If a landowner, for example, has provided a sealed surface for vehicular use on a farm track that has public bridleway rights, the Highway Authority cannot be held responsible for maintenance beyond that required for reasonable bridleway use.

When the surface is disturbed and planted as part of agricultural practice, farmers and landholders have a legal requirement to reinstate the path within a set period of time.

The council works closely with land owners to ensure that public rights of way are open and available for use at all times and, generally, the majority of landowners comply with their legal responsibilities. However, for those exceptional cases, an enforcement policy is in place to ensure the reinstatement and Notices may be served against a landowner and costs recovered as a final sanction

B.3.5.1 - Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

B.3.5.2 - Routine Maintenance

Routine maintenance of the PROW network is managed and delivered by CBC Rights of Way Officers. Routine Maintenance is targeted at meeting the need identified through inspections undertaken by Rights of Way Officers.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

It may be the case that an identified defect does not fall within any of the described types, in such an event the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

B.3.5.3 - Programmed Maintenance

An annual programme of vegetation clearance, of around a quarter of the network, is undertaken by specialist contractors, land owners and volunteers; the programme is built up from inspections and local requests. Most paths are cut twice during the May to September period but can be supplemented by clearance by trained People, Projects, Partnership P3 volunteer groups, Community Payback scheme or other volunteer groups.

Where an inspection identifies issues which cannot be resolved via reactive works, these shall be recorded and shall be put forward for inclusion within the maintenance programme of works.

It is the aim of the service to establish a four year programme taking in to account the criteria of:

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Introduction to Network Maintenance Management document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

In all other cases account will be taken of the advice given in the BRE publication:
“Guidance on specifying recycled content in Local Authority contracts for highway maintenance”

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

“Total package” thinking promotes the inclusion of works upon all elements of the assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

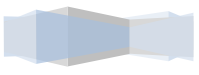
Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

B.3.6 - Network Maintenance Standards Public Rights of Way

B.3.6.1 - Reactive

Surface Defects

Having confirmed that a PROW surface defect represents an immediate or imminent hazard (Category 1 defect) it shall be rectified as follows:
Potholes shall be in filled with new material which is sympathetic to the existing surfacing material.
Due to the remote nature of some PROWS, compaction will be by hand and therefore infill material should be left slightly proud of the PROW surface to ensure sufficient material is present to allow for natural compaction without potential for water ponding



Encroaching Vegetation

Shrubs, brambles and branches are inspected and cut back as necessary to prevent obstruction to passage and to sight lines (see Annex F Part 1)

B.3.6.2 - Routine

Surface Defects

Routine PROW surface defects shall be actioned by infilling with new material which is sympathetic to the existing surfacing material.

Due to the remote nature of some PROWS, compaction will be by hand and therefore infill material should be left slightly proud of the PROW surface to ensure sufficient material is present to allow for natural compaction without potential for water ponding.

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

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Network Maintenance Management Plan

Annex C:

Bridges, Highway Structures and Safety Fencing

Part 1: Bridges and Highway Structures

C.1.1 – Introduction

The highways network in Central Bedfordshire contains 345 No. total structures, varying from simple culverts for water courses up to structures which pass over railways, or retaining structures which retain the highway. The Highway Asset Management Plan Identifies that within the network there are 49 Over Bridges, 198 Under Bridges, 360 Culverts and 7322 Retaining Walls, along with 18 Cattle Grids.

These assets form a key element to the network, as if any one of them fails there could not only be a serious accident, but it will also affect the transport network in an adverse manner, which could affect both residents and businesses which use the CBC highways network on a daily basis.

Careful management and maintenance of these structures is therefore needed to ensure that they remain in a serviceable state, which is safe for the travelling public to use.

C.1.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

The frequencies of inspection shall be set through the Bridge Management Team, following the prerequisites for the inspections identified in the Network Inspections section of this part.

C.1.3 – Inspections and Testing

C.1.3.1 - Introduction

The overall purpose of inspection, testing and monitoring is to check that the highway structures stock is safe for use and fit for purpose. It also provides the data required to support good management practices such as Asset Management Planning and Maintenance Planning and Management.

Through various types of inspection, the intention is to provide data on the current condition, performance and environment of the structure, which can then lead to informed analyses, assessments and processes. This data also contributes towards improved information databases on the structures by filling any missing data, verifying existing data and updating data where necessary.

C.1.3.2 - Routine Surveillance

All structures should be subject to Routine Surveillance as part of regular Highway Safety Inspections carried out by highway maintenance staff. Routine Surveillance will normally be undertaken by the passenger in a slow moving vehicle. Inspectors should immediately report any obvious defects that

are apparent from the vehicle and need urgent attention, to the bridge manager. This will include but is not limited to damage to the superstructure or bridge supports, damage to parapets, flood damage, insecure expansion joint plates, damage from vehicular impact etc.

The frequency of Routine Surveillance shall be the same as for the carriageway, footpath, cycle track or public right of way which runs over or under the structure.

C.1.3.3 - General Inspection

Highways structures should be subject to regular General Inspections on an average of 2 years from the previous General Inspection. This shall be varied based upon risk analysis by the bridge management team as per paragraphs 6.4.27 to 6.4.34 of the Code of Practice. The risk assessment should be specific to a structure taking into account, the likelihood of rapid deterioration or other incidents, and the consequences of unchecked deterioration or incidents. The General inspection regime for each structure shall be noted in the Bridge Management File.

General Inspections comprise a visual inspection of all parts of the structure and, where relevant to the behaviour or stability of the structure, adjacent earthworks or waterways that can be inspected without the need for special access or traffic management arrangements.

Guidance on General Inspections for highways structures in included in *CSS Bridge Condition Indicators Volume 2: Guidance Note on Bridge Inspection Reporting* and also Addendum *to CSS Bridge Condition Indicator Volume 2*.

C.1.3.4 - Principal Inspection

Highways structures should be subject to regular Principal Inspections on an average of 6 years from the previous Principal Inspection. This shall be varied based upon risk analysis by the bridge management team as per paragraphs 6.4.27 to 6.4.34 of the Code of Practice. The risk assessment should be specific to a structure taking into account, the likelihood of rapid deterioration or other incidents, and the consequences of unchecked deterioration or incidents. The Principal inspection regime for each structure shall be noted in the Bridge Management File.

Principal Inspection comprises a close examination, within touching distance, of all accessible parts of the structure, including, where relevant, underwater parts and adjacent earthworks and waterways, utilising suitable access and/or traffic management works as necessary. Closed circuit television may be used for areas of difficult or dangerous access.

Principal inspections may also include a modest programme of tests when considered necessary.

Principal Inspections should be sufficient in scope to determine the condition of all parts of the structure, the extent of any significant change or deterioration since the last Principal Inspection and any information relevant to the stability of the structure. The Principal Inspection should establish the scope and urgency of any remedial action identified, the need for any special inspections or further investigations and the accuracy of data held for the structure in the inventory.

C.1.3.5 - Special Inspection

Following from a General or Principal Inspection there may be times when a more specific inspection, concentrating on the condition of particular parts of a structure is required. This is known as a Special Inspection. The need for a special Inspection normally arises due to specific circumstances or following certain events.

C.1.3.6 - Inspection for Assessment

Inspection for Assessment is another type of inspection, used prior to a structural assessment. This type of inspection should include comments and observations on the condition of the structure, and if any deterioration is identified, this should be noted along with its importance, and if appropriate, how the deterioration should be taken into account in the assessment calculations i.e. condition factor or size of structural element to be taken for calculation purposes.

C.1.3.7 - Safety Inspection

A Safety Inspection shall be undertaken following Routine Surveillance or after information has been received which indicates the structure is damaged and may be unsafe.

The Safety Inspection should determine the extent of the damage and whether immediate safety precautions or other action should be taken. A Special Inspection may then follow to monitor the condition and effectiveness of interim measures and determine what repair or other actions should be undertaken in the longer-term.

C.1.3.8 - Acceptance Inspection

The need for an Acceptance Inspection should be considered when there is a changeover of responsibility for the operation, maintenance and safety of a structure from one party to another. The intent of this inspection is to provide the party taking over the structure a formal mechanism for agreeing the current status of, and outstanding work on, a structure prior to handover.

The Acceptance Inspection should include the permanent access provisions and features affecting the safety and security of the structure, the identification and handover of all necessary records, maintenance and operating manuals which will have an impact upon the future management of the structure and agreement of the date on which the authority takes on the responsibility of the structure.

Additional requirements for New, Existing and Concession structures can be found in the Management of Highways Structures Code of Practice.

C.1.4 – Network Surveys

All survey and inspection works for highways structures shall be as identified in the Network Inspection section of this Annex and Part.

C.1.5 – Network Maintenance Types

C.1.5.1 Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications

Typical reactive measures for each element of the highway asset are described in the relevant asset Section of this Plan. It may be the case that an identified defect does not fall within any of the described types. In such an event the responsible officer shall undertake those measures they see fit to render the defect safe in line with the above time scale targets.

In the case of dangerous defects to utility apparatus or trenches the responsible officer shall make the utility responsible aware by logged telephone call, under S81 of the NRSWA91, of the nature of the inadequacy. The responsible officer shall instigate measures to render the site safe if:

- The identity of the utility responsible is unknown
- He is unable to contact the utility responsible
- The utility cannot make the inadequacy safe within 2 hours
- No response is received from the undertaker within 2 hours of the logged telephone call.

In this case all costs associated with rendering the site safe shall be borne by the utility concerned.

In any event, information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

Historic Bridges
Central Bedfordshire has 4 bridges that are classified as Scheduled Ancient Monuments and 1 that is a Grade II Listed Structure.
These are:

Bridge Name and Number	Scheduled Ancient Monument or Listed Building (with grade)	Ancient Monument Number	Grid Reference
Blunham River Bridge (181)	S.A.M	24	TL 156519
Blunham Navigation Bridge (182)	S.A.M	24	TL 156519
Holme Mills / Lock Bridge, Broom, Southill (143)	S.A.M	87	TL 18434303
Pack Horse Bridge, Sutton (423)	S.A.M	9	TL 22064741
Girtford Bridge, Sandy (9)	L.B Grade II	NA	TL 163490

Consent for any work on theses bridges has to be obtained from the Conservation Authority e.g. English Heritage for Ancient Monuments. For all historic bridges great care will be taken to replicate the original materials and finishes.
In the event of a historic bridge requiring emergency action, appropriate measures will be taken without first obtaining consent but the Conserving Authority will then be informed retrospectively. The Conservation Officer of Central Bedfordshire shall be kept informed in advance of any work required on historic bridges.

C.1.5.2 Emergency Reactive Maintenance

Outside normal office hours (8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays) the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

At all times, upon identifying the need (either by description or by inspection) for an emergency reactive response the responsible officer shall instigate measures to render the site safe within 2 hours.

Wherever practicable, such measures shall take the form of a permanent repair thereby avoiding the necessity to revisit the site in the short term. However, this may not be achievable in every circumstance. In such events a temporary make safe repair shall be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, shall be put into place.

C.1.5.3 Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways.

Routine Maintenance is to be targeted at two areas. Firstly at meeting the need identified through highway inspections and secondly, at preventative maintenance, working ahead of highway inspections to address defects while they are in their 'infancy'. This secondary role can only be tackled after having addressed all identified safety inspection defects within a field of work and then only if and when budgets allow.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the Network Maintenance Standards section (see C.1.6.2)

It may be the case that an identified defect does not fall within any of the described types, in such an event the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

C.1.5.4 Programmed Maintenance

It is the aim of the service to establish a four year programme of strengthening works which will take in to account the criteria of:

- Safety
- Serviceability
- Sustainability
- Community Effect

Where practicable improvement works shall also be delivered in conjunction with the strengthening programme.

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Core document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

In all other cases account will be taken of the advice given in the BRE publication:
“Guidance on specifying recycled content in Local Authority contracts for highway maintenance”

“Total package” thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

The programme of assessment and strengthening shall adhere to national standards of assessment and the management of sub-standard structures. “Added value” shall also be considered in the design phase, with examples being addition of cycle lanes or improving transportation links and combining works with other programmed highway maintenance requirements.

C.1.6 – Network Maintenance Standards Structures

C.1.6.1 - Reactive

Accident damage, severe water scour or any other bridge defect that represents an immediate or imminent hazard shall be rectified as follows:
The means of making safe shall be assessed and enacted immediately. This may involve restrictions to traffic or pedestrians or even closure with associated diversions.
Should any structure be found to present immediate or imminent hazard, Bedfordshire Highways shall immediately notify the following with an assessment of the risk and recommended ‘make safe’ measures:

- Head of Highways;
- Assistant Director for Highways and Transport;
- Director for Community Services;
- Executive Members for Community Services;
- Key stakeholders, particularly blue light services.

Long-term repair measures shall be assessed. If traffic restrictions have been incurred or public safety affected then permanent repairs are to be carried out as a matter of urgency by agreement with CBC. Otherwise, the work will be assessed for inclusion within the scheduled programme.

C.1.6.2 - Routine

All bridges and culverts over 0.9 metres span will be inspected regularly in accordance with the Approved Code of Practice for the Management of Highway Structures.
The average target frequency, if the CBC budget is available, being two years for a 'General' inspection and six years for a more thorough 'Principal' inspection, this however, can be varied as per paragraphs 6.4.27 to 6.4.34 of the Code of Practice. The inspections produce a Bridge Condition Indicator (BCi) score for each structure. (The new CoP allows for variation in the frequencies of general and principle inspections, depending upon a risk assessment which includes type and age of structure).
Any work identified during these inspections deemed as urgent will be dealt with as above. Any other work required will be classified as 'High', 'Medium' or 'Low' priority and will be linked to the BCi for the structure. Maintenance work will then be programmed in order of priority and within a suitable financial year, depending on available funding.

Routine maintenance of bridges should take into account the environment and the surrounding ecology. Watercourses are often populated by sensitive or protected species and vegetation clearance is often required during routine maintenance operations. The possibility that the bridge may support roosting bats is a particular issue in Masonry structures but should be considered at all sites. All bat species are protected under the provisions of both the Wildlife and Countryside Act 1981 (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). The latter legislation makes them "European Protected Species".
Maintenance could easily seal cracks being used by bats and works of this type should not occur until a bridge has been checked by a suitably qualified and licensed bat surveyor.

Graffiti on Highway Structures
Graffiti that is obscene or offensive represents an immediate or imminent hazard (category 1 defect) shall be removed from highway structures as follows:
If the graffiti cannot be removed by the use of proprietary cleansing products, then it should be hidden by over-painting.

If the location means that the structure is difficult to get to then consideration will be given to the use of anti-graffiti coatings. Graffiti will then be cleaned on a regular basis or referred to the CBC Waste Team as appropriate.
Materials will also be supplied at the request of accredited voluntary bodies for more frequent cleaning or alternatively for the periodic over-painting of graffiti. Consideration will be given to the proposed provision of murals in subways and underpasses by accredited voluntary bodies to improve their appearance and to deter graffiti.

C.1.7 – GAP Analysis of Current Practice to CoP Guidelines

In July 2011 the Council commissioned a GAP analysis of the current management systems and processes of the structures stock, in comparison to the November 2011 Management of Highways Structures Code of Practice. The analysis looked at each individual chapter of the CoP and then split this down into the key milestones, so that prioritisation of any corrective actions could occur.

The analysis found that:

- 29% of the Milestone 1 Actions were not being met;
- 65% of the Milestone 2 Actions were not being met; and
- 78% of the Milestone 3 Actions were not being met.

Milestone 1 Actions relate to processes that are required for a highway structures stock that is safe to use, inspect and maintain. There were 9 Milestone 1 Actions that were not being met, of which corrective action has been prioritised as a matter of urgency.

Milestone 2 Actions encompass Milestone 1 and also intend to broadly include adoption of additional processes necessary to provide highway structures fit for purpose and that meet Government requirements. There were 20 Milestone 2 Actions which were not being met.

Milestone 3 Actions additionally required the adoption of a process necessary to deliver agreed levels of service at minimum whole life cost. The analysis found that there were 14 Milestone 3 Actions not being met.

The report presented reasons as to why each was or was not being adequately addressed, one of which being that the contract was let before the 2005 version of the Code of Practice was released, and so some gaps were not covered in the contract.

For further information, reference should be made to Central Bedfordshire Council Management of Highway Structures, GAP Analysis, July 2011 (Amey Document Reference 500387 (410924))

C.1.8 – Implementation Plan for GAP Analysis Results

Following the GAP analysis, an implementation plan was commissioned in 2012. The plan was produced to provide a programme for implementation of the recommendations over a 5 year period. This however means that full implementation of the plan would not occur within the current contract, but completion needs to be considered in the tender process to 2016.

For further information, reference should be made to Central Bedfordshire Council Management of Highway Structures, Implementation Plan, April 2012 (Amey Document Reference 500965-001)

Part 2: Road Restraint Systems

C.2.1 – Introduction

Road Restraint Systems are used both locally and nationally to contain errant vehicles within the highway boundary, and protect them from objects which are located off of the highway which may serious injury or death. An operational road restraint system should not only contain errant vehicles to the carriageway but also be able to deflect and absorb the force of the collision and control the errant vehicle in such a way as to minimise risk to other vehicles in the same section of carriageway.

Examples of locations for road restraint systems would be on the approaches to over bridges, to prevent errant vehicles from rolling down the embankment, or on the approach to under bridges where protection is required to prevent errant vehicles striking the structure.

G.2.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

G.2.3 – Network Inspections

G.2.3.1 - Introduction

The overall purpose of inspection, testing and monitoring is to check that the highway structures stock is safe for use and fit for purpose. It also provides the data required to support good management practices such as Asset Management Planning and Maintenance Planning and Management.

•

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

The type and frequency of inspections shall be as per the Carriageway, Footway or Cycleway network upon which, or adjacent to which, the Road Restraint System asset is to be found. These types and frequencies, along with the requirements for each can be checked by referring to the associated Annexes to these assets.

G.2.3.2 - Safety Inspections

Safety inspections shall be undertaken to identify defects likely to create danger or serious inconvenience to users of the network or the wider community. The risk of danger is assessed on site and categorised so as to allow for an appropriate priority response.

The frequency of inspections shall be as identified in the relevant annex for the network and route that the Road Restraint System or Barrier is based upon.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Where there may be exceptional circumstances, for example an abnormally high occurrence of damages claims, a higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers.

Policy NMPC1: Road Restraint System Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Fences and barriers	Integrity and location of safety fencing for vehicles, cyclists and pedestrians

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

With regards to footways in particular, but also for carriageways, any defects with utility apparatus assessed as Cat 1, the utility must be notified immediately and requested to attend or make safe within 24 hours. This

should be undertaken with reference and in accordance with section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Policy NMPC2: Definition of a CAT 1 Road Restraint System Defect

Vehicle Restraint System – Unprotected vertical or horizontal protrusions from the Road Restraint System, which could cause damage;

OR

A total loss of containment for one or more sections of Road Restraint System, including, but not limited to, damage caused by collision;

OR

A permanent deformation of the guard rail or displacement of the support posts, foundations and anchorages;

OR

Unprotected drops at the edge of carriageway

OR

Clearance of the restraint barrier shall be checked to ensure a clearance of 600mm above the carriageway within 1500mm of the edge of carriageway and from ground level when greater than 1500mm.

OR

Obstructions within the working width of the barrier which could impinge upon the designed dynamic deflection of the barrier under impact loading

In considering the defectiveness of a defect, recognition must be given to where in the carriageway the defect is located, as a lesser defect in certain locations could be deemed dangerous by a Court.

An example of what should be recorded during a routine safety inspection can be found on page 40 of "BS 7669-3:1994 Vehicle Restraint Systems – Part 3 Guide to the installation, inspection and repair of Safety Fences".

Where routine inspections identify that a Road Restraint System is not constructed to current standards, a note should be added to the asset inventory so that future replacement may occur under a programme of works.

G.2.3.3 - Detailed Inspections

Highways Road Restraint Systems should be subject to regular Detailed Inspections, with a period of 5 years between inspections for assets which are less than 10 years old and a period of 2 years between inspections for assets which are over 10 years old.

Detailed Inspection comprises a close examination, within touching distance, of all accessible parts of the structure, utilising suitable access and/or traffic management works as necessary.

The clearance of the restraint barrier shall be checked to ensure a clearance of 600mm above the carriageway within 1500mm of the edge of carriageway and from ground level when greater than 1500mm.

The clearance behind the barrier shall be inspected to ensure that it meets the minimum requirements of manufacturer's specified working width or overhang from high sided vehicles impacting the barrier, as defined in BS EN 1317-2. For the correct minimum distances of Safety Barrier from the top or toe of slopes in verges or in central reserves where safety barrier is required for other reasons, reference shall be made to Chapter 3 of Section 2 Part 8 of Volume 2 of the Design Manual for Roads and Bridges (TD 19/06).

Detailed inspections may also include a modest programme of tests when considered necessary.

Detailed Inspections should be sufficient in scope to determine the condition of all parts of the Road Restraint System, the extent of any significant change or deterioration since the last Detailed Inspection and any information relevant to the stability of the fence. The Detailed Inspection should establish the scope and urgency of any remedial action identified.

An example of record sheets for detailed inspection can be found on pages 42-44, 45-46, 47-48 and 49-50 of "BS 7669-3:1994 Vehicle Restraint Systems – Part 3 Guide to the Installation, Inspection and Repair of Road Restraint Systems", for tensioned corrugated beam, un-tensioned corrugated beam, open box beam and tensioned rectangular hollow section beam respectively. The council does not have any wire rope Road Restraint Systems.

Where routine inspections identify that a Road Restraint System is not constructed to current standards, a note should be added to the asset inventory so that future replacement may occur under a programme of works.

C.2.4 – Network Surveys

All survey and inspection works for highways structures shall be as identified in the Network Inspection section of this Annex and Part.

G.2.5 – Network Maintenance Types

G.2.5.1 - Reactive Maintenance

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications
Typical reactive measures for each element of the highway asset are described in the relevant asset Section of this Plan. It may be the case that an identified defect does not fall within any of the described types. In such an event the responsible officer shall undertake those measures they see fit to render the defect safe in line with the above time scale targets.

In any event, information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

G.2.5.2 - Emergency Reactive Maintenance

Outside normal office hours (8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays) the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

At all times, upon identifying the need (either by description or by inspection) for an emergency reactive response the responsible officer shall instigate measures to render the site safe within 2 hours.

Wherever practicable, such measures shall take the form of a permanent repair thereby avoiding the necessity to revisit the site in the short term. However, this may not be achievable in every circumstance. In such events a temporary make safe repair shall be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, shall be put into place.

G.2.5.3 - Routine Maintenance

The Road Restraint Systems maintained by Central Bedfordshire Council shall be subject to a routine maintenance programme comprising:

- Retensioning

Which shall be undertaken as described below.

Retensioning

Retensioning of Tensioned Corrugated Beam must be carried out at two yearly intervals and preferably in conjunction with the two yearly detailed inspections (as referenced in G.2.3.3). Note that when retensioning Tension Corrugated Beam all post screws must be replaced. Retensioning must be carried out in accordance with the procedures set out in BS 7669-3.

G.2.5.4 - Programmed Maintenance

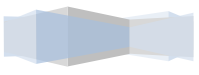
Road Restraint Systems and Parapets are routinely inspected via a programme of visual and physical inspection. Equally, inspection may be requested by ad-hoc reports from Area Teams, Safety Engineers or equally from members of the public.

Programmed replacement of Road Restraint Systems shall be subject to the Road Restraint Risk Assessment Process (RRRAP) and TD19/06 (Requirement for Road Restraint Systems) which shall identify risks and the mitigations for those risks.

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Core document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

In all other cases account will be taken of the advice given in the BRE publication:
“Guidance on specifying recycled content in Local Authority contracts for highway maintenance”

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.



“Total package” thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by

the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

C.2.6 – Network Maintenance Standards Road Restraint Systems (Safety Fence)

C.2.6.1 - Reactive

Having confirmed that a Road Restraint System (Road Restraint System), parapet or pedestrian barrier represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

The means of making safe shall be assessed and enacted as soon as possible.

Beams

Any structural damage to the beam will render it unserviceable. Particular attention should be paid to bolt holes. Any corroded adjuster or anchorage bolt should be replaced.

Mounting Height
If the damaged section is not more than 10 standard beam lengths, replace to match existing fence height.
If the damaged section is in excess of 10 standard beam lengths then the beam should be replaced at a mounting height of 610mm +/- 75mm, measured from the top of the paved surface if less than 1500mm from the edge of carriageway, or from ground level if greater than 1500mm from the edge of carriageway. Any variance in the mounting heights of the old and new beams should be taken out over two or three beam lengths at each end of the damaged section.

Replacement of tension corrugated beams
All beams that are installed as part of repair works should be podgered-out from the adjacent beam.
Where this results in the replacement length exceeding the length of gap to be enclosed, then either:

A. Slacken post bolts up to adjacent adjuster assembly and draw the beams back (replacing post bolts); or

B. Use an additional adjuster assembly within the replaced section.

Replacement of open box beams
If the damaged section is in excess of 100m but does not include an expansion assembly, then opportunity should be taken to include one within the section of the repaired fence.

If the replacement beams are too long for the length of section to be replaced then either:

A. Assemble several beams away from the posts suitably supported and attached at each end to an existing length of fence. Push the assembled beam up to the posts, taking care not to damage the galvanizing; or

B. Use an expansion assembly with the expansion gap set as required, this should accommodate up to 36mm. A half standard beam may also be required

Incomplete works
When no work is being undertaken on an incomplete section of fence, or where there is a delay between a damaged beam being removed and replacement installed, the gap should be protected by an assembled beam, with hand tightened fasteners, ramped down and dug into ground or protected with sand bags.

Posts
Any structural damage to a post will render it unserviceable. It is necessary to identify the type of post used.

Where a post has moved out of the correct upright position in the ground but has not yielded near the ground level, this will indicate that the stability of the ground is suspect. Post foundation tests such as push/pull tests should be considered

A post that is loose in the ground should be removed and replaced; attempting to consolidate the soil around an in-situ post is not satisfactory.

Where the post is unserviceable but the beam is undamaged, there may be no need to dismantle the beam prior to replacing the post.

Driven Posts
Where a standard driven post has moved out of the correct upright position in the ground, it should be normally replaced with a long driven post unless there is evidence to suggest that a designed concrete footing is required, the size of which should be determined by an engineer. A check on the location of buried services should be carried out prior to the driving of any posts.

Where a long driven post is no longer in the correct upright position, it will be necessary to provide a concrete foundation, the size of which should be determined by engineer

Driven Post Centres
In tensioned corrugated beams, if the posts are at standard centres, then the new posts should be driven at a position to correspond with the post bolt slot mid way between the original post locations. This will result in the posts at either end of the repaired section being 1.6m from the adjacent undisturbed post.

In open box beams and Rectangular Hollow Section (RHS) beams, the posts should be driven into undisturbed ground at standard spacings. This will result in the posts at either end of the repaired section being closer than the standard spacing to the undisturbed post.

Posts in Concrete Foundations
Any concrete foundation that has been disturbed should be removed and replaced with a new designed foundation, the size of which should be determined by an engineer.

A damaged post in any special undisturbed designed concrete foundation may be cut off at surface level and the concrete cored to provide a socket foundation, in this case non-setting passive filler should be used to fill the void to a level slightly above the top of the socket. Alternatively a surface-mounted post may be used; in this case non-setting passive filler should be used to fill the void to a level slightly above the top of the socket.

Surface-mounted Posts
Prior to the replacement of a surface mounted post, the holding down bolts should be examined to ensure that none of them have been pulled out of the concrete. Any movement or structural damage will render the bolts unsuitable for further use and they should be replaced with suitable fastenings which are able to withstand the pull-out load specified in then Manual of Contract Documents for Highways Works (Series 400).

Anchors
Anchorages
If an accident occurs within 50m of a ramped end or full height anchor, then the anchor block should be inspected. The Engineers instructions should be sought if there is any sign of movement

Full Height Anchorages
Where full height anchorages are set directly into concrete and the frame is damaged, but the concrete foundation is sound and undisturbed, then either:

A. Cut off the frame at the surface of the concrete and core to provide sockets for the new frame; or

B. Cut off the frame at the surface of the concrete; fill the holes with concrete and install a surface mounted frame.

Fasteners
Any fastener in the damaged section should be replaced with new components conforming to current specifications.

Any post screws affected by re-tensioning should be replaced with a new component conforming to the current specification.

C.2.6.2 - Routine

Works to Road Restraint Systems, Parapets and Barriers are currently undertaken by either:

- Reactive Works
- Programmed Works

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

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Network Maintenance Management Plan

Annex D:

Street Lighting

Part 1: Street Lighting

D.1.1 - Introduction

Central Bedfordshire Council manages 21336 No. street lights, 1044 No. illuminated safety bollards and 1366 No. illuminated signs. These can be found on various classifications of road, footway and cycle track in both urban and rural environments.

Street lighting has many benefits if maintained correctly. In the past areas have often been over designed for street lighting provision due to a disinterest in energy consumption, maintenance of these assets has continued this by not considering technological advancements.

Due to the current economic climate and pressures facing many local authorities in continuing to fund services, Central Bedfordshire Councils thinking has changed to incorporate technological advances in street lighting maintenance. It is Central Bedfordshire Councils aim to provide a level of lighting that is suitable while ensuring the lights can remain on for many years.

Suitably maintained street lighting can play a substantial part in the Local Authority's duties to its residents by:

- Improving safety
- Reducing crime
- Improving commerce
- Improving the night scene
- Making sustainable and non-motorised transport more attractive and friendly
- Lighting for People rather than Places

When planning repair and renewal treatments, all users shall be considered, including cyclists, horses and other non-motorised users, as well as the disabled and elderly (where not mentioned in this plan, these users will be taken as those that need to be considered in all works).

D.1.2 - Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footpaths, Cycle tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

In considering technological and functional improvements to the lighting technology through the maintenance function i.e. replacement of luminaires to more efficient type or replacement of lighting columns due to structural failure/damage, the following table should be referenced to identify the requirements for specific lighting zones:

Lighting Zone	Requirements
Zone E1 – National Parks, Sites of Special Scientific Importance and	Additional lighting should not be provided, unless a safety audit states that additional lighting will directly improve safety.
	The provision of lighting in accordance with BS5489:1-2003 and BSEN13201 will not be required and a more strategic approach to locations adopted

other Dark Areas	Where lighting is to be repaired or replaced, consideration should be given to the need/reason for the retention of the light unit, for example the possibility of lowering the wattage or removing the unit altogether should be a considerations
Zone E2 – Areas of Low District Brightness (Rural Locations outside Zone E1)	Safety and environmental factors shall be defined and considered when deciding upon the need for and provision of lighting.
	Care will be taken not to urbanise a rural location by the provision of an unsuitable and intrusive lighting scheme.
	On roads between villages and settlements in Zone E2 areas, lighting shall only be provided where there is a known night-time safety problem that cannot be controlled by other methods.
	Rural roundabouts shall be provided with a lighting system to meet the minimum recommended level in BS5489:1-2003 and BSEN13201.
	The height of columns installed in Zone E2 areas shall be kept to a minimum, but adequate to illuminate the area appropriately, without the requirement for an excessive number of columns.
	Complex junctions in Zone E2 areas shall only be illuminated if it has been shown that there is a significant night-time traffic flow and no alternative remedial safety actions are effective.
Zone E3 – areas of Medium District Brightness (Urban Location)	Luminaires shall be well controlled and be restricted to Glare Index Class D3 or above.
	Consideration shall be given to whether lighting is required in all cases.
	New lighting (i.e. developments) shall be lit in accordance with the surrounding area.
Zone E4 – Areas of High District Brightness (Urban Location)	Lighting to be provided in Zone E4 areas shall be flexible in order to illuminate the area for motorists and also provide an interesting and attractive ambience for people to enjoy.
	Zone E4 areas are generally bright and lively, however care shall be taken to control glare.
	The provision of well-designed and integrated lighting in our towns can provide added amenity whilst increasing the value of our towns in terms of visitors, civic pride, safety, security and economic regeneration. To maximise these values lighting must be strategically planned.

D.1.3 – Cyclical Maintenance

D.1.3.1 - Introduction

Cyclical maintenance is the main tool in the management of preventative maintenance, forestalling poor performance and failure of the installation. The programme is designed to aid in the prevention of performance issues, maintain or increase the life of the installation and reduce the need for reactive maintenance.

Cyclical maintenance will include the following tasks:

Function	Activity

Cyclical Maintenance	Luminaire inspection, maintenance and cleaning
	Photocell / timing mechanism inspection, adjustment and cleaning
	Visual inspection and minor repairs to electrical equipment and wiring
	Mechanical inspection and maintenance including door security
	Visual inspection of the structural condition of the lighting column or illuminated traffic sign post, bracket, luminaire and attachments
	Programmed electrical inspection and testing
	Programmed structural testing
	Programmed group component replacement at best value, once life expired
	Inventory data verification

Cyclical maintenance programmes should be determined taking into account all variables including lamp type, luminaire sealing, age and type of equipment and statutory requirements.

As well as the above noted cyclic maintenance activities, the following inspections shall be carried out:

- A visual inspection of the condition of all lighting columns and illuminated signs shall be carried out during reactive and cyclic maintenance visits.
- A full Electrical Condition Report shall be carried out at least every six years on all electrical equipment.

The Cyclical Maintenance Regime shall be subject to annual review.

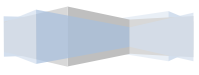
D.1.3.2 – Cyclic Maintenance Regime

Bulk Lamp Clean and Change

The frequency for lamp change and luminaire cleaning shall be as follows:

Light Source	Frequency (years)
PL - Fluorescent	6
SON – High Pressure Sodium	4
CMH – Ceramic Metal Halide	6
QL – Induction	15
LED – Light Emitting Diode	N/A
SOX – Low Pressure Sodium	Lanterns scheduled for replacement
MBFU – High Pressure Mercury	Lanterns scheduled for replacement

Driver replacement shall be undertaken at intervals recommended by the supplier. The supplier is to be noted on the asset register including an installation date.



Street Lighting Inventory System

A detained and accurate street lighting inventory system is essential for delivering an efficient and effective street lighting service. The inventory shall enable the following activities:

- Maintenance activities to be logged against each asset;
- Effective creation of cyclic maintenance regimes;
- Aid in the production of capital replacement programmes;
- UMSUG reports for accurate electricity billing.

Maintenance activities, cyclic or reactive, shall be recorded against each asset on the street lighting inventory system.

Recycling

Lamps and electrical equipment replaced during maintenance activities shall be disposed of in accordance with current regulations

D.1.4 – Reactive Maintenance

D.1.4.1 - Introduction

To maintain the service to the public there is a need to identify lighting units and illuminated traffic signs which have failed or have mechanical defects, and then to repair them within predefined timescales based upon the risk posed to the travelling public. Reactive maintenance also provides the ability to deal with emergency situations and protect the public from danger, by dealing promptly with events such as vandalism and vehicle impact.

D.1.4.2 – Monitoring for Inoperative Lights and Safety Defects

D.1.4.2.1 – Public Reports

CBC encourages members of the public to report any defects with street lighting by having a contact number for the Highways Helpdesk and reference number for each street lighting asset.

Customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

Once Public Reports have been validated a Works Instruction which should contain, as a minimum, the details below, shall be raised

Information Required	
Location	Address, unit reference number
Type of fault or repair	Failure of light, bracket misaligned, door missing
Priority	Category of defect
Equipment details	Column, material and height, lamp type and wattage, luminaire type and make
Special requirements	Access details, known risks, specific traffic management plan
Service connection	DNO or authority, location of switching points or isolation, authority cable records
Date	Date reported
Remarks	Repeat visit, previous repair history

D.1.4.2.1 - Safety Inspections

Safety inspections shall be undertaken to identify defects likely to create danger or serious inconvenience to users of the network or the wider community. The risk of danger is assessed on site and categorised so as to allow for an appropriate priority response.

The inspection undertaken will be a visual safety inspection and will not consist of structural or electrical testing.

Policy NMPD1: Frequency of Safety Inspections

The frequency of safety inspections will be based upon the hierarchy and frequencies for inspection for the carriageway (A.1.3.2), footway (B.1.3.2), cycle track (B.2.3.2) or PROW in which the asset is based, the relevant annex of this Network Maintenance Management Plan should be referenced for these frequencies.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways and cycle tracks, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections. As found in the case of Day v Suffolk County Council, any inspection shall be carried out slowly enough for defects to be seen.

Additional inspections may be necessary for specific routes in response to user or community concern, as a result of incidents or extreme weather conditions, or in light of monitoring information, such as an abnormally high occurrence of defects reported by users or if the particular characteristics

(such as flooding) make a footway more likely to deteriorate than other similar assets in the allocated category. These may be identified through the risk management process. An increase in the frequency of inspection may be recommended by the Council's Insurance Officers. Consideration of increased frequency of inspection should also occur on access routes to various features which will draw additional traffic; these features include but are not limited to:

- Access to schools, hospitals and medical centres;
- Vulnerable users or people with special needs; and
- Ceremonial routes and special events.

Safety inspectors shall keep a diary, and record daily which sections of the network have been and whether they have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Policy NMPD2: Street Lighting Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Condition of street lighting/illuminated signs and bollards	Dangerous, damaged or defective lighting columns/illuminated signs and bollards

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the core Network Maintenance Management Plan document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

D.1.4.3 – Repairs and Replacements

D.1.4.3.1 – Fault Reporting and Management Process

D.1.4.3.2 – Response Times

A ‘risk matrix’ shall be used to classify the degree of risk posed by all identified defects as identified in the “Network maintenance Management Plan: Introduction to Network Maintenance Management” Section 14 “Network Maintenance – Defect Category Identification”.

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. The following examples of CAT 0 defects shall be used as guidance when using the risk matrix.

Policy NMPD3: Example Definition of CAT 0 Street Lighting Defects

Street lighting defect – Bracket / bowl / luminaire hanging;

OR

Door off / missing;

OR

Reports of electric shock from lighting column / sign post;

OR

Multiple Lights out;

OR

Wires protruding from column (with door on)

The definition of “Multiple Lights Out” shall be:
Three or more adjacent lighting columns on the same DNO supply or private supply run which are not operating.

It should however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

D.1.5.3 - Programmed

- Programmed capital maintenance replaces demonstrably life-expired assets and takes a whole-life cost approach, thereby promoting the serviceability and sustainability of the asset. Energy, revenue cost and carbon reduction is implicit throughout the capital programme.
-
- Schemes Involve:
  - Column and lantern replacement to efficient alternatives;
  - Bulk lantern change and recycling;
  - Replacement of traffic sign illumination units and consideration of sustainable alternatives; and
  - Illuminated bollard replacement to reflective alternatives.

D.1.5 - Network Maintenance Standards Street Lighting

D.1.5.1 - Reactive

Having confirmed that a street light fault represents an electrical or structural danger it shall be rectified as follows:
The fault shall have emergency attendance within 2 hours when the fault shall be made safe. This might involve immediate removal of a structurally unsafe column or isolation if the fault is electrical. A full repair shall be carried out within 28 days.
Where the fault is a lantern outage a repair will be delivered within 10 days. Faults attributable to the mains supply may take longer, in which case key stakeholders may be notified or advisory signage considered on site.
Where the faulty column is parish owned, the above emergency works shall still apply in full but the parish informed of the outcome and the cost reimbursed from them.

D.1.5.2 - Routine

Routine works to street lighting, illuminated traffic signs and bollards shall comply with the conditions and specification set out within the Term Maintenance Contract, adopted Street Lighting Strategy, Policy and all relevant current legislation.

Appendix 1: Definitions

SON – High-pressure sodium discharge lamp using sodium-mercury amalgam at a high pressure in a ceramic arc tube housed in a tubular or elliptical glass outer envelope.

PL-L – Commonly known as fluorescent lamps. Electrodes at either end of the tube allow a current to be passed through the mercury vapour. This excites the mercury atoms, which emit UV radiation. The glass tube is internally coated with phosphor powder.

LED – Light Emitting Diodes. When current flows across the junctions of certain solid-state semiconductor devices, light is emitted. LED's are lightweight, small, and durable, have long life and produce light almost immediately. They are not affected by frequent switching, and can easily be dimmed.

SOX – Low-pressure sodium discharge lamp only uses sodium vapour at a low pressure in a glass arc tube, housed in a tubular glass outer envelope.

MBFU – A discharge lamp only using mercury vapour at a high pressure in a quartz arc tube housed in an elliptical glass outer envelope.

CPO – Philips Cosmopolis lamp, new-generation ceramic metal halide lamps for outdoor lighting with white light, using clear quartz outer envelope.

CDM – Ceramic metal halide lamp, a discharge tube filled with a small amount of mercury and specific metal halides.

PECU – Photo Electric Control Unit is a sensor that is supplied by a neutral/live/earth feed and switches a load e.g. 150W lamp when it becomes dark, letting electricity flow from the mains side to the load side of the sensor therefore activating the lantern.

Colour rendering – The ability of a light source to render colours of surfaces correctly is quantified by the CIE colour rendering group and the CIE general colour rendering index (Ra)

Illuminance (lux) – The magnitude of light landing on a surface. It cannot be seen because it has not yet reached the eye. Illuminance is measured in lux, which are lumens incident on a point per area of the point.

Luminance (cd) – The amount of light that reaches the eye by reflection or by direct emission from a light source. The light reflected from any surface is dependant on the quantity of luminance, the reflective properties of the surface and the position of the observer with relation to the surface. Luminance is measured in candelas per square metre.

Appendix 2: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

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Network Maintenance Management Plan

Annex E:

Traffic Signals, Pedestrian and Cycle Crossings

Part 1: Traffic Signals, Pedestrian and Cycle Crossings

E.1.1 – Introduction

The Council has numerous signalised junctions in both urban and rural situations which allow the safe and efficient flow of traffic at busy junctions and also aid in the reduction of congestion on the Council's highway network.

The Council also has numerous pedestrian and cycle crossings throughout the network which allow the safe passage of non-motorised users across busy roads and aid in the reduction of severance of residents to key community resources and facilities.

E.1.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

E.1.3 – Network Inspections

E.1.3.1 - Introduction

The Network Inspection regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results is crucial for defending the authority against third party claims.

The Network Inspection Regime shall be subject to annual review.

E.1.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

The frequency of inspections shall be as identified in the relevant annex for the network and route that the Signal or Crossing is based upon.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Where there may be exceptional circumstances, for example an abnormally high occurrence of damages claims, a higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers.

Policy NMPE1: Signal and Crossing Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Traffic signals, pedestrian and cycle crossings	Separation of potential traffic conflicts
	Safety of vulnerable road users
	Dangerous, damaged or defective columns/light heads/sensors/control boxes

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 defects	These require prompt attention and shall have an 18 hour response between 07.00 and 19.00 Monday to Sunday (Excluding Christmas Day)
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Policy NMNPE2: Definition of a CAT 0 Signal or Crossing Defect

Signal or crossing defect – All of the signals on the junction are unlit.

OR

The signals are failing to change (stuck on red, not changing to pedestrians).

OR

The signals are causing abnormal delays (Short green phase, Running out of sequence).

OR

There are 2 red lamp failures on the same approach.

OR

The signals are defective, which although not in accordance with point 1 or 2 above are likely to cause excessive queues or danger to road users and have caused abnormal traffic conditions which warrant urgent attention.

OR

The signal has a material defect or has been damaged compromising its operation and posing significant risk to both pedestrians and the travelling public.

OR

There is a permanent pedestrian demand

E.1.3.3 - Service Inspections

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. They fall into three camps:

- Planned Cyclic inspections
- Network Integrity inspections
-
- Service inspections of the physical aspects of road traffic signals for example the condition of the controller and auxiliary equipment cabinets and other site hardware, and inspections in relation to electrical safety should be carried out at intervals determined through risk assessment, or by default on an annual basis.
-
- Traffic signals, pedestrian and cycle crossings are the key points of interaction between vehicles and most vulnerable road users, and are also

key to network integrity. It is therefore crucial to the cause of transport integration that they are maintained to a high standard, signal control can also add significantly to the efficiency of the network.

- **Policy NMPE3: Signal and Crossing Service Inspection Defect Categories**

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Traffic signals, pedestrian and cycle crossings	Ease of use and efficiency
	Network integrity

Planned Cyclic Inspections – Traffic Signals, Pedestrian and Cycle Crossings

Policy NMPE4: Frequency for Cyclic Inspection for Signals and Crossings

Cyclic Inspections	Frequencies
Signal Head Visibility, Alignment and Detector Alignment	Unit to be cleaned at lamp change or electrical test, whichever is sooner.
Lamp Change	Lamps will be changed depending upon type and age. The lamp change programme will be determined by the Asset Register.
Basic Electrical and Structural inspection	After installation and at every maintenance visit – routine or cyclic.
Cleaning	Unit to be cleaned at lamp change or electrical test, whichever is sooner.
Electrical testing	New Equipment and 6 years thereafter (to be reviewed for extension to 8 years).
Structural testing	All Units will have a visual inspection during maintenance visit and will have an indicative test depending upon age and environmental risk factors. The test dates will be determined by the Asset Register.

Network Integrity Inspections

Although each asset on the network might be well maintained within an overall asset management strategy, the network still might not deliver best value, as the asset might not be performing to the optimum efficiency. Operational efficiency is primarily a network management consideration but aspects of it are closely related to maintenance, for example:

- Traffic signs or markings may be poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;

- Traffic signs or markings may be redundant;
- Facilities for walking, cycling or public transport might be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Opportunities might be taken to modify layout as part of future relevant maintenance schemes.

Inspections for Network Integrity shall normally be undertaken at the time of Safety Inspections.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan

E.1.4 – Network Maintenance Types

E.1.4.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

Defect classifications
Typical reactive measures for each element of the highway asset are described in the relevant asset Section of this Plan. It may be the case that an identified defect does not fall within any of the described types. In such an event the responsible officer shall undertake those measures they see fit to render the defect safe in line with the above time scale targets.

In any event, information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

E.1.4.2 - Emergency Reactive Maintenance

Outside normal office hours (8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays) the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area..

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

At all times, upon identifying the need (either by description or by inspection) for an emergency reactive response the responsible officer shall instigate measures to render the site safe within 2 hours.

Wherever practicable, such measures shall take the form of a permanent repair thereby avoiding the necessity to revisit the site in the short term. However, this may not be achievable in every circumstance. In such events a temporary make safe repair shall be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, shall be put into place.

E.1.4.3 - Routine Maintenance

Works to traffic signals, their controllers and ancillary components, pedestrian and cycle crossings are currently undertaken by:
Reactive Works

E.1.4.4 - Programmed Maintenance

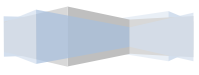
Programmed Maintenance to the highway network is managed by Bedfordshire Highways.

It is the aim of the service to establish a four year programme taking in to account the criteria of

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Core document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.



"Total package" thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of

unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

E.1.5 – Network Maintenance Standards Traffic Signals, Pedestrian and Cycle Crossings

E.1.5.1 - Reactive

Having confirmed that a traffic signal, pedestrian or cycle crossing fault represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:
'Lights Out' boards shall be placed at the site until such time as the fault can be rectified.

Having confirmed that a traffic signal, pedestrian or cycle crossing fault represents an electrical or structural danger it shall be rectified as follows:
The fault shall have emergency attendance within 2 hours when the fault shall be made safe. This might involve immediate removal of a structurally unsafe column or isolation if the fault is electrical. A full repair shall be carried out within 28 days.

E.1.5.2 - Routine

Works to traffic signals, their controllers and ancillary components, pedestrian and cycle crossings are currently undertaken by:
Reactive Works

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

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Network Maintenance Management Plan

Annex F:

Soft Estate and Drainage

Part 1: Soft Estate

F.1.1 - Introduction

Soft estate surrounds much of Central Bedfordshire Council's highway, footway and cycleway network, and can contain a variety of natural assets such as Roadside Nature Reserves and Sites of Special Scientific Interest. The nature of the asset is varied, as it can range from close cut grasses on visibility splays, to hedges and wooded areas contained within highways boundaries.

Maintenance of such a varied asset needs to be considered as there is a wide array of management techniques ranging from:

- Urban grass cutting and rural grass cutting;
- Maintenance of Roadside Nature Reserves;
- Tree and Hedge Maintenance; and
- Weed Control.

F.1.2 - Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

F.1.3 - Network Inspections

F.1.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

The type and frequency of inspections shall be as per the Carriageway, Footway or Cycleway network upon which, or adjacent to which, the Soft Estate asset is to be found. These types and frequencies, along with the

requirements for each can be checked by referring to the associated Annexes to these assets.

F.1.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

Policy NMPF1: Soft Estate Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Landscape areas, hedges and trees	Obstruction of visibility and signage, particularly at bends and junctions
	Hazardous trees and branches (including those outside, but within falling distance of the highway)
	Growth of weeds injurious to human health
	Leaf and fruit fall causing slippery surfaces
	Root growth causing Cat 1 surface irregularity

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

A ‘risk matrix’ shall be used to classify the degree of risk posed by all identified defects as identified in the “Network maintenance Management Plan: Introduction to Network Maintenance Management” Section 14 “Network Maintenance – Defect Category Identification”.

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Nationally the definitions of Category 1 defects for road and footway surfaces have, and continue to be tested through the courts. As a general guide defectiveness of a scale less than the following can be considered defendable in any actions brought against highway authorities. Examples of what might constitute a category 1 defect include but are not limited to:

Policy NMPF2: Definition of a CAT 1 Soft Estate Defect

Hedges
Overhanging footway or obscuring visibility.

Trees
Structurally unstable trees and branches (i.e. Diseased or dead limbs, risk of collapse due to damaged or dead roots)

Weeds
Poisonous invasive species which pose a risk to human health (i.e. giant hogweed.

It should however be remembered that a test of dangerousness is one of reasonable foresight of harm to users of the highway, therefore, in considering the defectiveness of a road or footway surface defect, recognition must be given to where in the surface the defect is located. Consideration must be given in particular to cyclists and motor cyclists in that a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

When checking for defects, all users of the carriageway shall be considered, including cyclists, horses and other non-motorised users, as well as disabled and elderly users.

F.1.3.3 - Service Inspections

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. They fall into three camps:

- Planned Cyclic inspections
- Network Integrity inspections
- Regulatory inspections

In general, trees should be inspected at a frequency of five years, this period however may be reduced on the advice of an arboricultiralist.

Policy NMPF3: Soft Estate Service Inspection Defect Categories

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Landscape areas, hedges and trees	Potential for service interruption
	Quality of user experience

Network Integrity Inspections
Although each element of each component within each category of network hierarchy might be well maintained within the framework of an overall asset management strategy, the network still might not deliver best value, as the asset might not be performing to the optimum efficiency. Operational efficiency is primarily a network management consideration but aspects of it are closely related to the maintenance function, for example:

- Traffic signs or markings may be poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Traffic signs or markings may be redundant;
- Facilities for walking, cycling or public transport might be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Opportunities might be taken to modify layout as part of future relevant maintenance schemes.

Inspections for Network Integrity shall normally be undertaken at the time of Safety Inspections.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:
Routine works
Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

Regulatory Inspections
Regulatory inspections shall be as detailed in the Core Network Maintenance Management Plan

F.1.4 - Network Surveys

Soft Estate shall be surveyed at the same frequency and at the same time as the carriageway or footway it is located within, additional inspections will be undertaken to soft estate assets following periods of severe weather or following contact from a member of the public.

F.1.5 - Network Maintenance Types

F.1.5.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;

Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.

In the case of dangerous defects to utility apparatus or trenches the responsible officer shall make the utility responsible aware by logging a telephone call (under S81 of the NRSWA91) describing the nature of the inadequacy.

The responsible officer shall instigate measures to render the site safe if:

- the identity of the utility responsible is unknown;
- the utility responsible cannot be contacted
- the utility cannot make the inadequacy safe within 2 hours
- no response is received from the undertaker within 2 hours of the logged telephone call

The costs of rendering the defect safe shall be borne by the utility concerned.

Information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices..

F.1.5.2 - Emergency Reactive Maintenance

Outside normal office hours (8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays) the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

Upon identifying the need for an emergency reactive response, either by description or by inspection, the responsible officer shall instigate measures to render the site safe within 2 hours.

Measures taken will wherever practicable, take the form of a permanent repair to avoid the necessity to revisit the site in the short term. Where this is not possible a temporary make safe repair will be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, will be put into place.

F.1.5.3 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways and is targeted at two areas:

- meeting the need identified through highway inspections
- preventative maintenance, working ahead of highway inspections when budgets allow to address defects while they are in their 'infancy'.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

Where an identified defect falls outside the described types the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

F.1.5.4 - Programmed Maintenance

Works to landscaped areas, weeds and trees are currently undertaken through:

- Reactive Works
- Routine Works

F.1.6 - Network Maintenance Standards Soft Estate

F.1.6.1 - Reactive

Fallen trees & unsafe trees in the public highway

Having confirmed that a tree represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

Traffic control measures shall be put into place to guide vehicular and pedestrian traffic safely around the tree. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure. As soon as is practicable and in accordance with Section 150 of the

Highways Act 1980, Bedfordshire Highways shall remove the obstruction arising from the tree or the whole tree, or if out of hours, make safe, and remove any arisings from site the following working day.

Where the tree is found to be in the ownership of an adjacent landowner, Bedfordshire Highways shall seek to reimburse itself of its costs in making the tree safe under Section 154 of the Highways Act 1980.

Overhanging vegetation & vegetation obscuring visibility in the public highway

Where the vegetation is found to be in the ownership of an adjacent landowner, Bedfordshire Highways shall seek remedy by way of Section 154 of the Highways Act 1980.

Where vegetation is part of the public highway, having confirmed that overhanging vegetation represents an immediate or imminent hazard (category 1 defect) it shall be rectified as such:

Traffic control measures shall be put into place to safely guide vehicular and pedestrian traffic in light of the obscured visibility. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure. As soon as is practicable and in accordance with Section 150 of the Highways Act 1980, Bedfordshire Highways shall cut back all vegetation causing the reduced visibility, or if out of hours, make safe, and remove any arisings from site the following working day.

Where the overhanging vegetation is found to be in the ownership of an adjacent landowner, Bedfordshire Highways shall seek to reimburse itself of its costs in making the overhanging growth safe under Section 154 of the Highways Act 1980.

F.1.6.2 - Routine

Highway Verges (Grass Cutting)

A Rural Verges, typically outside of 30mph speed limits, are cut one swath width (approximately 1m) plus bends and visibilities, twice a year. Frequencies are between April and May and between July and August. All highway furniture will be either strimmed out or treated with herbicide to prevent regrowth.

A full cut of rural verges will be carried out once every three years on a rotational basis.

No cutting will be carried out on identified Roadside Nature Reserves, which are signed on site as such, unless directed by the Council Ecologist.

Urban verges, typically within 30mph speed limits, are cut six times a year, in order to maintain a height of cut of less than 100mm. Accurate locations are based on a set of plans agreed with CBC's Service Delivery Team.

CBC also devolves the grass cutting service to Town and Parish Councils applying to do so, ensuring that they understand their duty of care e.g. road safety and traffic management, and have the proper identification.

Roadside Nature Reserves
The Council has identified areas of roadside verge that have high value of flora and fauna. These are recorded and shown on GIS and are indicated on site by means of marker posts. No cutting shall take place on roadside nature reserves unless indicated by the councils Ecologist.

The Ecologist will produce a report each year that sets out the treatment that is required for each nature reserve. Any maintenance work required by the Ecologist shall be carried out in September/October or as directed. All arisings shall be collected and removed from a nature reserve.

There are also a number of Sites of Special Scientific Interest (SSSI) throughout the Unitary area. No cutting shall be carried out on these verges without first contacting the councils Ecologist

Boundary hedges & Trees
For boundary hedges and trees, in most cases, the adjoining landowner maintains hedges alongside and integral to the boundary of the highway. This also applies to trees within the hedge and fence line.

Powers under Section 154 of the Highways Act 1980 shall be used to ensure that hedges and roadside trees do not present a danger to users of the highway. This includes trees on private land that if falling will do so on the public highway.

Hedges should be cut according to their type e.g. rural agricultural or urban ornamental plant species.

All works are to comply with current legislation regarding hedges and hedgerows e.g. Hedgerow Regulations 1997 and the High Hedge Legislation 2003.

Highway Trees
For highway trees, Arboricultural Officers will carry out regular inspections of all highway trees and will identify any necessary work to minimise the risk of the trees becoming a hazard to users of the highway.

Any subsequent tree works are to be prioritised according to risk rating e.g. imminently dangerous etc.

The Arboricultural Officer will confirm if any highway trees are protected e.g. Tree Preservation Orders or within conservation areas.

Any tree work commissioned via the provider will ensure that access underneath is within current guidelines e.g. that tree crowns are raised above the highway – Highways 5.5m and Footways 2.5m.

Any such actions shall take account of the Wildlife and Countryside Act 1981 in avoiding the cutting of hedges and trees between March and September unless there is a serious safety issue.

Highway Weeds
Routine spraying of weeds in urban areas is carried out once a year. The use of weed killers and pesticides must be approved for use in the public highways and comply with all relevant and current legislation e.g. DEFRA and HSE Code of Practice for Weed Control in Amenity Areas. It should be used strictly in accordance with the manufacturer's recommended application e.g. MDS and COSHH assessment.

Noxious or Injurious Weeds – (Weeds Act 1959, Wildlife and Countryside Act 1981)
Bedfordshire Highways shall identify and maintain data upon infestations of the following species:
Japanese Knot Weed;
Giant Hogweed;
Himalayan Balsam;
Ragwort;
Broad Leaf Dock;
Curled Dock;
Creeping Thistle or
Spear Thistle.

The Authority has a statutory responsibility to control such species under the Weeds Act 1959 and the Wildlife and Countryside Act 1981 as altered by the Countryside and Rights of Way Act 2000; it shall be rectified as follows:
"… Measures shall be considered, and enacted where reasonable, to remove or manage the cause of future risk. These may require the action of other parties, such as adjacent landowners…"

Part 2: Highways Drainage

F.2.1 – Introduction

Highway drainage should help to fulfill the following objectives:

- Prevent injury or damage caused by hazardous surface water
- Prevent highway surface water flooding adjacent properties
- Prevent blockages in associated highway drainage systems with consequential flooding

Highway drainage requires regular routine maintenance to ensure that all systems are working effectively. The highway drainage system includes the positive drainage systems of varying types from gullies and piped systems to grips. These are all designed:

- To prevent flooding, ponding and seepage, and keep the carriageway, cycleway and footway as free of standing water as possible;
- To ensure surface water falling on the highway enters the drainage system or natural watercourse as speedily as possible; and
- To keep the underlying road structure as dry as possible.

Central Bedfordshire Council has a varied selection of drainage assets which it maintains as part of the highways network, these include, but are not limited to 20088 grips, 43679 drainage gullies, 521476m of drainage ditch, 124 catchpits and 23 balancing ponds.
These were inherited as part of the Unitary split, however prior to this there has been a long case of research warning that climate change would test and exceed the current capacity of the UK's drainage capabilities.
Highways drainage has a major role in managing this ever increasing volume of water, in such a way that flooding is reduced to minimise the risks to the traveling public, that flood risk to properties and business is mitigated, and in the worst events, that routes can remain open to emergency services.
The key predictions from the UK Climate Impacts Programme which will have a bearing on the Council's drainage assets are:

- Summers will become hotter and drier;
- Winters will become milder and wetter;
- Snowfall will decrease;
- Heavy and extreme rainfall will become more frequent; and
- There could be more extreme winds and storms.

Legislative Requirements

Developments in legislation and regulatory governance have also been updated to encompass the future predictions of climate change. These have placed new responsibilities on local highways authorities. The new legislative documents with which the council has a responsibility to comply with in its duties are:

- The Water Framework Directive (2000);
- The Groundwater Directive (2006);
- The management of Flood Risks Directive (2007); and
- Flood and Water Management Act (2010) as updated in 2012

F.2.2 - Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

F.2.3 - Network Inspections

F.2.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

F.2.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

Policy NMPF4: Drainage Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Drainage	Dangerous accumulation of water on the carriageway, footway or cycleway

The degree of deficiency shall be assessed via Bedfordshire Highways' assessment matrix. This document is based closely on the DEFRA template under the Floods and Water Management Act 2010 (updated 2012) and contains a variety of parameters based on hazard, damage to property and affect upon the area caused by flooding, the process will also refer to fluvial

(river) and pluvial (ground water) flood risk maps (as produced by the Councils Floor Risk Management team) so as to introduce a proactive approach to flood risk management.

An example of the assessment matrix can be seen in Appendix 2

F.2.3.3 - Service Inspections

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. They fall into three camps:

- Planned Cyclic inspections
- Network Integrity inspections
- Regulatory inspections

A risk based approach to service inspections would identify the risk associated with inadequate serviceability, for example:

- Gullies, grips and ditches, which may be obstructed by the growth of vegetation or damaged by traffic;
- Culverts under roads which may be affected by blockage, subsidence or structural damage;
- Other piped drainage which may be affected by blockage or subsidence;
- Surface boxes and ironwork for both drainage and non-drainage applications, which may be affected by subsidence or obstructed access.

Generally, the frequency of Service Inspections shall be as the frequencies defined in the Safety Inspection section of the same asset. If the opportunity allows, drainage systems should be inspected during or immediately following periods of heavy rain.

Fundamental in the development of a risk based approach is the identification of areas that may be particularly susceptible to the risk of flooding, either from topological factors outside of the highway or from frequent silting of systems

Policy NMPF5: Drainage Service Inspection Defect Categories

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Drainage	Dangerous accumulation of water on the carriageway, footway or cycleway

Regulatory Inspections
Regulatory inspections shall be as detailed in the Core Network Maintenance Management Plan

F.2.4 - Network Surveys

The drainage network shall be surveyed on the same frequency and at the same time as the CVI's and DVI's of the carriageway or footway it is located

within, additional inspections will be undertaken to drainage assets at the time of routine maintenance such as gullies being inspected at the time of cleansing.

F.2.4.1 – Asset Inventory Surveys

Asset inventory surveys are a quick field survey that either identify the location of priority assets or confirm the validity of existing inventory records. The surveys are selective and are unlikely to survey 100% of the assets in the area.

- Validation Surveys See IAN 147/12
- Outfall and Soak away Surveys

F.2.4.2 – Detailed Defect Surveys

Detailed defect surveys are used to record all defects drainage assets. For pipework, this will require internal CCTV surveys. For non-pipework assets it will involve detailed inspection. Where the asset inventory has not previously been recorded, then the detailed inventory is also captured. The survey may focus on particular assets in an area of known problems, or may survey all the drainage assets in the area, in which case the survey also records how the assets connect together and flow directions plus appropriate invert depths and cover levels.

- Pipework only Detailed Defect CCTV Surveys
- Non-Pipework only Detailed Defect Surveys
- Full Asset Detailed Defect Surveys
- Post Construction Commissioning Surveys

F.2.5 - Network Maintenance Types

F.2.5.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.

In the case of dangerous defects to utility apparatus or trenches the responsible officer shall make the utility responsible aware by logging a telephone call (under S81 of the NRSWA91) describing the nature of the inadequacy.

The responsible officer shall instigate measures to render the site safe if:

- the identity of the utility responsible is unknown;
- the utility responsible cannot be contacted
- the utility cannot make the inadequacy safe within 2 hours
- no response is received from the undertaker within 2 hours of the logged telephone call

The costs of rendering the defect safe shall be borne by the utility concerned.

Information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

F.2.5.2 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways.

Routine Maintenance is to be targeted at two areas. Firstly at meeting the need identified through highway inspections and secondly, at preventative maintenance, working ahead of highway inspections to address defects while they are in their ‘infancy’. This secondary role can only be tackled after having addressed all identified safety inspection defects within a field of work and then only if and when budgets allow.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

It may be the case that an identified defect does not fall within any of the described types, in such an event the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target.

F.2.5.3 - Programmed Maintenance

Programmed works shall be prioritised via Central Bedfordshire Highways' assessment matrix. This document is based closely on the DEFRA template under the Floods and Water Management Act 2010 (updated 2012) and contains a variety of parameters based on hazard, damage to property and affect upon the area caused by flooding, the process will also refer to fluvial (river) and pluvial (ground water) flood risk maps (as produced by the Councils Floor Risk Management team) so as to introduce a proactive approach to flood risk management. It should also be noted that the Act encourages the employment of sustainable methods of drainage as far as reasonably practicable.

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section of the Network Maintenance – Environmental and Sustainable Development chapter in the Introduction to Network Maintenance Management and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011

In all other cases account will be taken of the advice given in the BRE publication:

'Guidance on specifying recycled content in Local Authority contracts for highway maintenance'

Where appropriate, consents will also be sought from the relevant authority such as the Internal Drainage Board (IDB) for working in water courses managed by them, or from the Environment Agency for discharging into Soakaways and water courses. In either cast this may involve monitoring the condition and quality of the water course or groundwater.

"Total package" thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

F.2.6 - Network Maintenance Standards Highway Drainage

F.2.6.1 - Reactive

Highway Drainage Defect Causing Internal Flooding of Property

Having confirmed that a highway drainage defect represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

- If appropriate, traffic control measures shall be put into place to guide vehicular and pedestrian traffic safely around the flooding. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure.

- The means of alleviation shall be assessed and enacted as soon as reasonably practicable. Alleviation techniques might include hazard warning and diversionary works, sandbags (which may be subject to prioritisation for stock) or, in exceptional cases, pumping.

- All actions shall accord with the roles and responsibilities as established in the Central Bedfordshire Resilience Plan and Business Continuity Officers should be informed for the purposes of resilience and business continuity planning.

- The Floods and Water Management Act 2010 (updated 2012) places a duty upon authorities to collect data, understand flood risk and react proportionately. Therefore, following a flood event long-term alleviation measures shall also be assessed via revenue maintenance programmes or capital improvement project. In some instances alleviation measures may require the action of other parties, all in line with responsibilities established by the Land Drainage Act.

Highway drainage defect causing flooding of the highway and/or adjoining land

Having confirmed that a highway drainage defect represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

- Flood Boards shall be placed either side of the flood. If appropriate, traffic control measures shall be put into place to guide vehicular and pedestrian traffic safely around the flooding. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure.

- The means of immediate alleviation shall be assessed by the highway authority, Land Drainage Engineer or his/her representative and actioned as soon as reasonably practicable. This action shall be in accordance with the duties and powers of the Highway Authority and roles and responsibilities as established by the Central Bedfordshire Resilience and Business Continuity Plans. Business Continuity Officers

should be informed for the purposes of resilience and business continuity planning.

- Following a flood event, long-term alleviation measures shall be focused on the public highway surface water system, which may in part be sited outside the limits of the public highway. In some instances alleviation measures may require the action of other parties, all in line with responsibilities established by the Land Drainage act and the use of CBC's powers under the Highways Act 1980.

F.2.6.2 - Routine

Road & Footway gullies

Bedfordshire Highways maintains a data-led, risk based, gully emptying programme. It does this via a recorded list of vulnerable, or 'problem' gullies, which are routinely found to be full of detritus or frequently called in by members of the public. Such gullies are cleaned three times annually.

The remaining, non-vulnerable, gullies receive cyclic treatment once every three years.

Manholes, Catchpits & Soakaways

Bedfordshire Highways will cleanse manholes and catchpits on a reactive basis. At those areas susceptible to silting, the manholes and catchpits may be included on a routine annual cleanse.

Pipes & Culverts

Bedfordshire Highways will cleanse pipes and culverts where required.

Additional programmed cleansing may be carried out on a reactive basis at those areas susceptible to silting.

Roadside Grips

Grips will be re-cut as required by inspection, but they may also be referred to the capital drainage programme as a project of coordinated grip and or ditch clearance.

Roadside Ditches

In some cases, the responsibility for the maintenance of ditches lies with the adjoining landowner. This is unless land has been purchased to construct a new road, and any ditches constructed as part of that scheme remain within the public highway.

However, the Highway Authority also has powers under Section 100 of the Highways Act 1980, to scour, cleanse and keep open all drains (including ditches) on or adjacent to the highway for the purposes of draining the highway. Clearance work may be carried out on a reactive basis as a result of inspection.

Exercising these powers does not release the adjoining owners of their responsibilities.

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

Appendix 2: Example Flood Scoring Matrix

Highway Flooding Scheme Scoring Matrix

Assessment only to be made for schemes with a projected cost above area team discretionary spend level. Confirm Y / N			
Assessment to be made after previous attempts to jet / clean any existing positive drainage have been exhausted. If flooding source emanates from adjoining land, eg. main river, watercourse or field flooding then assessment to be made after resolution of third party involvement. Confirm Y / N			
Assessment Date		AREA TEAM	
Site Location			
Town / Parish			
Road No			
Road Name			
From			
To			
Description			

Category	Sub Category	Category Score		Actual Score
	Only apply worst case per property. Include wash from Highway flooding if applicable			
Property Flooded (internal)	Residential, Private / Public Buildings. Health Risk.	50 per property		
Property Flooded (external)	Property Inaccessible, Structure in Contact with Flooding.	20 per property		
or Property Flooded (external)	Garage or Outbuildings	15 per property		
Land Flooded	Residential Gardens, Temporary Bldgs, Private Land	10 per property		
or Land Flooded	Farmland, Open Space, Public Land	5 per location		
	Only apply worst case per location. Include wash from Highway flooding if applicable			
Carriageway Flooded	Impassable or Danger to Life (loss of control / ice). (per location / site)	50		
or Carriageway Flooded	Passable. Carriageway over 30mph limit.	10		
or Carriageway Flooded	Passable. Carriageway up to 30mph limit	5		
Cycle / Footway Flooded	Impassable to Property (per location / site)	15		
or Cycle / Footway Flooded	Passable	10		
LTP 3 Objective A	Maintain the ease of access to employment.	5		
LTP 3 Objective D	Maintain access to healthcare (hospital & GP).	5		
LTP 3 Objective E	Maintain access to food stores & local services	5		
LTP 3 Objective F	Maintain access to leisure, cultural & tourism facilities.	2		
LTP 3 Objective G	Maintain efficient & reliable transportation of freight.	5		
LTP 3 Objective J	Reduce the risk of people being killed or seriously injured	Primary consideration		
		Sub-total		**0**
			Details not applicable	
Frequency of Flooding	Once per year	no addition		
Frequency of Flooding	2 - 4 times per year	sub-total x 0.25	0	0
Frequency of Flooding	More than 4 times per year	sub-total x 0.5	0	0
Duration of Flooding	Up to ½ day	no addition		
Duration of Flooding	½ - 3 days	sub-total x 0.25	0	0
Duration of Flooding	More than 3 days	sub-total x 0.5	0	0
	per location			
Carriageway Hierarchy	Local Road and Unclassified (UC)	no addition		
Carriageway Hierarchy	Non Principle (B&C)	sub-total x 0.25	0	0
Carriageway Hierarchy	Principle (A)	sub-total x 0.5	0	0
COST ESTIMATE		**Total Score**		**0**

S:\Community Services\Ad Highways and Transport\Shared\Highways\Highways 2006 to 2016\SB WIP\Asset Management\2. Structure\Drainage\Drainage Highway Flooding Scoring Matrix (CBC Oct 2011) Printed 02/07/2014

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Network Maintenance Management Plan

Annex G:

Traffic Signs, Bollards and Street Furniture

Part 1: Traffic Signs

G.1.1 – Introduction

Signs are used throughout the network to aid users to their destinations, indicate the correct use of the highway, advice of legal restrictions, regulations and speed limits and to warn of upcoming hazards. The correct usage and legend for these are indicated in the Traffic Signs Rules and General Directions 2002 (TSRGD).

Road signs therefore contribute to key objectives as follows:

- Advanced identification of hazards in the carriageway
- Traffic control
- Ease of use by the provision of directions

G.1.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

G.1.3 – Network Inspections

G.1.3.1 - Introduction

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results is crucial for defending the authority against third party claims.

The Network Inspection Regime shall be subject to annual review

G.1.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

The frequency of inspections shall be as identified in the relevant annex for the network and route that the sign is based upon.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from

the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Where there may be exceptional circumstances, for example an abnormally high occurrence of damages claims, a higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers.

Policy NMPG2: Traffic Sign Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Traffic signs and bollards	Crash damage
	Potential traffic conflicts
	Poor route delineation in darkness and bad weather
	Identification of risk to users
	Poor visibility of hazard warning or regulatory sign
	Separation of potential traffic conflicts

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

With regards to footways in particular, but also for carriageways, any defects with utility apparatus assessed as Cat 1, the utility must be notified immediately and requested to attend or make safe within 24 hours. This should be undertaken with reference and in accordance with section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be

made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Policy NMPG2: Definition of a CAT 1 Traffic Sign Defect

Sign Defects:
Adjoining vegetation obscuring warning or regulatory sign.
OR
Regulatory or warning signs missing, damaged or defaced.
OR
Dirty (illegible) regulatory or warning signs
OR
Damage, deterioration, or vandalism to signs leaving the sign or situation to which it applies in a dangerous condition
OR
Illegal or Unauthorised Signs:
Obstructs visibility or blocks footway

G.1.3.3 - Service Inspections

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. They fall into three camps:

- Planned Cyclic inspections
- Network Integrity inspections
- Regulatory inspections

The primary objective of service inspections on traffic signs is to keep all traffic signs legible, visible and effective as far as possible at all times in relation to the road use and traffic speeds.

Non-illuminated road signs should be inspected in daylight, for degradation of colour, retro-reflectivity, deterioration of fittings, legibility distance and average surface luminance after cleaning. The frequency of inspection should be determined by risk assessment or every two years as a minimum.

Illuminated signs should be inspected at regular intervals determined by risk assessment or as a minimum every two years, a visual inspection and certification of sign supports should be carried out at the same time. Electrical inspections of the lighting unit, lantern, switching gear and other electronic components should be carried out as detailed in Annex D of this Plan.

When inspecting signs reference should be made to TD 25/01 (or any relevant update of this document) of the Design Manual for Roads and Bridges, which gives advice on assessing colour degradation and retro reflectivity degradation.

‘Stop’ and ‘Give Way’ signage at minor roads should be included in the inspection of signs on the major road.

As an over proliferation of signage can dilute important messages, service inspections should also ideally identify signage that is inappropriate, no longer necessary or not in compliance with the Traffic Signs Rules and General Directions (TSRGD) regulation as amended, for entry into a programme of works for removal or replacement with a more appropriate sign.

Policy NMPG3: Traffic Sign Service Inspection Defect Categories

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Traffic signs and bollards	Contribute to ease of use
	Contributes to network integrity

Planned Cyclic Inspections
Lit signs should have planned cyclic inspections undertaken as identified in Annex D of this plan.

Network Integrity Inspections
All components across the various categories across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.

Opportunities shall be taken to address integrity issues identified by the survey, for example:

- Replacing signs and re-lining;
- Installing dropped kerbs and texture paving;
- Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

Regulatory Inspections
Regulatory inspections shall be as detailed in the Core Network Maintenance Management Plan.

G.1.4 – Network Maintenance Types

G.1.4.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

The Highways Helpdesk utilises the same Insight highway maintenance management system as the provider, and they allocate an initial priority, either Cat 0, 1, or 2, to any defect reported. The provider accesses the report via Insight and inspects and confirms or reallocates the initial priority. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.

Information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

G.1.4.2 - Routine Maintenance

Routine maintenance of the highway network is managed and delivered by Bedfordshire Highways and is targeted at two areas:

- meeting the need identified through highway inspections
- preventative maintenance, working ahead of highway inspections when budgets allow to address defects while they are in their ‘infancy’.

Whenever possible, measures taken shall be in the form of a permanent repair.

The typical routine measures for each element of the highway asset are described in the relevant assets Network Maintenance Standards.

Where an identified defect falls outside the described types the responsible officer shall undertake the measures he or she sees fit to repair defects prior to it deteriorating to become a hazard or in line with the appropriate time scale target..

G.1.4.3 - Programmed Maintenance

Works to traffic signs & bollards are currently undertaken through:

- Reactive Works
- Routine Works

G.1.5 – Network Maintenance Standards Traffic Signs

G.1.5.1 - Reactive

Having confirmed that a traffic sign or bollard represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

The means of making safe shall be assessed and enacted as soon as possible. A temporary sign shall be erected if necessary. Long term repair measures will then be assessed. Such measures shall be considered for inclusion within future routine or programmed works.

Having confirmed that an illuminated traffic sign or bollard represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

The fault shall be treated as an emergency, and will be made safe and repaired fully where possible.

G.1.5.2 - Routine

Traffic Signs & Bollards

Traffic sign defects of a non-hazardous nature shall be collated and replacement or repair works shall be ordered in batches.

Part 2: Fences, Guard Rails and Barriers

G.2.1 – Introduction

G.2.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

G.2.3 – Network Inspections

G.2.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime shall look at the following:

Objective	Contribution
Safety Inspections	Complying with statutory obligations
	Meeting user's need for safety

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

G.2.3.2 - Safety Inspections

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network and the wider community. The risk of danger is assessed on site, and the defect identified either as Category 0, 1 or 2, with an appropriate priority response.

The frequency of inspections shall be as identified in the relevant annex for the network and route that the Fence or Barrier is based upon.

Driven inspections shall be undertaken by the passenger (with the driver's assistance) from a moving vehicle. In busy urban areas, particularly when inspecting footways, it may be difficult to obtain the necessary level of accuracy from vehicle-based inspections and walking should be used. A lone inspector may undertake walked and cycled inspections.

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Where there may be exceptional circumstances, for example an abnormally high occurrence of damages claims, a higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers.

Policy NMPG4: Fences, Guard Rails and Barriers Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Fences and barriers	Integrity and location of safety fencing for vehicles, cyclists and pedestrians

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

With regards to footways in particular, but also for carriageways, any defects with utility apparatus assessed as Cat 1, the utility must be notified immediately and requested to attend or make safe within 24 hours. This should be undertaken with reference and in accordance with section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Policy NMPG5: Definition of a CAT 1 Fence, Guard Rail or Barrier Defect

Fence and Guard Rail defects – A Fence or Guard Rail which is out of plumb with the carriageway or footway in which or adjacent to which it has been installed, and poses an imminent risk to pedestrians and road users due to the condition it is in, or is in such a condition that it does not perform the task it was installed to do.

In considering the defectiveness of a defect, recognition must be given to where the defect is located. Consideration must be given that in certain circumstances a lesser defect near the edge of a carriageway could be deemed dangerous by a Court.

G.2.3.3 - Service Inspections

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. They fall into three camps:

- Planned Cyclic inspections
- Network Integrity inspections
- Regulatory inspections

Steel safety fences and pedestrian guard rails should be inspected at regular intervals determined through risk assessment in respect of mounting height, surface protective treatment and structural condition, to ensure that they remain fit for purpose.

Damage to pedestrian guard rail should be treated as a Category 1 defect and made safe in the appropriate timescale for this categorisation of defect.

Other barriers and fencing which is a highways asset will be included in the service and integrity inspections for the carriageway, footway or cycleway which they are on and be inspected at a frequency of two years as a minimum default level.

Safety barriers adjacent to bridges should be inspected as part of the highway asset.

Policy NMPG6: Fence, Guard Rail or Barrier Service Inspection Defect Categories

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Fences and barriers	Pedestrian safety
	Risk of livestock disrupting traffic

All high risk situations will require a robust inspection regime with a commensurate high standard of condition. Safety fences should be in a

sufficiently sound structural condition to serve their function and not be dangerous to road users or pedestrians.

Where safety fencing is provided with chevron markings this should be dealt with in accordance with the cleaning regime for traffic signs as indicated in Section 1 of this Annex.

Network Integrity Inspections
All components across the various categories across the various categories within the network hierarchy shall be maintained within the overall asset management strategy to ensure best value and optimal efficiency.

Operational efficiency is primarily a network management consideration but aspects are closely related to maintenance, for example:

- Traffic signs or markings may be missing, redundant, poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Facilities for walking, cycling or public transport may be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Street lighting is poorly positioned.

Opportunities shall be taken to address integrity issues identified by the survey, for example:

- Replacing signs and re-lining;
- Installing dropped kerbs and texture paving;
- Modifying layouts.

Network Integrity Inspections shall normally be scheduled coincident with a safety inspection.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

G.2.4 – Network Maintenance Types

G.2.4.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;

Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

Defect classifications

Typical reactive measures for the separate elements of the highway asset are described in the relevant asset Section of this Plan. Where an identified defect falls outside the described types the responsible officer shall undertake appropriate measures they see fit to render the defect safe in line with the above time scale targets.
In any event, information concerning the measures taken, including no action where necessary, shall be recorded, maintained and utilised as appropriate in reviews of maintenance strategy and practices.

G.2.4.2 - Emergency Reactive Maintenance

Outside the Helpdesk core office hours of 8:30am to 6:00pm Monday to Thursday; 8:30 to 5:30 Fridays, the service operates an emergency contact system which is managed by the provider. This is accessed automatically using the telephone contact details above.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

At all times, upon identifying the need (either by description or by inspection) for an emergency reactive response the responsible officer shall instigate measures to render the site safe within 2 hours.

Wherever practicable, such measures shall take the form of a permanent repair thereby avoiding the necessity to revisit the site in the short term. However, this may not be achievable in every circumstance. In such events a temporary make safe repair shall be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, shall be put into place.

G.2.4.3 - Routine Maintenance

Works to Fences and Barriers are currently undertaken by either:

- Reactive Works

- Programmed Works

G.2.4.4 - Programmed Maintenance

Where an inspection identifies issues which cannot be resolved via reactive works, these shall be recorded and shall be put forward for inclusion within the programme of works.

It is the aim of the service to establish a four year programme taking in to account the criteria of

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section of the Network Maintenance – Environmental and Sustainable Development chapter in the Introduction to Network Maintenance Management and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

“Total package” thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

G.2.5 – Network Maintenance Standards Street Furniture

G.2.5.1 - Reactive

Fences and Pedestrian Barrier

Having confirmed that a fence, guardrail or pedestrian barrier represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

The means of making safe shall be assessed and enacted as soon as possible. Long term repair measures will also be assessed and referred for treatment in capital programmes of work either specific to such assets or as part of other projects.

G.2.5.2 - Routine

Works to Fences and Barriers are currently undertaken by either:

- Reactive Works
- Programmed Works

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

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Network Maintenance Management Plan

Annex H:

Embankments and Cuttings

Part 1: Embankments and Cuttings

H.1.1 – Introduction

Embankments and cuttings are used to build up or reduce existing ground levels so that there are no sudden changes in the surface level of the highway. They are also used on the approaches to underpasses and over bridges so that adequate clearance can be given to the obstruction for which the over bridge or underpass has been constructed. These obstructions can include but are not limited to:

- Roads
- Railways
- Canals
- Rivers

Embankments and cuttings can therefore be considered an important part of the construction of the road, and as such should be subject to inspections and maintenance.

H.1.2 – Network Hierarchy

The Network Hierarchy shall be as per the hierarchy identified in Annex A for Carriageway (A.1.2) and Annex B for Footways, Footpaths, Cycle Tracks and Public Rights of Way (B.1.2, B.2.2 and B.3.2).

H.1.3 – Network Inspections

H.1.3.1 - Introduction

The Network Inspection regime shall be subject to an annual review. This regime has three constituent parts:

Objective	Contribution
Safety Inspections	To comply with statutory obligations
	To meet the user's needs for safety
Service Inspections	To ensure availability
	To achieve integrity
	To maintain reliability
Network Integrity Inspections	To minimise cost over time
	To maximise value to the community
	To maximise environmental contribution

All information from the network inspection regime, together with any immediate or programmed action, including nil returns, shall be recorded. Such information shall, whenever systems are available be recorded in a GIS format so that it may be utilised together with other relevant information in the review of the maintenance strategy, practices and the development of works programmes. Accurate recording of inspection results are crucial in assisting a defence against any third party claims.

H.1.3.2 - Safety Inspections

The frequency of inspections shall be as identified in the relevant annex for the network and route that the Embankment or Cutting is based upon.

Safety inspectors shall keep a diary, and record daily which sections of the network have been inspected on foot as opposed to by vehicle. Extracts from the inspector's diary shall be produced as necessary as evidence in response to any third party claims.

Where there may be exceptional circumstances, for example an abnormally high occurrence of damages claims, a higher degree of inspection may be considered jointly with the service provider and the Council's Insurance Officers.

Policy NMPH1: Embankments and Cuttings Safety Inspection Defect Categories

The condition of asset items subject to safety inspections shall be:

Feature	Defect Category
Embankments and cuttings	Risk of loose material falling to injure users or damage facility

Degree of deficiency shall be assessed upon the following criteria

Degree of Deficiency	Timeframe for action
Category 0 Defects	Emergency make safe response in 2 hours
Category 1 Defects	These require prompt attention and will require a permanent repair to be made within 5 days of the defect being reported.
Category 2 Defects	All other defects. These should be prioritised and repaired within planned programmes of work. If these are within 10m radius of a reported Category 1 defect then they should be repaired at the same time, as referred to in chapter 12 of the Introduction to Network Maintenance Management document.

In the defence of third party claims for damage to property or personal injury it is vitally important to demonstrate that Category 1 defects are treated as above and concise records are kept of inspections.

Any defect with utility apparatus assessed as Cat 1 shall require the utility provider to be notified immediately and requested to attend or make the defect safe within 24 hours. This shall be undertaken with reference and in accordance with Section 81 of the New Roads and Streetworks Act 1991.

A 'risk matrix' shall be used to classify the degree of risk posed by all identified defects as identified in the "Network maintenance Management Plan: Introduction to Network Maintenance Management" Section 14 "Network Maintenance – Defect Category Identification".

Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements should be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until a permanent repair can be made.

Policy NMPH2: Definition of a CAT 1 Embankment or Cutting Defect

Embankments and cuttings – Any failure which causes obstruction to the public highway from failure detritus.

OR

Any failure which causes movement or collapse of the public highway.

OR

Any minor slip that causes concerns over the safety of the travelling public or concerns over further movement issues.

H.1.3.3 - Service Inspections

Significant embankments and cuttings should be defined in an inspection regime identified based on the geological characteristics and the potential risk of slippages or rockslides.

Service inspection arrangements should be based on specialist geotechnical advice or legacy records but should be programmed, where ever possible, to follow periods of heavy rain, severe frosts or periods of prolonged dry weather. A risk based approach will be taken to identify any issues critical to network performance.

Service Inspections are included to target particular highway elements to ensure that they meet requirements for serviceability. These can be split into the following:

- Network Integrity inspections
- Regulatory inspections

Policy NMPH3: Embankment or Cutting Service Inspection Defect Categories.

The condition of asset items subject to service inspections shall be:

Feature	Defect Category
Embankments and cuttings	Damage to Property
	Risk of damage or Network interruption

Network Integrity Inspections
Although each asset on the network might be well maintained within an overall asset management strategy, the network still might not deliver best value, as the asset might not be performing to the optimum efficiency. Operational efficiency is primarily a network management consideration but aspects of it are closely related to maintenance, for example:

- Traffic signs or markings may be poorly sited or the legend may be either incorrect, confusing or not reflect current priorities;
- Traffic signs or markings may be redundant;
- Facilities for walking, cycling or public transport might be discontinuous or poorly defined. Opportunities for installation of dropped kerbs or textured paving should be taken;
- Opportunities might be taken to modify layout as part of future relevant maintenance schemes.

Inspections for Network Integrity shall normally be undertaken at the time of Safety Inspections.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

Regulatory Inspections
Regulatory inspections shall be as detailed in the Core Network Maintenance Management Plan.

H.1.4 – Network Maintenance Types

H.1.4.1 - Reactive Maintenance

Reactive maintenance to the highway network is managed and delivered by Bedfordshire Highways and is generally carried out in response to a customer report.

CBC operates a Highways Helpdesk for customers to be able to enquire or report on any highway matter. Contact details for the Highways Helpdesk are as follows;
Telephone; 0300 300 8049
Email; highways@centralbedfordshire.gov.uk

On receipt of a customer report the Highways Helpdesk technician will allocate a priority, either Cat 0, 1, or 2, to all defects reported. All reports will subsequently be inspected by an accredited highways officer/technician and the priority confirmed or changed. The provider updates the Insight system with the outcome of the inspection. Customers can then access this update via a web link from the CBC website.

The overarching principle of holistic working as discussed in chapter 12 of the Introduction to Network Maintenance Management will be considered during the organisation of maintenance works. Consideration of rectification of not only defects of a lesser nature, but also those on other assets shall be considered under the same traffic management and works order.

H.1.4.2 - Emergency Reactive Maintenance

Outside normal office hours (8.30am to 6.00pm Monday to Thursday; 8.30am to 5.30pm Fridays) the service operates an emergency contact system. This can be accessed via the Council's highways helpline – 0300 300 8049. The emergency out of hours contact shall co-ordinate the reactive maintenance response for the Authority area.

The emergency out of hours contact shall co-ordinate the reactive maintenance response.

Upon identifying the need for an emergency reactive response, either by description or by inspection, the responsible officer shall instigate measures to render the site safe within 2 hours.

Measures taken will wherever practicable, take the form of a permanent repair to avoid the necessity to revisit the site in the short term. Where this is not possible a temporary make safe repair will be considered. If this is not achievable, traffic control measures, such as traffic lights or a road closure, will be put into place.

H.1.4.3 - Routine Maintenance

Works to Embankments & Cuttings are currently undertaken by:

- Reactive Works
- As part of larger Programmed Works

H.1.4.4 - Programmed Maintenance

Programmed Maintenance to the highway network is managed by Bedfordshire Highways.

It is the aim of the service to establish a four year programme taking in to account the criteria of

- Safety
- Serviceability
- Sustainability
- Community Effect

Environmental Management Issues shall be addressed as identified in the Environmental Impact Assessment section in the Core document and shall adhere to the Town and Country Planning (Environmental Impact Assessment) Regulations 2011

Works shall be permanent and will, wherever practicable, adopt a holistic approach to management of the highway network. The potential to include such works shall be considered for all programmed schemes.

“Total package” thinking promotes the inclusion of works upon all elements of the highway assets when undertaking programmed works. This facilitates works which have the potential to add value at minimum cost, for example by the inclusion of dropped kerbs to assist disabled people, modification of unclear signage or road markings. The scope for inclusion for such works within each scheme will depend upon the key aims of the scheme and available resources.

Information concerning the measures taken, including no action where necessary, shall be recorded, monitored and utilised as appropriate in reviews of maintenance strategy and practices.

H.1.6 – Network Maintenance Standards Embankments and Cuttings

H.1.6.1 - Reactive

Landslip onto the Highway
Having confirmed that a landslip onto, or from under, the highway represents an immediate or imminent hazard (category 1 defect) it shall be rectified as follows:

- Traffic control measures shall be put into place to guide vehicular and pedestrian traffic safely around the Landslip. This may be by the use of Stop/Go boards, temporary traffic signals or an emergency road closure.

- As soon as is practicable and in accordance with Section 150 of the Highways Act 1980, Bedfordshire Highways shall remove the obstruction arising from the landslip. Following this, long-term stabilisation measures shall be assessed. Such measures shall be considered for inclusion within future routine or programmed works. These measures may require the action of other parties and the use of the Authority’s powers under the Highways Act 1980.

- Where the failed material may be the responsibility of an adjacent landowner, statutory body, rail operator or neighbouring authority, Bedfordshire Highways shall immediately inform them of the failure, its actions to make safe and its intention to recharge its costs for doing so. It shall also confer on them the responsibility for a programmed long-term stabilisation measure to be delivered as soon as is reasonably practicable.

H.1.6.2 - Routine

Works to Embankments & Cuttings are currently undertaken by:

- Reactive Works
- As part of larger Programmed Works

Appendix 1: Version Control

Reference	Action	Date	Topic
140701	Incorporated comments and policy statements	01/07/2014	Draft Revisions
140812	Incorporated comments	12/08/2014	Draft Revisions

Central Bedfordshire Council
www.centralbedfordshire.gov.uk

Network Maintenance Management Plan

Annex I:

Winter Maintenance

Introduction

Bedfordshire Highways review and update their activities in line with appendix H of the “Well Maintained Highways” Code of Practice on an annual basis. The following document is the current iteration of the Winter Maintenance Plan.

Central Bedfordshire Council
www.centralbedfordshire.gov.uk

Network Maintenance Management Plan

Annex J:

Regulatory Functions

Part 1: Regulatory Functions

J.1.1 - Licensing and Regulation (Highways Act 1980)

J.1.1.1 - Scaffolding within the public highway

J.1.1.1.1 - Introduction

Under Section 169 of the Highways Act 1980, a person may erect scaffolding on the public highway in to carry out work on adjoining properties, providing permission is first obtained from the Highway Authority in the form of a Licence.

J.1.1.1.2 - Procedure

Before placing a scaffold in the public highway, (including on grassed verges and footways), the contractor and the scaffolding company has to obtain permission from the Highway Authority in the form of a licence. The licence sets down the standards on such matters as lighting, signing, guarding and other relevant issues.

Each request is considered on an individual basis and site specific conditions can be included in the Licence if this is deemed necessary.

It is a condition of the Licence that the contractor and the scaffolding company have to prove that they have adequate insurance cover in the form of a Public Liability policy providing a £5million indemnity limit.

The Highway Authority accepts no responsibility for the structural integrity of the scaffold or other structure. The Licensee must indemnify the Highway Authority in this respect.

The contractor will be responsible for the costs of all traffic management, including any fees due for temporary traffic Orders and traffic signal approval or works.

A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.2 - Hoardings within the public highway

J.1.1.2.1 - Introduction

Under Section 172 of the Highways Act 1980, a person may erect hoarding or fencing on the public highway in to carry out work on adjoining properties, providing permission is first obtained from the Highway Authority (Bedfordshire Highways) in the form of a Licence.

J.1.1.2.2 - Procedure

Before placing hoarding or fencing in the public highway, (including on grassed verges and footways), the contractor has to obtain permission from Bedfordshire Highways, in the form of a licence. The licence sets down the

standards on such matters as lighting, signing, guarding and other relevant issues.

Each request is considered on an individual basis and site specific conditions can be included in the Licence if this is deemed necessary.

It is a condition of the Licence that the contractor has to prove that they have adequate insurance cover in the form of a Public Liability policy providing a £5million indemnity limit.

Under Section 173 of the Highways Act 1980, the contractor must ensure the hoarding or similar structure must be securely fixed. The Highway Authority (Bedfordshire Highways) accepts no responsibility for the structural integrity of the hoarding and fencing. The Licensee must indemnify the Highway Authority in this respect.

The contractor will be responsible for the costs of all traffic management, including any fees due for temporary traffic orders and traffic signal approval.

A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.3 - Skips within the public highway

J.1.1.3.1 - Introduction

Under Section 139 of the Highways Act 1980, a person can place a skip on the highway, providing permission is obtained from the Highway Authority (Bedfordshire Highways).
Where possible, it is advisable for skips to be placed on private land rather than on the public highway. This avoids potential conflict with users of the highway.

Where it is not possible to place a skip on private land, skip owner and / or hirer can apply to have a skip on the public highway.

J.1.1.3.2 - Procedure

Before placing a skip on the highway, the skip owner and / or hirer, has to obtain permission from Bedfordshire Highways in the form of a licence. The licence sets down the standards on such matters as lighting, signing, guarding etc.

Each request is considered on an individual basis and site specific conditions can be included in the Licence if this is deemed necessary.

It is a condition of the Licence that the skip owner / hirer also have to prove that they have adequate insurance cover in the form of a Public Liability policy providing a £5million indemnity limit.

A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.3.3 - Unlicensed skips

Where a skip has been placed on the public highway without a Licence, Bedfordshire Highways will use its powers under Section 140 of the Highways Act 1980, to require the owner or hirer of the skip to remove or reposition the skip.

If the owner / or hirer fails to do so, Bedfordshire Highways will take action themselves to remove or reposition the skip. In so doing, Bedfordshire Highways will recover all costs incurred from the Applicant.

If the skip is removed, Bedfordshire Highways will, where practicable, notify the owners and request that it is collected. If the owner cannot be traced or if after 28 days the skip has not been recovered by the owner, then Bedfordshire Highways will dispose of the skip and its contents. In so doing, Bedfordshire Highways will recover all costs incurred from the owner of the skip.

J.1.1.4 - Storing builders materials on the public highway

J.1.1.4.1 - Introduction

Under Section 171 of the Highways Act 1980, a person may temporarily place building materials on the highway, providing permission is obtained from the Highway Authority (Bedfordshire Highways).

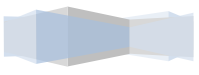
Where possible, it is advisable for building materials to be placed on private land rather than on the public highway. This avoids potential conflict with users of the highway.

Where it is not possible to place building materials on private land, the owner can apply to have the materials placed on the public highway.

J.1.1.4.2 - Procedure

Before placing building materials on the highway, the owner of the materials has to obtain permission from Bedfordshire Highways in the form of a licence. The licence sets down the standards on such matters as lighting, signing, guarding etc.

Each request is considered on an individual basis and site specific conditions can be included in the Licence if this is deemed necessary.



It is a condition of the Licence that the building materials owner also have to prove that they have adequate insurance cover in the form of a Public Liability policy providing a £5million indemnity limit.

Containment of any material stored within the highway boundary will also be required, to ensure that no stored material is “washed or transferred into the highways drainage system, including but not exclusive to gullies, drainage pipes and manholes.

A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.4.3 - Unlicensed building materials on the public highway

Where building materials have been placed on the public highway without a Licence, Bedfordshire Highways will use its powers under Section 171 of the Highways Act 1980, to require the owner of the materials to remove or reposition the materials.
If the owner fails to do so, Bedfordshire Highways will take action themselves to remove or reposition the materials. In so doing, Bedfordshire Highways will recover all costs incurred from the owner of the materials.
If the materials are removed, Bedfordshire Highways will, where practicable, notify the owners and request that they are collected. If the owner cannot be traced or if after 28 days the materials have has not been recovered by the owner, then Bedfordshire Highways will dispose of the materials. In so doing, Bedfordshire Highways will recover all costs incurred from the owner of the materials.

J.1.1.5 - Planting within the public highway

J.1.1.5.1 - Introduction

Under Section 142 of the Highways Act 1980, a person may, with the permission of the Highway Authority (Bedfordshire Highways) plant and maintain within the public highway. This gives residents the opportunity to up keep the frontage of their property.

Bedfordshire Highways will issue a Licence for the planting, which details the criteria for carrying out this work. There is a small charge of £30 for the administration involved in issuing the Licence (except to Town and Parish Council, where no charge is made).

J.1.1.5.2 - Procedure

Below is listed the procedure which must be followed in order for an applicant to plant within the public highway.

1. The area to be planted must adjoin the applicant’s property (does not apply to Town / Parish Councils).

2. The applicant should liaise with the Town / Parish Council on the type and nature of any landscaping / planting as this will need to be in keeping with the surrounding areas.

3. The applicant must submit a plan showing the extent of the planting area to the Highways Helpline (0300 300 8049) for approval, together with the administration fee. A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

4. When approved by Bedfordshire Highways, a Licence to plant and maintain within the highway will be issued. This licence will refer to the planting scheme and sets out the responsibilities for future maintenance. The licence will normally be issued within 14 days from receipt of a request.

5. Bedfordshire Highways will add the detail of the planting licence to the GIS overlay and inventory and a hard copy of the licence will be stored on file.

6. Once the Licence is issued, the applicant can then carry out the planting work.

7. The applicant will be responsible for all future maintenance of the area.

8. If the applicant does not carry out regular maintenance on the planted areas, then Bedfordshire Highways will remove the planting and reinstate the verge. The applicant will be responsible for any cost incurred should this be necessary.

9. The Licence is non-transferable. If an applicant wishes to move property then the Licence must be surrendered. The new owner can apply to take over responsibility for the planting and a new Licence will be issued, upon receipt of the £30 administration charge.

10. If an applicant surrenders the Licence then all planting must be removed and the area returned to its original condition. Failure to do so will result in Bedfordshire Highways carrying out the works and recharging the costs incurred to the applicant.

11. Bedfordshire Highways will review the Licence every five years. If after a five year period, the applicant wishes to surrender the Licence, then the procedure in step 9 applies. If the applicant wishes to continue with a Licence, then a new Licence will be issued for the following 5 years and a further administration fee of £30 is payable.

J.1.1.6 - Private apparatus within the public highway

J.1.1.6.1 - Introduction

Under Section 181 of the Highways Act 1980, a person may, with the permission of the Highway Authority (Bedfordshire Highways) install apparatus on / within the public highway.

Please note: this licensing procedure only applies to items not covered by a Street Works Licence.

Bedfordshire Highways will issue a Licence for the planting, which details the criteria for carrying out this work. There is a charge for the administration involved in issuing the Licence (except to Town and Parish Council, where no charge is made). All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.6.2 - Procedure

Below is listed the procedure which must be followed in order for an applicant to plant within the public highway.

1. The area to be where the apparatus is to be installed must adjoin the applicant's property (does not apply to Town / Parish Councils).

2. The applicant must submit a plan showing the extent of the highway where the apparatus is to be installed to the Highways Helpline (01234 228661) for approval, together with an administration fee. A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

3. When approved by Bedfordshire Highways, a Licence to install private apparatus within the highway will be issued. This licence will refer to the planting scheme and sets out the responsibilities for future maintenance. The licence will normally be issued within 14 days from receipt of a request.

4. Bedfordshire Highways will add the detail of the planting licence to the GIS overlay and inventory and a hard copy of the licence will be stored on file.

5. Once the Licence is issued, the applicant can then carry out the work.

6. The applicant will be responsible for all future maintenance of the apparatus.

7. If the applicant does not carry out maintenance on the apparatus, then Bedfordshire Highways will require the apparatus to be removed from the highway. The applicant will be responsible for any cost incurred should this be necessary.

8. The Licence is non-transferable. If an applicant wishes to move property then the Licence must be surrendered. The new owner can apply to take over responsibility for the apparatus and a new Licence will be issued, upon receipt of the £50 administration charge.

9. If an applicant surrenders the Licence then the apparatus must be removed and the area returned to its original condition. Failure to do so will result in Bedfordshire Highways carrying out the works and recharging the costs incurred to the applicant.

10. Bedfordshire Highways will review the Licence every five years. If after a five year period, the applicant wishes to surrender the Licence, then the procedure in step 9 applies. If the applicant wishes to continue with a Licence, then a new Licence will be issued for the following 5 years and a further administration fee is payable. A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

J.1.1.6.3 - Practice for recording underground apparatus in streets

The Code requires Highway Authorities to keep records of all of its apparatus within the public highway.

The Code is not a statutory Code but has been accepted by HAUC and it is strongly recommended that Highway Authorities adhere to it. Bedfordshire Highways will adhere to the requirements of this code.

Bedfordshire Highways is not required to keep records of apparatus that was installed before the Code, but where drainage systems are traced, these shall be added to the inventory for information.

Where the apparatus is new, altered or relocated in the course of other works then full records shall be kept and maintained.

Records will be available for inspection, free of charge.

Section 50 licenses are to be kept in the same manner and at the same accuracy. This also applies to any alteration to a licensed apparatus.

Although there is no reference to new adoptions in the Code, the aim is to provide, over a period of time, a comprehensive record of all plant. Therefore Bedfordshire Highways will record all apparatus that is installed as part of a new development.

The utility companies are responsible for their records and we would need to record our apparatus.

The equipment requiring recording is: -

- Highway drainage but not connections
- Street light cables and ducts
- Traffic/Vehicle Signal/Signs cables and ducts and loops
- Section 50 licenses

- Ice Prediction cables and ducts
- Speed camera cables and ducts

J.1.1.7 - Road closures

J.1.1.7.1 - Introduction

In order to safeguard the safety of the workforce and of the public it is sometimes necessary to close a road to enable works on the highway to be carried out. It is a requirement that all road works should have a safety zone between the work area and live traffic. A road closure will be required if a running lane of less than 2.5m is available to through traffic.

It is vital that we protect both the workforce and any through traffic from potential danger at the works. It is for this reason that the following procedure will be adhered to.

(NOTE: This procedure also applies where Bedfordshire Highways is the promoter of the works)

J.1.1.7.2 - Procedure

Bedfordshire Highways will assess all requests for road closures received from promoter of the works. If a closure is required, the promoter will pay Bedfordshire Highways the appropriate for fee for arranging the road closure. A fee is payable by the applicant for the Licence to be issued. This fee shall be received before the Licence is issued. All fees and charges for granting of license can be found on the CBC website Annual Accounts and Financial Information pages.

Bedfordshire Highways will arrange the necessary diversionary routes, legal orders and all necessary press advertisements.

Timings for the closure will depend on each individual site and will be agreed following discussions with Bedfordshire Highways. Bedfordshire Highways will liaise with local residents, public transport companies and the Parish Council as part of the preparation of the road closure order.

The promoter shall arrange for advance warning signs to be displayed detailing the dates and times of the closure. These signs will be erected at least 10 working days before the start of the closure. The promoter will be responsible for updating the advance warning signs should the programme for the works alter in any way.

In order to protect the workforce, no vehicles, with the exception of emergency vehicles, will be allowed through the works. Bedfordshire Highways shall make alternative arrangements for buses in consultation with the Passenger Transport & Schools Transport Sections in County Hall, prior to works commencing.

Any alternative arrangements made to exclude bus companies from roadwork closure sites will have cost implications and the promoter of the works will pay all of these costs.

The promoter's contractor will arrange for the necessary road closed and diversion boards to be displayed as required by Bedfordshire Highways.

The promoter's contractor shall install "Road Ahead Closed" signs at the point where the Diversion starts.

The promoter's contractor shall then install substantial barriers across the full width of the carriageway at the point where work is taking place. No vehicles except emergency services attending an emergency shall be allowed through the actual site of works without the agreement of the contractor. Access for emergency services will be allowed at all times.

The promoter will keep all residents within the extent of the closure regularly appraised as to the work that is going on, particularly as to which route through the works residents should use to access their properties. Residents will be allowed pedestrian access at all times but vehicles will only be given access when it is safe to do so or when the closure is removed overnight.

The promoter shall inform Bedfordshire Highways, the County Councillor and the Town/Parish Council if works are likely to over-run the duration of the closure. The advanced warning signs shall be changed accordingly. Similarly if works finish ahead of time the promoter shall inform Bedfordshire Highways, the County Councillor and the Town/Parish Council.

The promoter shall ensure that all signs (including diversion signs) are removed immediately upon completion of the works

J.1.1.8 - Unauthorised signs placed within the highway

J.1.1.8.1 - Introduction

Advertising and other signs shall not be placed in or on the public highway, except by or with the agreement of the Highway Authority.

The proliferation of unauthorised signs across the highway network causes the County Council some concern. There are some causes e.g. charity events, school fetes which the County Council would wish to be seen supporting. There are other events where commercial gain is being enjoyed at the expense of highway clutter, and to the detriment of other law abiding local businesses.

Ad-hoc advertisements displayed within the limits of the highway are seldom pleasant to look at, often a distraction to drivers and, like all unauthorised signs, are an unlawful obstruction on the highway which can be dangerous.

Bedfordshire Highways will take action upon receipt of a complaint from a County Councillor, from a Parish or Town Council, a member of the public or when unauthorised signs along a road present a problem to users of the highways.

J.1.1.8.2 - Legal Obligations

Section 132 of the Highways Act 1980 – Refers to signs fixed to a tree or structure or signs and goods stored on the footways in urban areas, which obstruct pedestrians and other road users taking account of the width of available footway.

Section 143 of the Highways Act 1980 – Refers to Signs on their own posts

Section 149 of the Highways Act 1980 – Refers to the removal of things so deposited on the highway
If anything so deposited on a highway so as to cause a nuisance, the highway may give notice to the person responsible for the structure requiring that person to remove the structure forthwith. Failing this, the highway authority can remove the structure and recover their costs

J.1.1.8.3 - Procedure

All unauthorised signs should be dealt with using the procedure detailed below, taking into account the following comments.

Consideration should be given before action is taken against signs advertising local charitable events. Provided signs are not an immediate hazard, the organisers shall be given two weeks to arrange for removal.

Advice from highway authority staff should be sought regarding safety signs such as those displaying ‘concealed entrance’, ‘mud on road’, or signs associated with issues such as speed reduction, campaigns for bypasses etc. Visibility mirrors also fall within this classification.

In the urban environment, certain signs, and indeed shop displays, can have an aesthetic benefit to the local area. Discretion should be given when the following parameters are complied with.

- Where a footway or other similar feature is obstructed, there should always be a clear width of 1.5 metres longitudinally past the obstruction for the availability of pedestrians.
- Areas immediately adjacent to pedestrian crossings should be totally clear of obstructions
- A general presumption against taking any enforcement would apply in cases where any display immediately abuts the shop frontage, its distance out from the frontage into the street does not exceed 1.0 metres and a 1.5 metre wide longitudinal clearing exists on any adjoining footway

- In cases that do not comply with the above, enforcement would normally take place; in particular action will be taken to remove any isolated display not abutting a shop.

Perhaps the most prevalent sign in the urban environment is the 'A' frame type advertising boards. Their presence on the highway can usually be tolerated if:

- the size of the board does not exceed 1000mm height x 600mm width **and either**
- they are located along any longitudinal or transverse line in a street where pedestrian movement is already impeded by street furniture **or**
- they are located immediately adjacent to a shop frontage **and**
- taken in aggregate they are not in the highway authority's view causing significant visual distraction or impedance to pedestrian's mobility.

In no circumstances will displays of goods or advertising boards be allowed within any carriageway or other highway pavement marked out for the passage of vehicles to facilitate deliveries or other vehicular access

Where signs are clearly on private land, the provisions of the Highways Act 1980 do not apply.

J.1.1.8.4 - Procedure

a). Signs affixed to the highway infrastructure.

Unauthorised signs affixed to the highway infrastructure should be removed immediately without notice by the highway authority or the highway authority's agent. In particular signs attached to trees, lamp columns, traffic signs, and other street furniture or structures within the highway. The term 'signs' can include posters attached by paste or tape, more substantial signs mounted on hardboard or something similar (often fixed with string, wire or metal tape), and other advertising material.

Any signs and other objects (except paper posters etc.) removed under S132 should be taken to an appropriate store and retained for at least 28 days in case the owner wishes to collect them. In the event that boards are not reclaimed then they may then be destroyed. If the owner does collect any removed signs then the opportunity should be taken to explain the requirements of S132 of the Highways Act 1980.

b) Free standing signs or signs fixed into the ground.

It is not possible to take action under S132 of the Highways Act 1980 for freestanding or pole mounted signs. This includes 'A' type boards standing on footways outside shops and board mounted signs placed in verges on their own posts.

In such instances, attempts should be made to locate the owner of such signs and inform them of the requirements of S143 of the Highways Act 1980, and then the owner should be given a period of time, (normally 14 days), in which to remove the signs. If the owner does not remove the sign, Bedfordshire Highways should remove the sign, take to an appropriate store and retain for at least 28 days in case the owner wishes to collect them. Bedfordshire Highways can recover all costs in such instances.

If a sign is regarded to constitute a danger to users of the highway (e.g. visibility), then the highway authority, or the highway authority's agent, may remove it forthwith.

c) Signs fixed to vans or other vehicles

Refer to the Police for help in removing.

d) Temporary Signs advertising Community Events

Bedfordshire Highways will exercise discretion when a reasonable number of temporary signs are erected within villages or towns, for a community event, provided the following:

- The signs do not cause an obstruction to users of the highway.
- The signs are not erected more than 7 days before the event.
- The signs do not remain in place for more than 48 hours after the event.

Where more extensive directional signing is needed, communities / groups should seek the assistance of the AA or RAC (at a cost to the organisers) and follow the guidelines for Special Events.

e) Temporary Signing to Special Events

Such signs need to comply with the Traffic Signs Regulations and General Direction 1981. Bedfordshire Highways recommend that the organisers should contact the AA or RAC or other approved provider of temporary signing for help with sign designs and routing. It is essential that any company providing this service has adequate public liability insurance.
Such signing layouts require a 28 day approval period by the Highway Authority.
A fee of £50 will be payable for the approval of temporary signing to special events.

J.1.1.8.5 - Delegation of function

The functions of S132 and S143 of the Highways Act 1980 can be delegated to local councils using S101 of the Local Government Act 1972. This power will be delegated to any Town / Parish Council who so requests.

J.1.1.9 - Stones and other obstructions placed on Highway verges

J.1.1.9.1 - Introduction

Stones are normally placed on verges by residents who wish to stop vehicles from driving on and damaging the grassed areas. These should not be placed on the highway because they may represent an obstruction and a potential danger to users of the highway

J.1.1.9.2 - Procedure

Bedfordshire Highways will take action when we receive a complaint from a Councillor or from a Parish or Town Council or where the stones become a problem, as follows:

1. When large stones are deposited on the highway verge, they should be inspected and recorded with photographs.
2. The owner should be contacted in writing and be requested to remove the stones from the highway verge.
3. Where Bedfordshire Highways deems the stones to be a danger, the stones should be removed without further notice and stored for 28 days.
4. Where Bedfordshire Highways deems the stones to be a nuisance rather than a danger, the site shall be re-inspected 28 days after the initial notice date to ensure the stones have been removed.
5. In extreme cases where stones are repeatedly replaced and the owners continue to be unwilling to move the obstacles, then an application to the local magistrates' court will be considered under Section 149 of the Highways Act 1980.
6. Bedfordshire Highways shall discuss with the resident the reasons for installing the stones..

J.1.2 – Regulatory Inspections

J.1.2.1 - Regulatory Inspection – Highways Act 1980

Regulatory Inspection of the Highway Network shall be undertaken at the time of Safety Inspection. This will identify illegal matters affecting the highway network.

Dependent upon the degree of deficiency, each identified defect shall be assessed for action through either:

- Reactive works
- Routine works
- Programmed works

The nature of response for each element of the highway asset is established in the relevant asset section of this Plan.

J.1.2.2 - Regulatory Inspection – New Roads and Street Works Act (NRSWA)

Central Bedfordshire Council has a duty to inspect public utilities' street works at three defined stages:

- During excavation (Type A inspection);
- Within six months of permanent reinstatement (Type B inspection);
- During the three months preceding the end of guarantee period, which is normally two, but three years in the case of full reconstruction (Type C inspection).

Bedfordshire Highways shall comply with the NRSWA Code of Practice for inspection carry out these three categories of inspection. The inspection is based on a random sample of 10% of openings at each of the stages, making a total of 30% of an Undertaker's works.

Bedfordshire Highways shall report defective reinstatements and street works sites to the relevant utilities and monitors those remedial measures, to ensure that they are correctly carried out, imposing financial penalties where appropriate.

J.1.3 – Regulatory Maintenance Standards

J.1.3.1 - Reactive

In many instances of reactive maintenance, the Council's powers under the Highway Act 1980 have to be utilized to combat immediate or imminent hazards where the duty for maintenance or fault lies with others. Examples might be an incident or other exceptional event on the highway network or offences caused.
In such instances, costs incurred may be recovered. Such action shall always be entered into where:

- It is considered that it is cost effective to do so;
- The offence is repeated or severe in nature.

Where the provider has exhausted all reasonable non-legal efforts in stopping or removing the risk or offence from a third party, then the matter shall be referred to the CBC Service Management Team for consideration of CBC invoking a legal challenge.

In addition to this, measures may be required to remove the cause of future risk. This measure may require the action of other parties and the use of CBC's powers under the Highway Act 1980.

Road Traffic Regulation Act 1984 – Emergency Road Closure
The Council, as the Highway Authority, has the power under Section 14(3) of the Road Traffic Regulation Act 1984 to close any part of the public highway in the interest of safety.

J.1.3.2 - Routine

Highway Act 1980

CBC has the power to enter into agreement upon or license a number of activities upon the public highway. The number of activities included within the contract with the provider together with who is responsible for managing is listed below;

Section of HA 1980	*Provision*	*Duty held by CBC*	*Work carried out by Supply Chain*	*Providers Duties*
37	Highway created by dedication		#	Assist the Employer as requested by the Employer
38	Power to adopt by agreement		#	Assist the Employer as requested by the Employer
41	Duty to maintain	#		Carry out works on behalf of Employer
47	Power of magistrate to declare unnecessary highway		#	Assist the Employer as requested by the Employer
48	Power of magistrate to declare highway again		#	Assist the Employer as requested by the Employer
56	Order to repair		#	Assist the Employer as requested by the Employer
58	Defence for non-repair		#	Assist the Employer as requested by the Employer
59	Recovery of expenses due to extraordinary traffic		#	Assist the Employer as requested by the Employer
60	Liability of others for alternative routes		#	Assist the Employer as requested by the Employer
62	Power to improve highways	#		Exercise the functions of the Employer by or under this section

64	Dual carriageways and roundabouts	#		Carry out works on behalf of Employer
65	Cycletracks	#		Exercise the functions of the Employer by or under this section
66	Footways and guard-rails	#		Exercise the functions of the Employer by or under this section
68	Refuges		#	Carry out works on behalf of Employer
70	Footbridges	#		Exercise the functions of the Employer by or under this section
71	Margins for horses	#		Exercise the functions of the Employer by or under this section
72	Widening of highways		#	Exercise the functions of the Employer by or under this section
75	Varying of widths		#	Exercise the functions of the Employer by or under this section
76	Levelling of highways	#		Exercise the functions of the Employer by or under this section
77	Alteration of levels	#		Exercise the functions of the Employer by or under this section
78	Cutting off of corners	#		Carry out works on behalf of Employer
79	Prevention of obstruction to view at corners		#	Advise the Employer when it may be necessary for the Employer to issue a notice and plan pursuant to this section

80	Power to fence		#	Exercise the functions of the Employer by or under this section
81	Provision of boundary posts	#		Exercise the functions of the Employer by or under this section
82	Provision of cattle grids		#	Assist the Employer as requested by the Employer
83	Removal of cattle grids		#	Assist the Employer as requested by the Employer
84	Maintenance of cattle grids	#		Exercise the functions of the Employer by or under this section
91	Construction of bridges		#	Assist the Employer as requested by the Employer
92	Reconstruction of bridges		#	Assist the Employer as requested by the Employer
93	Powers to make orders for private bridges		#	Assist the Employer as requested by the Employer
94	Powers to enter into agreements with bridge owners		#	Assist the Employer as requested by the Employer
95	Supplementary provisions as to orders for bridges		#	Assist the Employer as requested by the Employer
96	Powers to plant trees, grass etc.		#	Exercise the functions of the Employer by or under this section
97	Lighting of highways		#	Exercise the functions of the Employer by or under this section
98	Delegation of lighting functions		#	Assist the Employer as requested by the

				Employer
99	Metalling of highways	#		Exercise the functions of the Employer by or under this section
100	Drainage of Highways	#		Exercise the functions of the Employer by or under this section
101	Power to fill in roadside ditches etc	#		Advise the Employer when a ditch on land adjoining or lying near the highway may constitute a danger to users of the highway
102	Provision of works for protecting highways	#		Exercise the functions of the Employer by or under this section
103	Provision of posts to indicate flood water	#		Exercise the functions of the Employer by or under this section
104	Mitigating nuisance of dust		#	Exercise the functions of the Employer by or under this section
116	Stopping up of highway		#	On advice of the Employer, exercise the functions of the Employer by or under this section
122	Power to make temporary diversions	#		Exercise the functions of the Employer by or under this section, advising Employer of compensation claims
124	Stopping up of private access		#	Advise the Employer and exercise the functions of the Employer by or under this section when requested

				by the Employer
125	Further powers to stop up private access		#	Advise the Employer and exercise the functions of the Employer by or under this section when requested by the Employer
126	Provisions supplementary to S124 and S125		#	Advise the Employer and exercise the functions of the Employer by or under this section when requested by the Employer
127	Stopping up access by agreement	#		Exercise the functions of the Employer by or under this section, advising Employer of compensation claims
128	Penalty for using access		#	Advise the Employer and exercise the functions of the Employer by or under this section when requested by the Employer
129	Further provisions with respect to accesses	#		Exercise the functions of the Employer by or under this section
130	Protection of public rights	#		Exercise the functions of the Employer by or under this section
131	Penalty for damaging highway		#	Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action.

				If requested by Employer, arrange for remediation
132(1)	Unauthorised marks on highways		#	Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action. If requested by Employer, arrange for remediation
133	Damage to footways of streets by excavations	#		Exercise the functions of the Employer by or under this section
137	Penalty for obstruction	#		Advise Bedfordshire Police and Employer
138	Penalty for erecting building in highway		#	Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action. If requested by Employer, arrange for remediation
139	Placing of builder's skips	#		Assist the Employer as requested by the Employer
140	Power to require owner of skip to remove or reposition it	#		Assist the Employer as requested by the Employer
141	Restriction on planting of trees etc. in or near carriageway	#		Exercise the functions of the Employer by or under this section

142	Licence to plant trees, shrubs etc. in a highway	#		Exercise the functions of the Employer by or under this section. Manage the sponsorship of roundabouts (See Network Maintenance Service Plan)
143	Power to give notice requiring removal of structures from highways	#		Exercise the functions of the Employer by or under this section including encroachment on the highway or highway boundary
144	Power to erect flagpoles etc. on highways		#	Advise Employer, as requested by Employer, on consents to erect flagpoles and other "relevant works" referred to in this section. Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action
145	Powers as to gates across highway		#	Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action. If requested by Employer, arrange for remediation

148	Penalty for depositing things on the highway		#	Advise Employer if any person commits an offence covered by this section, with details and recommendations for further action. If requested by Employer, arrange for remediation
149	Removal of things so deposited on the highways as to be a nuisance etc.		#	On behalf of the Employer remove obstructions from the highway or make safe pending further action. Advise the Employer of things deposited on a highway that may constitute a nuisance with recommendations for further action. Arrange for work to be carried out and take steps to recover expenses reasonably incurred as requested by the Employer
150	Duty to remove snow, soil etc. from the highway	#		Exercise the functions conferred on the Employer by or under this section, except insofar as they relate to an obstruction in a highway which is the property of a person
151	Prevention of soil etc. washing on to highway	#		Exercise the functions of the Employer by or under this section

152	Powers as to removal of projections from buildings	#		Exercise the functions of the Employer by or under this section
153	Doors etc. not to open outwards	#		Exercise the functions of the Employer by or under this section
154	Cutting or felling of trees that overhang the highway	#		Exercise the functions of the Employer by or under this section. Arrange for work to be carried out and take steps to recover expenses reasonably incurred as requested by the Employer
161 and 161A	Penalties for causing danger or annoyance	#		Exercise the functions of the Employer by or under this section
162	Penalties for placing rope across the highway	#		Exercise the functions of the Employer by or under this section
163	Prevention of water flowing onto highway	#		Exercise the functions of the Employer by or under this section
164	Power to require removal of barbed wire	#		Exercise the functions of the Employer by or under this section
165	Dangerous land adjoining the highway	#		Exercise the functions of the Employer by or under this section
166	Forecourt abutting highway	#		Exercise the functions of the Employer by or under this section
167	Powers relating to retaining walls	#		Exercise the functions of the Employer by or under this section
168	Building operations	#		Exercise the functions of the

	affecting public safety			Employer by or under this section
169	Control of scaffolding on the highway	#		Assist the Employer as requested by the Employer, particularly in respect of undertaking structural safety inspections. Advise employer of any dangerous scaffolds or other structures
170	Control of mixing mortar etc. on the highway	#		Exercise the functions of the Employer by or under this section
171	Control of deposit of building materials and making of excavations in streets	#		Assist the Employer as requested by the Employer, particularly in respect of undertaking structural safety inspections. Advise employer of any dangerous scaffolds or other structures
172	Hoardings to be set up	#		Exercise the functions of the Employer by or under this section
173	Hoardings to be securely erected	#		Exercise the functions of the Employer by or under this section
176	Restriction on construction of bridges over highways	#		Assist the Employer as requested by the Employer, particularly in respect of design checks and preparation of licenses. Advise employer of any dangerous

				scaffolds or other structures
177	Restriction on construction of buildings over the highway	#		Assist the Employer as requested by the employer
178	Prohibition on placing rails, beams etc. over highways without consent of the Highway Authority	#		Exercise the functions conferred on the Employer as Highway Authority by or under this section. Assist Employer to respond to appeals
184	Vehicle crossings over footways and verges	#		Exercise the functions of the Employer by or under this section
185	Power to install etc. refuse or storage bins in streets	#		Exercise the functions of the Employer by or under this section

NB Stopping Up Orders (Section 116 above) can also be promoted under the Town and Country Planning Act under certain circumstances.

Road Traffic Regulation Act 1984
The Council as the Highway Authority, has the power to instigate temporary traffic control measures. These Include:

Temporary Road Closure or Traffic Restriction	Section 14(1)
Temporary Road Closure Special Event	Section 16(a)
Temporary Speed Restriction Order	Section 14(1)

New Roads and Street Works Act 1991
The Authority has a duty under NRSWA 1991 to co-ordinate their own and public utilities' street works. It holds quarterly co-ordination meetings during which information is exchanged with utilities and the timing of major projects is discussed.

J.1.3.3 - Programmed

Regulatory Functions are currently undertaken by:

- Reactive Works

- Routine Works
- As part of other Programmed Works

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