

**HEREFORDSHIRE COUNCIL  
Highway Maintenance Plan  
June 2016**

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## 1 Introduction

Herefordshire Council is the Highway Authority for all highways maintainable at public expense within Herefordshire, with the exception of the Trunk Roads and Motorways. As a Highway Authority the Council has to fulfill a number of statutory duties, many of which are contained in the Highways Act, 1980. In addition, a number of other Acts impose duties and give the Council additional powers relating to the management of highways.

A number of national guidelines exist for the provision of highway maintenance, the Council seeks to work in accordance with the latest guidance and that has been utilised in the development of this plan. In particular this plan also anticipates some of the expected changes to 'Well Maintained Highways', the code of practice for maintenance management that are to be published in 2016. It is anticipated that 'Well-managed Highway Infrastructure' will be a revision of and replacement for Well-maintained Highways, Well-lit Highways and Management of Highway Structures. The various recommendations contained in the latest draft of Well-managed Highway Infrastructure known to the Council are referenced in this plan, and where the Council has chosen to adopt elements of policy, standards or practices that differ from those recommendations, the rationale for those differences is detailed in this plan, including where the Council has chosen to continue to work to the 2005 code 'Well Maintained Highways'. For the avoidance of doubt, wherever this Highway Maintenance Plan differs from either code, then this plan shall be taken as the Council's approach to highway maintenance.

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#### RECOMMENDATION – USE OF THE CODE

This Code, in conjunction with the UKRLG Highway Infrastructure Asset Management Guidance, should be used as the starting point against which to develop, review and formally approve highway infrastructure maintenance policy and to identify and formally approve the nature and extent of any variations.

The Codes of practice are founded upon the principles of best value and emphasise the use of an asset management approach to highway maintenance. The intention of the incoming code 'Well-managed Highway Infrastructure' is that Authorities will develop their own levels of service through a local, risk-based, approach. This Highway Maintenance Plan does just that and has been developed in conjunction with Herefordshire's Local Transport Plan (LTP) and in particular the asset management policy and strategy that is detailed in that plan.

This Highway Maintenance Plan sits alongside the Highway Asset Management Plan, which details the mechanisms that will be deployed as we work towards attaining the Council's objectives as expressed in its LTP. This will be through planned performance against the life cycle plans for all major components of the highway asset. These are:

- Carriageways
- Structures
- Drainage
- Footways and Cycleways
- Street Lighting and Traffic Signals

Changing from a reliance on specific standards in all areas to an entirely local, risk-based, approach is likely to take time. This plan sets out this risk based approach, which will be embedded in every-day decision making. During the development of this plan this approach, along with the referenced guidance material, has been used to set standards for undertaking inspections and maintenance. However for certain standards, where noted, it is intended that these standards are to evolve as the maintenance service environment changes and further understanding of risks arises. For example inspection intervals may increase for problem areas or decrease following maintenance schemes to address underlying issues. This evolution of service will be undertaken in a comprehensive and considered manner, as laid out in this plan, and be subject to ongoing annual review approval through the Council's governance processes and, agreed via the Annual Planning process.

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**RECOMMENDATION – FINANCIAL PLANS**

Financial plans should be prepared for all highway maintenance activities covering short, medium and long term time horizons.

Highway works and services are to be developed, delivered and measured through a Forward Programme and each year's Annual Plan these plans will both inform and be prepared in line with the Council's medium term financial strategy with the aim of delivering its long term objectives as described through the LTP.

This Highway Maintenance Plan (HMP) sets out the minimum performance that is required by the Council for it to continue to meet the duty to maintain the highway (Section 41, Highways Act 1980) and where there is a breach of the absolute duty to maintain to enable the Council to make use of the defence available to it under section 58 of Highway Act 1980 through a reasonable system of inspection and repair (Section 58 of the Highways Act 1980), whilst delivering on the wider objectives across all assets, as expressed through the LTP, TAMP and other related policies and plans.

## **2 Overview and Purpose**

The core purpose of this plan is to set out the reasonable system of inspection and repair that will be deployed by the Council to ensure that it meets its duty to maintain all publically maintainable highways for which the Council is the highway authority.

This Highway Maintenance Plan builds upon the 2007 plan, it and the risk based approach established by the 2007 plan, establishing a method of maintenance that uses the assessment of the risk, that any defect in the condition of the highway poses to the current and future usage of the highway by the public, as the core decision making tool. The objective is to guide and prioritise maintenance according to the risk posed to the highway user now and over time through the long term integrity of the highway structure.

This plan is structured so that there is a core document (this element) sets the overarching principles for the whole plan and applies to the entire service. Standards, policies and, where appropriate, processes for discrete areas are appended to the plan.

The policies and procedures appended to the plan have been written to:

- a) Be flexible to allow the service to adapt to a changing a regulatory, environmental and economic climate;
- b) Be simple to implement effectively;
- c) Enable measurement of service performance; and,
- d) Incorporate best practice.

## **2.1 Scope**

The HMP describes the policies and standards, and where appropriate the processes, that will be utilised to deliver the Council's duty to maintain.

The highway network is by far the single most valuable asset in the control of the Council, with an estimated replacement value of £5.5 billion (2015). The extent, and hence value of this asset, is expanding constantly through new development and improvements to the existing infrastructure.

Herefordshire has in excess of 3,200km of publicly maintained highways, 724 bridges and approximately 14,000 street lights, illuminated bollards and signs. The Council also maintains some 3,380 km of public rights of way. The extent of the highway asset will vary over time as a result of development, improvements and stopping up processes.

Highway maintenance is a wide ranging function that covers the following general activities:

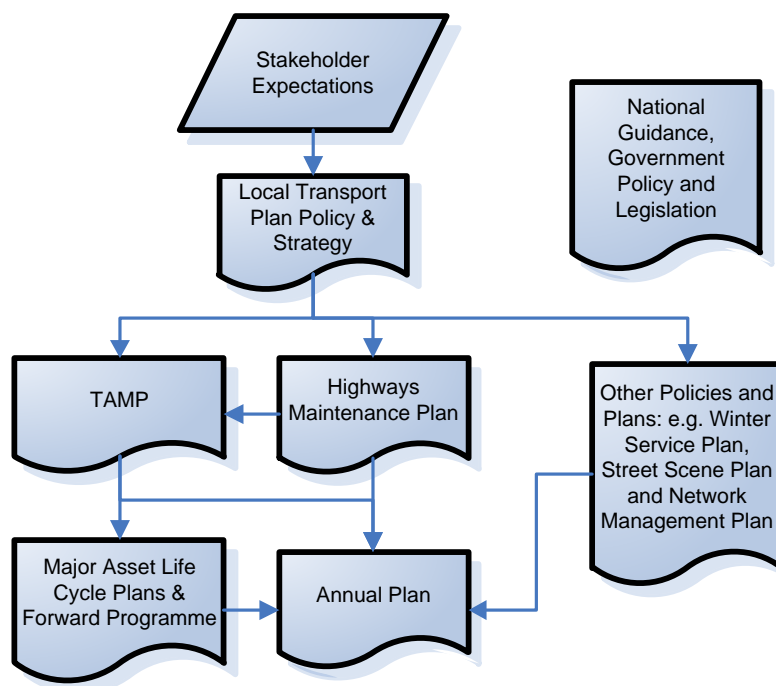
- Reactive maintenance – addressing defects and deficiencies that are causing a significant, and immediate or imminent, hazard to highway users.
- Routine maintenance – undertaking consistent and/or cyclical functions to preserve assets in a safe and serviceable condition, wherever possible avoiding the need for reactive maintenance by enhancing the value or life of the asset as part of a whole system of works.
- Programmed maintenance – planned interventions (usually on a more significant scale) that

are designed through our asset management processes as works that will enhance the value or life of the highway asset.

- Regulatory functions – requiring or enabling others to undertake works or other activities in, on or around the highway in accord with the Council’s authority.
- Winter Service – precautionary salting and the clearance of snow and ice.
- Weather and Other emergencies – providing a planned emergency response to events that cause a significant hazard to highway users or threaten the integrity of the highway.

## 2.2 Link to other Key Documents

Herefordshire Council’s policies relating to the highway asset are detailed in the Local Transport Plan. The HMP details the minimum levels of service that arise from the Council’s duty to maintain the highway when considered in the context of these wider policy objectives, as well as provide more detailed operational policy for specific areas of service. The Transport Asset Management Plan (TAMP) details the methodology that will be used to achieve the LTP policy objectives. The Forward Programme and a series of Annual Plans will detail the specific activities that will be undertaken over time and then in each year and the resources assigned to achieve our objectives. Figure 1 illustrates how these documents relate to one another.



**Figure 1: Relationship of Strategic Highway Documents**

**RECOMMENDATION – AN INTEGRATED NETWORK**

The highway network should be considered as an integrated set of assets when developing highway infrastructure maintenance policies.

This plan, and the risk based approach it details, enables the wide variety of highway assets to be managed as an integrated set. It details an approach to assessing and undertaking maintenance that is used across all assets.

### **3 Asset Management**

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**RECOMMENDATION – ASSET MANAGEMENT FRAMEWORK:**

An Asset Management Framework should be developed and endorsed by senior decision makers. All activities outlined in the Framework should be documented. (HIAMG Recommendation 1)

**RECOMMENDATION – ASSET MANAGEMENT POLICY AND STRATEGY**

An asset management policy and a strategy should be developed and published. These should align with the corporate vision and demonstrate the contribution asset management makes towards achieving this vision. (HIAMG Recommendation 3)

The Local Transport Plan sets the Council's Asset Management Policy and Strategy. The following definition provides a useful explanation of asset management:

*“Asset management is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers.”- ADEPT's 2004 Framework for Highway Asset Management.*

Through our Highway Asset Management Planning we will develop specific lifecycle plans for major assets that detail how we will collect information about condition and then utilise, where budgets allow, a system of planned interventions designed to preserve, maintain and enhance our highway assets. This will take account of the following factors:

- Minimising whole-life cost and maximizing cost/benefit
- Risk based approach
- Network priorities and policies set out in the Local Transport Plan and this Highways Maintenance Plan.
- Agreed levels of service

Where funds are unavailable to deliver all planned interventions across all highway assets we will use the standards and risk based approach outlined in this plan to deliver, as a minimum maintenance activities with the intention of keeping the highway safe for all reasonable use. To

ensure that we do meet our duty towards the maintenance of the highway across its full extent it is essential that we direct resources towards the highest priorities and deploy the most effective ways to address these. This plan seeks to address this issue through a risk based approach.

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**RECOMMENDATION – ENGAGING AND COMMUNICATING WITH STAKEHOLDERS**

Relevant information associated with asset management should be actively communicated through engagement with relevant stakeholders in setting requirements, making decisions and reporting performance. (HIAMG Recommendation 2)

As described in the LTP, the efficient operating model introduced as part of the Public Realm Services Contract has seen the introduction of Locality Stewards into nine locality areas across Herefordshire. These Locality Stewards undertake highway inspection and are working as part of the community to manage the delivery of the public realm services locally.

Through this way of working we ensure that the delivery of our investment programmes is informed by the intelligence gained through working alongside the community within localities. Additionally, we also ensure that the work undertaken at a local level complements the activity delivered through our countywide programme of maintenance and improvement works.

#### **4 Risk Based Approach**

This HMP details our risk based approach (RBA) to highway maintenance activities, which is in line with latest industry practices outlined in Well-managed Highway Infrastructure.

The purpose of RBA is through the consistent application of a decision making process to:

1. Correctly evaluate the risk posed to highway users by all defects or deficiencies in the highway asset;
2. Prioritise resources so that the risk is managed effectively;
3. Ensure the efficient use of available resources;
4. Understand performance and address any gaps in resources or performance;
5. Ensure value for money; and,
6. Enable monitoring of outcomes.

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**RECOMMENDATION – RISK BASED APPROACH**

A risk based approach should be adopted for all aspects of highway infrastructure maintenance, including setting levels of service, inspections, responses, resilience, priorities and programmes.

The principle of RBA is to assess the likelihood of injury or damage as a result of any defectiveness and the consequences of that event should it occur. Decisions will be informed by data and knowledge derived from the analysis of previous maintenance activities, such as highway safety inspections.

The consequences of defects in the highway can include:

1. Damage or injury to highway users, their property and the resultant claims for damages;
2. Safety hazards resulting in risk to the community;
3. Disruption to traffic;
4. Accessibility being compromised;
5. The devaluing of place;
6. Dissatisfaction; and,
7. Economic disruption to businesses.

Prescriptive intervention levels for defects are not used in this plan. They can be wasteful of resources with defects that present a low risk often being measured and then repaired ahead of smaller defects that by virtue of their location, may cause a greater hazard. A risk based approach utilises the expertise of the inspector to correctly and consistently evaluate defects in accordance with the guidance established in this plan. Expertise and consistency of inspectors is ensured by training to industry recognised standards and regular comparative inspections, as detailed in section 8.4.

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**RECOMMENDATION – CONSISTENCY WITH OTHER AUTHORITIES**

To ensure that users' reasonable expectations for consistency are taken into account, the approach of other local and strategic highway and transport authorities, especially those with integrated or adjoining networks, should be considered when developing highway infrastructure maintenance policies.

The Council is a founding member of the Midlands Service Improvement Group (MSIG). MSIG is a collective of Midlands and North West County, City and Unitary Councils sharing best practice to drive improvements and efficiencies within the Highways and Road Safety Disciplines of Local Authorities. In particular, the MSIG Highway Maintenance and Asset Management Task Group has worked to develop a set of High Level Principles for the Risk Based Approach to Safety Inspections and Defect Response times. The Council has considered that work in the development of this Highway Maintenance Plan and will consider any change in accord with those principles as we evolve the service. This with a view to ensuring that highway users experience an appropriately consistent approach to highway safety inspection and maintenance.

MSIG has also been at the forefront of the development of asset management in the UK highway sector and this work has been considered and appropriately incorporated into the Council's approach to asset management as described in the TAMP.

## 5 Sustainable Highway Maintenance

Sustainability is a key part of the Council's vision. The delivery of highway maintenance is undertaken in accordance with good environmental management procedures so as to minimise environmental impact and sustain Herefordshire's biodiversity and character.

In the selection of materials, and treatment, their environmental impact is considered. We aim to maximise the environmental contribution and sustain the County's biodiversity, character and heritage by the adoption of good environmental management procedures in highway maintenance works.

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#### RECOMMENDATION - CARBON

The impact of highway infrastructure maintenance activities in terms of whole life carbon costs should be taken into account when determining appropriate interventions, materials and treatments.

As a member of the West Midlands Highway Alliance the Council has signed up to a low carbon concordat (September 2013). Through that concordat the Council is committed to the delivery of at least 20% of its surfacing works using low carbon materials such as low warmed foamed asphalt. We intend to go further to minimize our carbon footprint and these low carbon materials have been adopted as the material of choice for all our resurfacing activities. This unless there is a valid technical reason why they cannot achieve the required performance in any particular circumstance, or it is impracticable to use such products.

Whilst most works are undertaken in accordance with approved works specifications, it is recognised that this should not limit our Council's ability to promote Environmental Sustainability. We take advantage of locally sourced, and recycled materials, as well as environmentally friendly methods to promote value and innovation, and to drive continuous improvement. In each case departures from the approved standards will only take place following an assessment of risk, and with approval of the Asset Manager and Council Officers. In any event if, for reasons of necessity and/or valid engineering reasoning, different materials and treatments are adopted, then a procedure note is submitted to the Head of Service.

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**RECOMMENDATION – CONSISTENCY WITH CHARACTER**

Determination of materials, products and treatments for the highway network should take into account the character of the area.

As such this Highway Maintenance Plan focuses, as part of a whole system of works described by this plan, the LTP and TAMP, on a methodology and means of maintaining the network to meet the challenges of safety, serviceability and sustainability, in order to provide best value for the Council and local community, by taking into account:

Table 1: Maintenance Considerations

Safety	Serviceability	Network Sustainability
Complying with statutory obligations	Ensuring availability	Minimising cost over time
Meeting users' needs for safety	Achieving integrity	Maximising value to the community
	Maintaining reliability Maintaining or enhancing condition	Maximising environmental contribution
The character of the area		
The current and desired future usage of the area		

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**RECOMMENDATION – ENVIRONMENTAL IMPACT NATURE CONSERVATION AND BIODIVERSITY**

Materials products and treatments for highway infrastructure maintenance should be appraised for environmental impact and for wider issues of sustainability. Highway verges trees and landscaped areas should be managed with regard to their nature conservation value and biodiversity principles.

Herefordshire Council have a duty to 'Enhance & Conserve' Biodiversity (under the Biodiversity Duty (Section 40) under the Natural Environment and Rural Communities (NERC) Act 2006)

The Natural Environment and Rural Communities Act came into force in England and Wales on the 1st October 2006. Section 40 of the Act states that:

*"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity".*

The duty affects over 900 public bodies including Local Authorities. Guidance on how this might be implemented by Public Bodies and Local Authorities was published on the 22nd of May 2007.

In 2009 Defra reviewed progress with implementation of the duty. The Guidance states that “In demonstrating that it has implemented its Duty a public authority is likely to be able to show that it has:

1. Identified and taken opportunities to integrate biodiversity;
2. Considerations into relevant service areas and functions, and ensured that biodiversity is protected and enhanced in line with current statutory obligations;
3. Raised awareness of staff and managers with regard to biodiversity issues;
4. Demonstrated a commitment and contribution to Biodiversity Action Plans, where appropriate;
5. Demonstrated progress against key biodiversity indicators and targets.”

In 2008, Herefordshire Council signed the West Midlands Biodiversity Partnership Pledge, showing acknowledgement of biodiversity and expressing the Councils commitment to biodiversity conservation.

The service will develop its Herefordshire Biodiversity Action Plan (HBAP) to cover Herefordshire's Council-owned highway, public open spaces and public rights of way soft estate. The HBAP will set out a number of improvement actions and practicable developments to working practices for the purpose of the conservation and enhancement of biodiversity, and is in part a response to the NERC Act. This plan has been produced as an expansion of the original 2010 Highways Biodiversity Action Plan (HBAP) and its next iteration in 2012.

There is a diversity of habitats within and associated with the county highway network. The habitats are usually small, linear and narrow in extent but within and next to larger route layouts there are some more extensive areas. Highway habitats consist mainly of various types of grassland but woodland and scrub is also common. Routes can also pass through, over or next to other habitats such as wetlands, rivers and estuaries. Features associated with highways can be important for biodiversity, e.g. boundary trees, rocky cuttings, bridges, ditches and balancing ponds.

As with churchyards highway land can sometimes support remnants of ancient habitats and features, e.g. old meadows on verges and species-rich hedgerows along green lanes. They are often refuges for wildlife and can act as corridors that connect wildlife and habitats across the county. Highway land is particularly valuable if it is adjacent to international, national and local sites designated for their nature conservation importance.

The biodiversity value of the highway land holding is poorly known but an indication of the most likely species and habitats that it supports can be attempted. The key source of information is the

Herefordshire LBAP. DEFRA have produced a 'List of habitats and species of principal importance for the conservation of biological diversity in England' which should also be taken into account. This list is required by Section 74 of the Countryside & Rights of Way Act 2000 (now S41 of NERC Act 2006) and the UK BAP has action plans concerning the habitats and species involved.

Highways works can have adverse effects on biodiversity but with care most of these can be avoided. By managing our working practices we can actually enhance biodiversity. Threats to biodiversity connected with highway works can include:

- Lack of management leading to the deterioration and loss of open habitats. Absence of mowing can lead to the dominance of coarse grasses and eventual colonisation by scrub. To maintain the value of the extended area of highway land beyond the normal cut swathe it may be desirable in certain situations to carry out a full width cut, e.g. to control scrub on grassland sites.
- Intensive management leading to the detriment of species and habitats, e.g. frequent mowing can prevent plants from flowering and reduces the value of verges for many invertebrates.
- Failure to identify significant constraints such as protected species and SSSIs.
- Physical damage caused by the movement and storage of vehicles, plant and materials.
- Inappropriate restoration and reseedling of damaged or disturbed areas.
- Inappropriate tree planting, e.g. on flower-rich grassland verges
- Use of insensitive management techniques, e.g. flailing of hedgerows and severe pollarding and root pruning of urban trees.
- Poor timing of works leading to harm to species, e.g. scrub removal during bird nesting period and mowing grassland before rare flowers set seed.
- Unnecessary salt contamination and other pollution incidents.
- Lack of control of invasive weeds and non-native plants.
- Use of kerbing and badly designed drainage openings can sometimes trap and kill significant numbers of small mammals, reptiles and amphibians in certain locations.
- Roadway repairs due to undermining by animal works. Care must be taken not to harm animals in spite of damage done by them to the network, and all repairs should consider a mutually beneficial solution for human and animal use of land.

It is hugely important that we manage the risks posed by these works in order to not only reduce our negative impact on highways biodiversity, but to conserve and enhance these areas. Animal road casualties also represent a significant threat to biodiversity and it is important that we manage our network in such a way that we can reduce this risk. National statistics suggest that 47,000 badgers (25% of the population) and between thirty and seventy million birds are killed annually on the UK roads for example (English Nature. 1996). Animals on highways can also contribute to the causes of road traffic accidents and as such, managing this can be mutually beneficial.

## 6 Maintenance Inventory and Hierarchy

6.1 The essential elements of an effective highway maintenance strategy are:

- A relevant inventory
- A defined maintenance hierarchy
- Clear policies, objectives and standards for maintenance

### 6.2 Inventories

The Highways Act 1980 requires highway authorities to maintain a register of roads maintainable at public expense. There is a further requirement under the New Roads and Street Works Act 1991 to maintain information for the purpose of:

- Identifying streets, described as 'traffic sensitive', where works must be avoided at certain times of day;
- Identifying structures under or over the street which need special consideration when work is planned; and,
- Identifying reinstatement categories used by Statutory Undertakers in their reinstatement of roads and footpaths.

This information is maintained and updated on a regular basis to take into account new developments, changes or amendments to the network and is managed within the framework of the National Street Gazetteer (NSG) in a format that the Statutory Undertakers can access electronically.

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##### RECOMMENDATION – INFORMATION MANAGEMENT

Information to support a risk based approach to highway maintenance should be collected, managed and made available in ways that are sustainable, meet any statutory obligations, and, where appropriate, facilitate transparency for network users.

Detailed inventories of the various components of the highway asset, including street lighting and structural assets, are similarly maintained in electronic formats within Highway Management Systems. These systems also are used to collect and store defect information such as the occurrence, type and response times. This enables performance monitoring and reporting to key decision makers and network users. In addition, this data informs the risk based approach set out in this plan.

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**RECOMMENDATION – NETWORK INVENTORY**

A detailed inventory or register of all highway assets, together with information on their scale, nature and use, should be maintained. The nature and extent of inventory collected should be fit for purpose and meet business needs.

The Network Inventory register is part of the TAMP, this document includes this and details how we ensure it is correct and fit for purpose.

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**RECOMMENDATION - ASSET DATA MANAGEMENT**

The quality, currency, appropriateness and completeness of all data supporting asset management should be regularly reviewed. An asset register should be maintained that stores, manages and reports all relevant asset data. (HIAMG Recommendation 5).

Our approach to Data Management is detailed in the TAMP and supported by an Asset Data Quality Plan.

### **6.3 Network Hierarchies**

The network maintenance hierarchy is the foundation of the system of routine safety inspection.

The maintenance hierarchy adopted by the Council reflects the needs, priorities, strategic importance and actual use of each road in the network. The dynamic nature of the network is taken into account as this hierarchy is regularly reviewed, as detailed below, to reflect changes in street characteristics and use.

The network maintenance hierarchy currently serves to inform the frequency and method of safety inspection and is also used as a weighting factor to inform the response times for routine or reactive maintenance alongside the overarching network hierarchy that is established in the LTP as part of the asset management policy.

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**RECOMMENDATION - NETWORK HIERARCHY**

A network hierarchy, or a series of related hierarchies, should be defined which include all elements of the highway network, including carriageways, footways, cycle routes, structures, lighting and rights of way. The hierarchy should take into account current and expected use, resilience, and local economic and social factors such as industry, schools, hospitals and similar.

**RECOMMENDATION - INTEGRITY OF FACILITIES FOR ACTIVE TRAVEL**

Network hierarchy should take into account the desirability of continuity and of a consistent approach for walking and cycling.

The Council has adopted the hierarchy from Well Maintained Highways, with the exception of adding a new category for “Rural Lanes”. Rural lanes are usually unmetalled roads, seldom used and offering occasional access. The inclusion of this new category reflects the undeniably rural nature of Herefordshire and as a consequence its evolved highway network. This hierarchy is included in Appendix 1.

The Council believes that the highway asset should provide a network that facilitates the efficient and safe movement of people and goods whilst protecting the quality of life within communities

The LTP sets out our policy objectives in regard to all our public places, which should be safe and enjoyable for all to use responsibly. It is understood that our highway infrastructure is vital to a functioning county should be resilient to the impact of weather and climate and available for all to use, whether they choose to travel by car or through more sustainable modes, such as walking or cycling. This plan describes a system of maintenance that is designed to keep, so far as is reasonably practicable, our highway’s asset safe for use by all transport modes.

## **7 Assets Maintenance Standards**

For the major asset groups, the Council will utilise the asset management approach, as detailed in the Transport Asset Management Plan, in conjunction with the risk based approach, outlined above, to target its maintenance resources. Programmed maintenance will be directed towards timely proactive treatments in accordance with the asset management policy and strategy established in the LTP. This approach will presents better value for money, minimises disruption to the travelling public, and is the most effective means of maintaining the overall condition of the asset throughout its lifecycle. This is achieved by identifying assets that are approaching condition thresholds so that cost effective interventions can be made and targeted condition levels can be achieved where possible. Timely intervention has proved effective at halting the overall deterioration of the network and reducing the demand for reactive maintenance in response to defects that present an immediate hazard to highway users, ‘prevention is better than cure’.

Programmes of capital maintenance are maintained on an on-going basis, as part of a Forward Programme with confirmed work for the coming year prioritised, procured, commissioned and delivered as part of each year’s Annual Plan. .

Routine and reactive maintenance is managed throughout each year utilising the resources identified in each year’s Annual Plan. As a minimum the levels of service in regard to the timescale for response and the quality of repair will be as described in this Highway Maintenance Plan.

## 8 Safety Inspection, Assessment and Recording

This Highway Maintenance Plan describes the regime of safety inspections that the Council will deploy. Associated processes and procedures for condition inspection, assessment and recording for major assets is described in the TAMP.

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### RECOMMENDATION – CONDITION SURVEYS

An asset condition survey regime, based on asset management needs and any statutory reporting requirements, should be developed and implemented.

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community. The Highways Act 1980 Section 41 requires the Council to maintain the highways for which they are responsible. Section 58 of the act provides a statutory defence to a claim made for breach of the Section 41 duty to maintain. This document provides a framework for Herefordshire to use in that defence.

Herefordshire's safety inspection regime forms a key part of the Council's strategy for managing liabilities and risk. It comprises the following elements:

- frequency (and mode) of inspections
- items for inspection
- degree of deficiency
- nature of response

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### RECOMMENDATION – INSPECTIONS

A risk-based inspection regime, including regular safety inspections, should be developed and implemented for all highway assets.

The frequency of safety inspections for individual network sections is provided in Table 2 below. In accordance with the 2005 Code these are based upon a risk based consideration of:

- Category within the network maintenance hierarchy
- Traffic use, characteristics and trends
- Incident and inspection history
- Characteristics of adjoining network elements
- Wider policy or operational considerations.
- Complaints about condition

- Claims received
- Condition assessments (UKPMS)
- Traffic flows and changes in use
- Defect interventions recorded

**Table 2: Safety Inspections – Categories, Frequencies and Mode**

Feature	Category	Frequency	Method
Roads	Strategic Route	1 month	Driven
	Main Distributor	1 month	Driven
	Secondary Distributor	1 month	Driven
	Link Road	3 months	Driven
	Local Access	1 year	Driven
	Rural Access Lanes	1 year	Driven or Walked
Footways	Prestige Area	1 month	Walked
	Primary Walking Route	1 month	Walked
	Secondary Walking Route	Typically 1 year, but variable following risk based review	Driven or Walked
	Link Footway		Walked
	Local Access Footway		Driven or Walked
Cycleways	Part of carriageway	As for roads	Driven or Cycled
	Remote from carriageway	Typically 1 year, but variable following risk based review	Cycled or Walked
	Cycle Trails		Cycled or Walked
PROW	Recreation Routes	3 years	Cycled or Walked
	All other routes: Metalled	All other surfaced PROWs to be inspected at the same frequency as the footway adjoining them.	Cycled or Walked
	Un-Metalled	Reactively based on enquiries that have been risk assessed. Any visit by an Inspector for whatever reason will generate a recorded safety inspection.	Cycled or Walked

While every effort will be made to achieve the frequency of inspection, the times are subject to the following tolerances:

**Table 3: Safety Inspections – Frequency Tolerance**

Inspection Frequency	Tolerance
----------------------	-----------

1 month	+/- 7 Days
3 month	+/- 14 Days
Annual	+/- 28 Days

### Risk Based Inspection Frequency

Where complaints have been received regularly and/or reactive works have been carried out regularly, safety inspections frequency may be shortened, (or introduced where no minimum is listed above). Similarly, surfacing schemes may trigger a review of the inspection frequency for a certain area due to the reduction in risk. Frequency changes will be determined via risk assessment that takes account of the above noted considerations and will be reviewed and recorded (with the reason for doing so) annually as part of the Annual Plan.

When resources are available, extra ad hoc inspections will be carried out on areas of increased deterioration, regularly obstructed areas and other roads.

### Mode

Table 2 shows that the majority of safety inspections are driven. Risk assessments dictate whether safety inspections are walked, driven or cycled. This assessment takes account of:

- Current condition
- Expected rate of deterioration
- Third party claims
- Inspector Safety

For driven safety inspections, a passenger undertakes the main role of identifying defects and updating records. Lone inspectors can undertake walked and cycled inspections.

All pedal cycle ridden inspections will be conducted at a speed equating to a fast walking pace i.e. up to 5 mph. All driven inspections will be conducted at a speed not exceeding 20 mph. The inspector is required to evaluate all visible defects.

## **8.1 Scope of Safety Inspections**

Table 4 describes the defects that inspectors seek to identify during safety inspections.

Table 4: Scope of safety inspection defects/risks

Inventory Item	Scope of defects/risks to be identified
Carriageway	<ul style="list-style-type: none"> <li>• Surface defects                             <ul style="list-style-type: none"> <li>○ Pothole/Spalling</li> <li>○ Crowning</li> <li>○ Depression</li> <li>○ Rutting</li> <li>○ Gap/Crack</li> <li>○ Sunken Ironwork</li> <li>○ Missing/Defective Skid</li> </ul> </li> <li>• Kerbs &amp; Edge defects</li> <li>• Surface skid resistance—visual assessment</li> <li>• Mud, debris, spillage or contamination on running surfaces</li> <li>• Obstructions</li> <li>• Flooding</li> <li>• Markings, Road Studs</li> <li>• Covers, Ironwork,</li> <li>• Highway Trees</li> <li>• Resistant Surfacing In Carriageway</li> </ul>
Footways and Cycleways	<ul style="list-style-type: none"> <li>• Surface defects:                             <ul style="list-style-type: none"> <li>○ Trip hazards or Potholes</li> <li>○ Rocking Slab/Block</li> <li>○ Open Joint</li> <li>○ Tree Root Damage</li> <li>○ Sunken Ironwork</li> <li>○ Defective Coal Plates/Basement Lights, Etc</li> </ul> </li> <li>• “Bubbled” Mastic Asphalt In Footway</li> <li>• Kerbs and edge defects: Dislodged/Missing/Loose/Rocking</li> <li>• Highway weeds causing slippery surfaces or trips</li> <li>• Mud, debris, spillage or contamination on running surfaces</li> <li>• Obstructions</li> <li>• Loss of grout</li> <li>• Covers, Ironwork</li> </ul>
Drainage	<ul style="list-style-type: none"> <li>• Accumulation of water on the carriageway, footway and cycleway</li> </ul>
Embankments and Cuttings	<ul style="list-style-type: none"> <li>• Risk of loose material falling to injure users or damage facility</li> <li>• Slippage causing loss of support to highway</li> </ul>

Landscaped Areas and Trees (incl. hedges)	<ul style="list-style-type: none"> <li>• Obstruction of visibility and signage</li> <li>• Hazardous trees and branches</li> <li>• Leaf fall causing slippery surfaces</li> <li>• Root growth causing surface irregularity</li> <li>• Noxious weeds</li> <li>• Other hazards</li> </ul>
Fences and Barriers	<ul style="list-style-type: none"> <li>• Integrity and location of safety fencing for both vehicles and pedestrians</li> </ul>
Traffic Signs and Bollards	<ul style="list-style-type: none"> <li>• Identification of risk to users</li> <li>• Separation of potential traffic conflicts</li> <li>• Route delineation in darkness and bad weather</li> </ul>
Road Markings and Studs	<ul style="list-style-type: none"> <li>• Route delineation in darkness and bad weather</li> <li>• Potential for damage and injury if loose</li> <li>• Traffic control</li> </ul>
Traffic Signals, Pedestrian and Cycle Crossings	<ul style="list-style-type: none"> <li>• Segregation of potential traffic conflicts</li> <li>• Key safety contributor for vulnerable road users</li> </ul>
Condition of Street Lighting / Illuminated Signs and Bollards	<ul style="list-style-type: none"> <li>• Damaged or defective lighting columns/illuminated signs and bollards</li> </ul>
Standards for Regulatory Functions	<ul style="list-style-type: none"> <li>• Risk to users and adjoining property</li> </ul>
Bridges	<ul style="list-style-type: none"> <li>• Accident and other damage</li> </ul>
PROWs	<ul style="list-style-type: none"> <li>• Hazardous trees and branches</li> <li>• Surface defects</li> <li>• Mud, debris, spillage or contamination on running surfaces</li> <li>• Obstructions</li> <li>• Flooding</li> <li>• Obstruction of visibility and signage</li> <li>• Hazardous trees and branches</li> <li>• Leaf fall causing slippery surfaces</li> <li>• Root growth causing surface irregularity</li> <li>• Noxious weeds</li> </ul>

## 8.2 Defect Investigatory Levels

Authorities must guard against applying fixed measurements without regard to the particular circumstances of each defect. When assessing the risk associated with defects consideration will be given to its location, the volume of traffic, the nature of such traffic, etc., usage by children, elderly and disabled persons, and the extent of visibility at the site. The new code does not set out specific intervention levels and refers to existing legal precedents.

The item of inventory together with the typical types of defect to be observed is detailed above in Table 4. A highways inspector records all defects that that may present a risk to highway users, negligible risk defects are not noted. The risk assessment will then identify the defect category that will be assigned to each defect.

## 8.3 Recording Defects

Guidance on the recording of highway defects is provided below:

To ensure the repair team can quickly identify the precise defect, it is essential that the information provided is simple and easily understood. In order to locate a defect effectively, the repair team requires the following information:

- The location of the defect along the length of the highway.
- The position of the defect across the width of the highway
- The size and type of defect

If possible, a photo of the defect with adjacent features in order to locate it will be taken. Defects shall only be marked with temporary road marking paint where necessary and safe to do so, to enable the repair team to locate them quickly.

*Location along the length:* This information should be clear, precise and easily understood. This will reduce any lost productivity time of the repair team used to locate a specific defect. Ideally a combination of the following information should be recorded:

- Street name / road number
- House number / building name
- Distance and direction from nearest road junction
- Street lighting (S/L) column number

*Location across the width:* This information is essential for assisting the repair team to precisely locate the defect, identified by the inspector.

Examples

- Channel of carriageway
- On verge
- At start of radius.
- Adjacent to
- On pedestrian crossing
- In central reservation
- In slow / fast lane

*Size and Type of Defect:* When describing a defect the inspector must clearly state the nature of the defect and its approximate size, where applicable. This will enable the repair team to collect the correct materials to carry out the repair. Descriptions such as 'Pothole', 'Broken Flags' and 'Damaged Kerbs' do not convey enough information for the repair team to carry out a repair efficiently. It is essential that all the information required to carry out the repair is recorded, by the inspector and passed onto the repair team.

## 8.4 Competence and Standard Setting

### Competence and Training

A vital component of inspections is to ensure that inspectors are able to undertake Inspection and Assessment duties consistently, accurately and within current guidelines and standards. Inspectors will undertake training on a regular basis and we will ensure appropriate refresher courses are provided.

Well-managed Highway Infrastructure

#### RECOMMENDATION – COMPETENCIES AND TRAINING

The appropriate competency required for asset management should be identified, and training should be provided where necessary. (HIAMG Recommendation 10)

All inspectors of highways should be trained to a standard that allows registration on the National register of Highway Inspectors (IHE). The registration should be continuous and any required continuing professional development required is to be carried out. The training will cover:

- Inspector training and accreditation.
- UKPMS training.
- Health and safety training.
- Risk assessment training.
- Annual reviews and assessments etc.

### Standard Setting

It is important that inspectors are inspecting consistently and applying the parameters correctly. This will be achieved by holding bi-annual standard setting workshops where several inspectors separately inspect a section of network and then their results are compared. This will be followed by a further joint inspection to resolve differences. This process will give a measure of the reproducibility of the inspections.

## **8.5 Enforcement**

Any enforcement action that the Council deems to be required will be carried out in accordance with Herefordshire Council Enforcement & Prosecution Policy, which is accessible via the Council's website.

## **9 Categories of Defect**

The Council will utilise a RBA to defect categorisation and repair times to enable cost-effective maintenance that is appropriate to the level of risk presented to all highway users, in the context of the entire highway asset for which the Council is responsible. This approach will, wherever practicable, enable a right-first-time approach to permanent repairs that will reduce the risk to the travelling public in the longer term and also result in a reduction in:

1. The use of resources on repeat safety repairs;
2. The exposure of the workforce to danger;
3. Disruption and overall risk to the highway users; and,
4. Environmental impact.

Defects will continue to utilise the principal categorises described by the 2007 Highway Maintenance Plan. However, this Highway Maintenance Plan introduces revised response times for these categories that have been set following risk analysis, a revised breakdown of priority for Category 2 defects to enable a more tailored response to the risk presented and permanent repairs to be undertaken first time. This is a shift from a reliance on specific standards that are universally applied to the entire network to a risk-based approach.

Defects are allocated one of two categories as follows:

**Category 1** – those defects that require prompt attention because they represent an immediate or imminent hazard or because there is a risk of short term structural deterioration.

**Category 2** defects are those which, following a risk assessment, are deemed not to represent an immediate or imminent hazard or risk of short term structural deterioration. They can be categorised

in terms of high (**Priority A**), medium (**Priority B**) or low (**Priority C**) priority with different times for response.

**Category 2** defects are all those that are not categorised as Category 1 defects.

### 9.1 Risk Assessment

The key to selecting the appropriate action for a defect is the risk assessment process. All defects that reach the investigatory level should be evaluated for their significance and the likelihood of injury or damage to a highway user.

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#### RECOMMENDATION – RISK MANAGEMENT

The management of current and future risks associated with assets should be embedded within the approach to asset management. Strategic, tactical and operational risks should be included as should appropriate mitigation measures. (HIAMG Recommendation 11)

Response times for remedial action on defects will depend on where the defect is located on the network. The response time is linked to the need to prioritise, through the asset management policy and strategy, maintenance towards a Strategic Network. This is as described in the LTP. As such the Network hierarchy, as detailed in the LTP asset management policy statement, will be used to determine the timescale for response.

#### Impact

The impact of a risk occurring is measured on a scale of 1 – 4 (1 lowest, 4 highest) the following table gives guidance:

*Table 5: Impact Ratings*

Impact rating	Score	Description	Possible Indicators
High	4	The Hazard presented by the defect, or due to the short term structural deterioration in the defect, could result in serious injury or a fatality.	<p>Impact will result in serious damage to persons or property.</p> <p>Highway users will instinctively react to avoid the defect and this will place them in peril.</p> <p>The defect could destabilise a vehicle and this will place highway users in peril.</p>
Medium	3	The Hazard presented by the defect, or due to the short term structural deterioration in the defect, could result in injury or serious claim against the Authority.	<p>Impact will result in damage to persons or property, from which they are likely to recover.</p> <p>Highway users will instinctively react to avoid the defect.</p> <p>The defect could destabilise a vehicle.</p>
Low	2	The Hazard presented by the defect, or due to the short term structural deterioration in the defect, could result in minor injury or claim against the Authority. If untreated the defect will contribute to the deterioration in the overall condition of the Highway Asset. The defect is likely to deteriorate further before the next safety inspection.	<p>Most impacts will not result in any injury.</p> <p>Highway users are unlikely to react to avoid the defect and the impact will not interrupt their passage.</p> <p>The defect will be felt and recognised as a defect by most Highway users, and its presence will be a negative influence on their perception of the Highway Asset.</p> <p>If untreated the defect will accelerate the local deterioration of the Highway Asset.</p>
Very Low	1	The Hazard presented by the defect, or due to the short term structural deterioration in the defect, is unlikely to result in injury or claim, but the defect will contribute to the deterioration in the overall condition of the Highway asset. The defect is unlikely to deteriorate further before the next scheduled safety inspection.	<p>The defect will be recognised by Highway Inspectors as requiring attention, but is unlikely to be felt and recognised as a defect by most Highway users.</p> <p>The defect is very unlikely to cause injury.</p>

The vulnerability of all highway users, including cyclists and pedestrians to certain highway defects will be reflected in the risk assessment carried out when deciding the category of the defect. In all other areas the degree of regular use of the network by cyclists, or for example equestrians, will be considered in the risk assessment.

## Probability

The probability of a risk occurring is measured on a scale of 1 – 4

*Table 6 Probability Ratings*

Probability Ratings	Score	Description	Possible Indicators
High	4	More than a 75% chance of occurrence.	<p>Vehicular, cycle and / or pedestrian flows are high.</p> <p>A high percentage of vulnerable users may pass through the site.</p> <p>The location of the defect and the topography of the site will mean that it is difficult to a highway user to recognise and hence avoid the defect.</p> <p>Forward visibility may be compromised.</p>
Noticeable	3	40 – 75% chance of occurrence.	<p>Vehicular, cycle or pedestrian flows may be high, but differing modes are less likely to share the Highway at this location.</p> <p>Responsible Highway users may be able to recognise and take action to mitigate the impact of the defect.</p> <p>Forward visibility is good.</p>
Low	2	10 – 40% chance of occurrence.	<p>Vehicular, cycle or pedestrian flows are moderate or low.</p> <p>Different transport modes are unlikely to share the Highway at this location.</p> <p>The majority of responsible Highway users will be able to recognise and take action to mitigate the impact of the defect.</p>
Negligible	1	Less than 10% chance of occurrence.	<p>Vehicular, cycle or pedestrian flows are very low.</p> <p>The speed differential between users is very likely to be low.</p> <p>The majority of responsible Highway users will be able to avoid the defect.</p>

Risk factor

The risk factor is the product of the impact and the probability and determines the seriousness of the risk. The risk matrix determines the risk factor from the impact and probability assessments.

**Table 7: Risk Assessment matrix Defect Categories and Response Times**

<b>Probability</b> <b>Impact</b>	<b>Very low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Negligible</b>	1	2	3	4
<b>Low</b>	2	4	6	8
<b>Moderate</b>	3	6	9	12
<b>High</b>	4	8	12	16
<b>Category</b>	<b>Cat 2C</b>	<b>Cat 2B</b>	<b>Cat 2A</b>	<b>Cat 1</b>
<b>Response Minimum Time Frame</b>	<b>Consider for Forward Programme</b>	<b>2 months</b>	<b>28 days</b>	<b>A&amp;B Roads &amp; Prestige Footways: by end of the following day</b>  <b>All other locations: 7 days</b>

These timescales commence at the point in time that the Council (or its Service Provider) has knowledge of the defect, has undertaken the risk assessment and as a consequence has categorised the defect. In the event that the Council (or its Service Provider) has knowledge of the defect (for example as a result of a report from a member of the public), but has yet to be able to quantify the risk associated with the defect, the defect shall be progressed as if it is a category 1 defect.

Timescales are designed to enable highway defects to be, wherever practicable, actioned by a permanent repair. This balances the immediate risk posed to highway users with the ongoing risk that will be posed as a consequence of a failed temporary repair. In some situations, it may be necessary to respond to certain defects as an emergency, responding as soon as possible (often within 4 hours).

### Accident report automatic response

Whenever a highway related accident is reported, the Council aims to attend site and identify any associated defects within four hours and then repair in line with the response times set out in this plan. Defects notified by the emergency services will also be considered as requiring an urgent inspection.

The inspection and defect categorisation process is detailed below:

## 9.2 Defect Remedial Actions

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### RECOMMENDATION – DEFECT REPAIR

A risk-based defect repair regime should be developed and implemented for all highway assets.

Risk assessment procedures provide the means of determining the appropriate course of remedial action for defects. This action is summarised in Table 8, below:

***Table 8: Remedial Actions and Response Times***

Defect Category	Remedial Action
1	<p>Where required to protect the public from immediate harm due to the nature of the hazard created by the defect, and it is practicable to do so, risk mitigation will be undertaken at the time of inspection.</p> <p>This 'risk mitigation' action may constitute erection of appropriate warning notices, cones or fencing. The delivery of such 'risk mitigation' action will not constitute a repair unless the ongoing integrity of the action is assured through a documented system of work. With a system of work in place the action shall be considered to be a temporary repair.</p> <p>All Cat 1 defects will be actioned as reactive work within the specified timescales either through either temporary or permanent repair.</p> <p>Cat 1 defects arising in high risk areas (which are defined as all A &amp; B roads and Prestige Footways) will be addressed by the end of the following day. This may be risk mitigation measures, a temporary or permanent fix. Where a permanent repair is not possible within 24hrs, this will be scheduled to occur within the next 7 days.</p> <p>Cat 1 defects on the all other sections of the network will have a permanent 'right first time' fix undertaken within 7 days.</p>

2

All other defects. These are defects which do not represent an immediate or imminent hazard or a risk of short term structural deterioration. They may represent a safety concern, but this will be of a lesser significance than Category 1 defects. They will be considered under three sub-categories which will determine how they are treated:

**Priority A.** These are defects that may either represent a greater safety hazard or are likely to deteriorate further and become the equivalent to a Category 1 defect before the next scheduled inspection. Remedial works will be prioritised and scheduled as part of a short term programmes of repair works within 2 months, this will enable permanent repairs to be carried out. If the repair is to be actioned as part of a programmed maintenance scheme that will not take place within 2 months of the defect being identified, the defect will be kept in a safe condition through a temporary repair that is designed to last until the programmed maintenance scheme is undertaken. Whenever such temporary repairs to Category 2A defects are required, they will be actioned within 2 months of the defect having been identified.

**Priority B.** These are defects which either represent a more minor safety hazard or may deteriorate further before the next scheduled inspection, but are unlikely to become the equivalent of a Category 1 defect by the next scheduled inspection. Cat 2B defects will be dealt with within 3 months. Priority B defects will be prioritised and scheduled for permanent repair either as part routine maintenance work or as part of a programmed maintenance scheme. If the repair is to be actioned as part of a programmed maintenance scheme that will not take place within 3 months of the defect being identified, the defect will be kept in a safe condition through a temporary repair that is designed to last until the programmed maintenance scheme is undertaken.

**Priority C.** These defects, which do not represent a safety concern and are unlikely to deteriorate further before the next scheduled inspection. Where appropriate, they are noted for the next safety inspection and considered for repair as part of planned maintenance works in the Forward Programme.

## 10 Maintenance Delivery

The delivery of all highway maintenance activity for the Council is managed through the Herefordshire Public Realm Contract, with our service delivery partners, Balfour Beatty Living Places. The works and services required to deliver the standards set out in this document are detailed in each year's Annual Plan. The Annual Plan will confirm any specific levels of services over and above the minimum levels required by this highway maintenance plan. Each year's Annual Plan will also identify the resources that have been assigned to deliver the requirements of this highway maintenance plan.

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RECOMMENDATION – MANAGEMENT SYSTEMS AND CLAIMS

Records should be kept of all activities, particularly safety and other inspections, including the time and nature of any response, and procedures established to ensure efficient management of claims whilst protecting the authority from unjustified or fraudulent claims.

Maintenance activities and correspondence regarding enquiries are recorded in the enterprise asset management systems that the Council utilises. These records are utilised for performance monitoring and in the defense against claims. The established procedures for dealing with claims are also established with the Council's maintenance service provider. Review And Performance Monitoring

Review

This policy will be subject to periodic review. The frequency of review may vary and the decision to do so will be risk based and will be documented with in the Annual Plan, the following items may trigger a review:

- the level of achievement of desired and measurable outcomes;
- changes in legislation; or,
- changes in available resource.

Performance monitoring

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RECOMMENDATION – PERFORMANCE MANAGEMENT FRAMEWORK

A performance management framework should be developed that is clear and accessible to stakeholders as appropriate and supports the asset management strategy. (HIAMG Recommendation 4)

RECOMMENDATION – PERFORMANCE MONITORING

The performance of the Asset Management Framework should be monitored and reported. It should be reviewed regularly by senior decision makers and when appropriate, improvement actions should be taken. (HIAMG Recommendation 13)

The aims and objectives of the County's highway maintenance service is set out in the LTP. The performance management framework utilised to ensure the highway maintenance service achieves these objectives is set out in the TAMP. The specific performance indicators and targets are set annually in the Annual Plan. Performance is reviewed on a monthly basis.

The outcomes from this maintenance plan will be monitored for quality and delivery by routine sampling of output. A poor monitoring score will result in further sampling and corrective action.

The following list is not fixed but indicates the type of KPI's that will be utilised:

1. Repudiated claims. The proportion of claims received that are not settled and/or defended

successfully (Target 100%)

2. Response times to claims enquiries. The number of claims received from the insurance section that are responded to in the time allowed. (Target 100%)
3. Inspections carried out on schedule. The number of inspections carried out within the frequency set out in this policy. (Target 100%)
4. Contractor repair times. The number of repairs carried out by the repair contractor within the time specified in the order. (Target 100%)
5. Contractor repair times. The number of category 2 repairs carried out by the repair contractor within 6 weeks. (Target 50%)
6. Contractor repair quality. The number of repairs carried out by the repair contractor compliant with SROH. (Target 100%)

## APPENDIX 1 – Network Hierarchies

Table A1-1: Highway Hierarchy

Hierarchy	Maintenance Hierarchy Description	Type of Road General Description	Detailed Description	Asset Management Network Hierarchy as described in LTP
1	<b>Motorway and Trunk Roads</b>	M50 , A49T and A40T	Maintained by Highways England and outside of the jurisdiction of Herefordshire Council.	
2	<b>Strategic Network</b>	The principal roads required for the economic and community continuity.	A network developed in line with the recommendations of the <i>2012 Transport Resilience Review</i> . The network comprises of Strategic Links between main population centres and emergency sites. The majority of 'A' roads are included, as well a number of highly used 'B' roads, accesses to principal economic areas as well as roads in principal retail areas.	The Strategic Network (including the Resilience Network).  As defined by Policy LTP AM13 The Resilience Network as Part of a Strategic Network.
3a	<b>Main Distributor</b>	Major Urban Network and Inter-Primary Links. Short - medium distance traffic (A and B Class).	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.	The General Network.  The Majority of the network that is not included in the Strategic Network.
3b	<b>Secondary Distributor</b>	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 30mph 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	<b>Link Road</b>	Roads linking between the Main and	In rural areas these roads link the smaller villages to the distributor roads. They	

		Secondary Distributor Network with frontage access and frequent junctions.	are capable of varying width and not always capable of carrying two-way traffic. In urban areas they are residential or industrial interconnecting roads with 30mph speed limits, random pedestrian movements and uncontrolled parking.	
<b>4b</b>	<b>Local Access Road</b>	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 unsuitable for HGV. In urban areas they are often residential loop roads or cul de sac.	
<b>5</b>	<b>Rural Access Lanes</b>	Partially unmetalled roads serving occasional rural properties and providing access to the countryside carrying only access traffic. This includes metalled Byways Open to All Traffic		<p>The Low Priority Network.</p> <p>In order to ensure that our objectives can be afforded, it will be necessary to reduce the levels of service that will be delivered to an identified component of the network.</p>

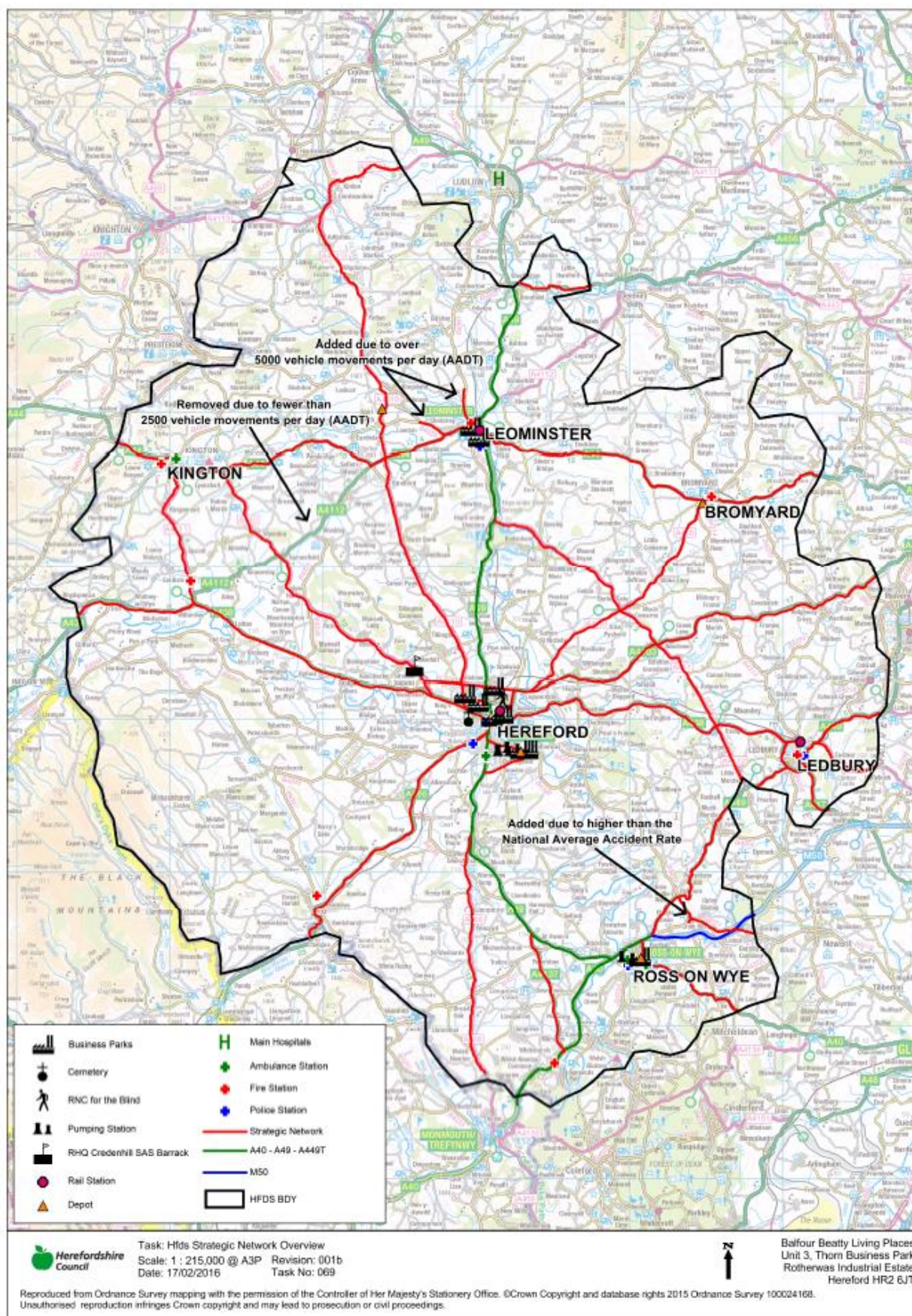


Figure A1-1: Strategic Network – County View

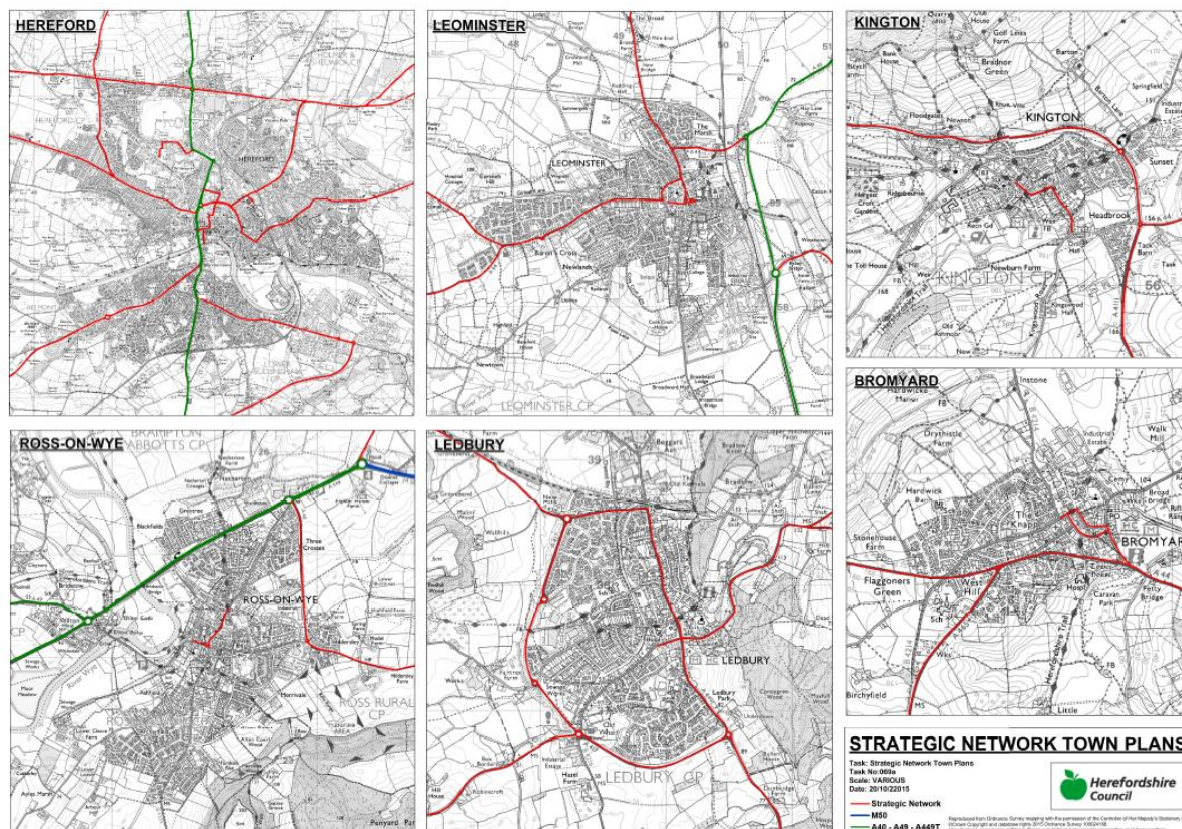


Figure A1-2: Strategic Network – Town/City View

Table A1-2: Footway Hierarchy

Category	Category Name	Brief Description	Asset Management Network Hierarchy as described in LTP
1a	Prestige Walking Zone	Prestige Areas in towns and cities with exceptionally high usage.	The Strategic Network
1	Primary Walking Route	Busy urban shopping and business areas, and main pedestrian routes linking interchanges between different modes of transport, such as railways, bus stops etc.	May form part of the Strategic Network, but if not then part of the General Network
2	Secondary Walking Route	Medium usage routes through local areas feeding into primary routes, local shopping centres, large schools and industrial centres etc.	May form part of the Strategic Network, but if not then part of the General Network
3	Link Footway	Linking local access footways through urban areas and busy rural footways, including other schools.	General Network
4	Local Access Footway	Footways associated with low usage, short	The Low Priority Network.

		estate roads to the main routes and cul de sacs	
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*Table A1-3: Cycleway Hierarchy*

Category	Description of Type
A	Cycle lane forming part of the carriageway, commonly 1.5 meter strip adjacent to the nearside kerb. Cycle gaps at road closure point (exemptions for cycle access).
B	Cycle track, a route for cyclists not contiguous with the public footway or carriageway. Shared cycle/pedestrian paths, either segregated by a white line or other physical segregation, or un-segregated.
C	Cycle trails, leisure routes through open spaces. These are not necessarily the responsibility of the highway authority.

*Table A1-3: Public Rights of Way Hierarchy*

Category	Category Name	Description
1	Recreation Routes	Promoted rural and Urban footpaths and bridleways often well used.
2	Public Footpaths	Urban and Rural rights of way registered as public footpaths.
3	Bridleways	Urban and Rural rights of way registered as public Bridleways.
4	Byways Open to All Traffic (BOAT)	Urban and Rural rights of way registered as BOATs.

## **APPENDIX 2 – Public Rights of Way**

Herefordshire has a recorded network of 2159 miles (3475 km) of public rights of way (PROW) consisting of:

- 1876 miles (3019kms) of footpaths
- 260 miles (419kms) of bridleways
- 19 miles (31kms) of byways open to all traffic (BOATS)
- 4 miles (6km) of restricted byway

The network provides important access across the county for the community; it also provides a valuable amenity function.

### Legislation

The following are the main pieces of legislation relating to PROW:

- National Parks and Access to the Countryside Act 1949,
- The Countryside Act 1968,
- Highways Act 1980
- The Wildlife and Countryside Act 1981,
- The Countryside and Rights of Way Act 2000,
- Equalities Act 2010
- Deregulation Act 2015

### Policy Interaction

PROW has functional links with:

- a. Herefordshire Sustainable Community Strategy
- b. Herefordshire Council's Joint Corporate Plan
- c. Herefordshire Council – Local Transport Plan
- d. Herefordshire's Tourism Strategy
- e. Herefordshire Council's Rights of Way Improvement Plan
- f. Wye Valley AONB Management Plan
- g. Malvern Hills AONB Management Plan

### Definitive Map and Statement

The legal record of public rights of way is the definitive map and statement, prepared and maintained under the provisions of the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CROW) Act 2000 and the Deregulation Act 2015. The definitive map and statement provide conclusive evidence of the existence of rights of way, and are referred to whenever questions or disputes arise concerning rights of way.

The Council maintains the Definitive Map of Public Rights of Way for Herefordshire. The Definitive Map is used by the Ordnance Survey as its source of information for publicising rights of way on its Landranger and Explorer maps, and so the Council seeks to ensure that the record is as accurate and up to date as possible, within its available resources.

The definitive map and statement can only be updated by making Modification Orders, which legally alter the documents to show changes to the rights of way network which have already taken place. These modifications come in two forms:

- Legal Event Modification Order (LEMO)
- Evidential Modification Order (EMO)

The Herefordshire definitive map and statement was originally compiled in the 1950s, with the latest version being published by Herefordshire and Worcester County Council in 1989. Since 1989, no LEMOs have been made; the map and statement are therefore very out of date. There is also a large backlog of EMOs to be considered and made.

The Countryside & Rights of Way Act 2000 set a deadline of the year 2026 to register claims for claimed rights of way not currently on the definitive map, based on historical evidence. The Deregulation Act 2015 will introduce significant changes to the way that Modification Orders are processed in an attempt to simplify and speed up the process.

The Council has published a statement of priorities setting out how applications for Definitive Map Modification applications will be managed in order to add benefit to the network and maximise usage of current resources (see ROWIP).

### Network Condition

There is no statutory duty for the Council to carry out condition inspections of the PROW network. Network condition is monitored by reports from parish and town councils, members of the public, other stakeholders and by ad-hoc inspections by staff. Inspections are also carried out on a risk based approach as outlined above.

### Maintenance

The responsibility of maintaining the network falls to both landowners and Herefordshire Council. Landowners are responsible for maintaining stiles, gates and other structures used to enable access through hedges, fences and other boundaries. Landowners are also responsible for ensuring rights of way do not become blocked by obstacles such as crops, trees, and overhanging vegetation. The Council is responsible for maintaining signposts, waymarking, watercourse crossings, steps and surface vegetation. They are also responsible for ensuring landowners meet

their legal obligations.

The Council will investigate problems reported on the network. Whilst investigating issues, potential access improvements such as replacing stiles with gates or improving the surface may also be identified. Once work has been identified either the landowner will be requested to carry out the work or the work will be carried out by the Council depending on the nature of the problem.

This policy, which forms part of the Highways maintenance policy, is to be used in conjunction with

1. Highway Safety Inspection Policy (HMP App. 2)
2. Highways Enforcement Policy (HMP App. 9)
3. Rights of Way Improvement Plan (ROWIP 2),

#### Rights of Way Improvement Plan

Herefordshire has produced a statutory Rights of Way Improvement Plan (ROWIP 2), which gives comprehensive detail on PROW management in Herefordshire. This document has extracted the key principles from that plan to produce a concise document as an appendix to the highways management plan. This document should not be used as a replacement for ROWIP2 and that plan should always be used to inform any decisions to be made.

## **APPENDIX 3 – Structures**

Structures are an important asset to the County and enable movement across or past obstacles that would otherwise prevent or delay transit. The function provided by many of the county's structures is vital for community and economic connectivity.

The TAMP and Structures Life Cycle Plan should be referred to for details of the asset management approach utilised for this asset group.

This policy covers structures that Council is responsible for maintaining, specifically:

- Highway Bridges with spans of 1.5m or more;
- Footbridges of spans 7.5m or more that carry PROW; and,
- Retaining Walls 1.35m high.
- Subways

Moiety Bridges are structures on the County boundary and are the joint responsibility of the Council and the neighboring authority. Amenity Bridges are bridges owned by the Council generally found away from the highway network in parks and open spaces

Private structures are those adjacent to, over or under highways that are vested in and maintained by 3<sup>rd</sup> parties.

### Inspections

Highway Bridges and Footbridges will have regular inspections carried out to monitor their condition, ensure, so far as is reasonably practical, they are safe and fit for lawful use by the public, identify maintenance needs and enable a prioritise maintenance programme to be developed. Inspections will be undertaken in accordance with the Code of Practice for the Management of Highway Structures (2005). General Inspections will be undertaken every two years, except when a Principal Inspection is due to occur. Principal Inspections intervals will generally be undertaken every six years, but the interval may be increased if assessed to be appropriate by the Senior Structures Engineer. Such assessments will be based on the risk and consequence of failure and be recorded.

Amenity Bridges and Private Bridges will only have Safety Inspections carried out.

Retaining walls will be inspected following identification of possible defects stemming from Highway Safety Inspections or enquires from members of the public.

### Prioritisation of Maintenance

Maintenance to address defects is prioritised using the risk based approach outlined above. Category 2 defects are held in the structures forward programme and are prioritised based on Asset Management principals. This includes the following factors:

- The hierarchy of the highway/route the structure supports
- The most efficient and effective use of funds
- The timing of the intervention and the escalation of cost should a maintenance window be missed
- Meeting the Local Transport Plan Objectives
- Public Interest or Opposition

#### Statutory Consultation

A number of the County's Bridges are listed structures or Scheduled Ancient Monuments.. Where this is the case we will consult with and seek approval for works to these structures from the appropriate Heritage Authority prior to undertaking maintenance.

Many of our bridges cross water courses that are regulated by the Environment Agency. Where this is the case we will consult with and seek approval for works to these structures from the Environment Agency prior to undertaking maintenance.

#### Capacity Assessment and Substandard Structures

Between 1989 and 1999, as the result of a European Directive, Highway Authorities were charged by Central Government with assessing the strength of bridges carrying the adopted highway and , where appropriate, carry out strengthening to ensure adequacy for the 40 tonne European Standard introduced to roads in the UK on 1 January 1999. These assessments are also utilised in the planning of abnormal load movements, as detailed below.

Assessments are carried out in accordance with the *Design Manual for Roads and Bridges (DMRB) Volume 3, Section 4, Part 3 'BD21'* or its successive developments. In the event of the assessment indicating inadequate strength, a further assessment is undertaken. For road over rail bridges this is to BE4, to determine whether the load-bearing obligation for the structure was met.

A structure that does not meet the requirements of standards used in its assessment is termed a 'substandard structure'. The forward programme of structures maintenance works will include schemes to deal with any shortfalls of strength and meet the desired loading requirements for the route. Schemes are prioritised alongside other Cat 2C structure defects, due to budgetary constraints it is likely that a number of substandard structures will exist for a prolonged period on the network.

Substandard Structures will be managed in accordance with DMRB: *BD 79 The Management of Sub-standard Highway Structures*. Prior to strengthening or replacement, all substandard structures will be considered as representing a risk to the public. Where such works have to be

deferred, detailed risk assessments are to be undertaken and where appropriate interim measures implemented as soon as possible. If there is deemed to be an immediate risk to public safety formal interim measures which effectively mitigate the risk, will be put in place until the identified remedial action is implemented.

### Management of Abnormal Loads

An abnormal load is any vehicle that is outside the classification of normal permitted traffic by virtue of its gross weight, length, width or axle configuration according to current axle configurations.

Abnormal loads will be processed in accordance with the elementary system as defined in the Code of Practice for the Management of Highway Structures and in accordance with the requirements of the Construction and Use Regulations.

### Rail Bridges

Bridges carrying railways or waterways over highways are usually owned by the respective Boards or their successors. Adequate consultation and liaison takes place before either the other owner or the highway authority does any work that could impact upon the interests of the other.

Disused railway bridges are the responsibility of the residual body of the Rail Property Board. However they are inspected for safety.

At the time of writing, within the county the railway network is divided into two areas, Network Rail (Wales), are responsible for the Newport to Shrewsbury line and Network Rail (Western) are responsible for the Hereford to Worcester line.

There are three types of live Rail Bridges:

- a) Bridges vested in and maintained by a Rail Network Operator, normally those carrying the railway over the highway.
- b) Bridges vested in the Council and maintained by a Rail Network Operator as the Council's agent, normally by agreement.
- c) Bridges vested in and maintained by the Council, normally those bridges carrying the highway over the railway.

Bridges in category (a) and (b) are not routinely inspected by the Council.

### Responsibilities for Rail Bridges

- The Rail Network Operator is responsible for the maintenance and repair of their bridges excluding (in most cases) the surfacing, kerbs and footways.
- By virtue of Section 116 of the Transport Act 1968, highway surfaces over railway bridges

are maintained at public expense by the Council excluding bridge waterproofing and bridge expansion joints.

- Rail Network Operators are responsible for ensuring that the bridge is capable of carrying loads in accordance with BE4 design loads for bridges constructed at or before 1968. This translates to 24-tonne capacity for live loading to today's standards. Where the bridge is known to have a capacity less than the required design loading, Rail Network Operators is responsible for any signing and costs associated with this weight restriction.
- The Council is responsible for ensuring that the parapet meets modern load requirements; Rail Network Operators are responsible for ensuring the general integrity of the parapet.

### Road-Rail Incursions

For sites in the County where there is the possibility of a road vehicle getting onto the railway, these are jointly assessed with the appropriate Rail Network Operator for the risk of road-rail incursions. This inspection and risk assessment is carried out on a 3 yearly basis as recommended in the DfT document Managing the Accidental Obstruction of the Railway by Road Vehicles (2003).

### Low Bridges

On the highway network the Council is responsible for signing of low bridge sites. Where highway works and/or signage will affect a Rail Operator's Bridge the Council will notify and agree requirements (as far as is reasonably practical) for the works with the Operator.

### Moiety Bridges

The Council will agree inspection and maintenance liability works for Moiety Bridges with neighboring authorities. They will seek to work in coordination with neighboring authorities to ensure Moiety Bridges are maintained to the same standards as the rest of the bridge stock.

### Privately Owned Structures

Under Section 41 of the Highway Act, the Council is responsible for ensuring the safety of the general public crossing the carriageway.

- Where the bridge is owned and maintained by an experienced and responsible owner, the Council shall inform that owner of any defects that require attention. Any defects shall be corrected at the expense of that owner.
- Where the bridge is owned and maintained by a member of the general public, charitable group, resident group etc. then an agreement will be made with that group or individual, to ensure the safety of the general public and if necessary consideration shall be given to the use of existing powers under Section 93 of the Highways Act 1980 to transfer the ownership and maintenance of the structure to the Council.

### Emergency Works Affecting Other Owners' Bridges and Structures

Defects affecting other owners' structures or bridges that affect the highway shall be reported to the Council. Where damage to the structure is considered to affect the strength and/or integrity of the structure the Council shall immediately request an inspection and take appropriate action to maintain the safety of the public, either directly or in liaison with the landowner. Any costs associated with the inspection, on site attendance by the contractor and repairs shall be sought from the owner.

#### Statutory Undertakers' Apparatus

A Statutory Undertaker intending to carry out work affecting highway structures is required to consult with the Council for a minimum of seven days prior to the issue of a formal notice. The Council shall respond within three working days of receipt of the preliminary notice.

If the formal notice does not confirm agreement following preliminary consultations, the Streetworks Co-ordinator shall obtain consent from the Structures Engineer before acceptance and entry to the Streetwork Register.

Work done on, under or adjacent to Highway Structures by Statutory Undertakers (or their Contractors) shall always be inspected by Council's Structures staff or their Engineering Consultant's staff to ensure that damage to the structure and/or any waterproofing membrane is avoided.

## APPENDIX 4 – Highway Drainage and Flood Assets

Highway drainage systems are installed to capture surface water run-off to reduce flooding and protect the fabric of the road. Flood alleviation schemes are installed to reduce the risk of flooding to settlements.

The Council is responsible for maintaining the following:

- Drainage assets that have been installed by or on behalf of the Local Authority and where responsibility for these assets has not been novated to the Riparian Landowner.
- Drainage systems for the sole purpose of accepting surface water run-off from the highway.
- Drainage assets that cross the highway, i.e. pipes or culverts carrying watercourses
- Flooding alleviation assets that have been adopted by the Council.
- Historic drainage assets or watercourse on Council owned property, where the Council has Riparian duties.

Many open ditch drainage systems are historic and are the responsibility of the adjoining riparian landowner. The Council has powers to cleanse and restore the profile of these ditches as appropriate.

### Policy

- To provide safe and efficiently maintained highway drainage structures.
- To identify through a system of risk based inspections, highway drainage and flood alleviation systems requiring maintenance.
- To prioritise any necessary maintenance (repairs or cyclical) identified to most effectively utilise limited funds.
- Where a statutory duty exists on the Council to act and the cause of the issue is due to a third party's fault, the Council will seek to recover the associated costs from the negligent party.

*Table A4: Frequency of Ordinary and Cyclic Maintenance*

<b>Drainage Asset Type</b>	<b>Minimum Frequency of Maintenance</b>
Gullies, Catchpits and Interceptors	Reactively as required, with certain high risk assets will have cyclical maintenance regimes implemented.
Soakaways, Gully Connections, Piped Drainage Systems, Piped Grips, Grips, Grills, Filter Drains, Fin Drains, Roadside Ditches that are the responsibility of the Council, Culverts, Balancing Ponds, Sluices, Tidal Flaps etc	Inspected and cleaned out when blockages are identified or issues reported.
High Risk Drainage Assets	Risk based approach to establish specific inspection and cyclical maintenance requirements
Pumps and Other Specialised Equipment	In accordance with manufacturer's instructions

The number of high risk assets with cyclical inspection and maintenance regimes will be identified and set within the Annual Plan.

## **APPENDIX 5 – New Roads and Street Works Act 1991 (NRSWA)**

The Authority has a duty to:

- 1) Maintain the street works register
- 2) Co-ordinate works in the street
- 3) Grant a street works licenses

The Authority also has the powers to:

- 1) Inspect public utilities' street works
- 2) Carry out investigatory works to ascertain compliance
- 3) Carry out remedial works and recharge the utility company.
- 4) Direct utilities in the timing and duration of their works
- 5) Charge for prolonged occupation
- 6) Prosecute utilities for failure to co-ordinate or carry out works correctly.
- 7) Charge for a temporary traffic order
- 8) Charge for works or damage caused by a diversion
- 9) Enter into an agreement with an undertaker to carry out street works

### **Inspections of Works**

Under Section 72 of the New Roads and Street Works Act 1991, the Council is empowered to carry inspections of undertakers street works. Following the NRSWA Code of Practice, a structured random sample of works are inspected at various stages during the works and reinstatement guarantee period as follows:

- Category A inspections - Undertaken During the progress of the works
- Category B inspections - Undertaken within six months following reinstatement
- Category C inspections - Undertaken within the three months preceding the end of the guarantee period.

The number of sample inspections for any year shall be based on the actual number of units of inspection averaged over the previous three financial years for each undertaker. The number of inspections in each of the above categories shall be 10% of the number of inspection units, thus each year 30% of an undertakers inspection units over the previous three years will be inspected. The Council may inspect a higher number of inspection units however payments for additional inspections above the 30% is not recoverable from the undertaker. Undertakers are notified of any defects identified through these inspections and the undertakers are then responsible for carrying out any required remedial works.

### **Defective Reinstatements**

In addition to the sample inspections mentioned above, the Council has the power under Section 72 of NRSWA to carry out such investigatory works as appear necessary to check on whether or not an undertaker has complied with the duties placed on it in respect of reinstatement of the street. This may be in the form of visual inspections or involve the digging up of a street or carrying out other investigatory techniques such as a coring programme. If such a failure is disclosed the undertaker is notified and are then responsible for the reimbursement of the investigatory works and for carrying out any remedial works. In safety related circumstances, the Council may intervene and undertake precautionary works if the relevant utility cannot be identified, contacted or mobilised to respond. NRSWA provides the Council with the powers to recover all costs incurred.

#### Defective Apparatus

Upon discovery or report of defective utility apparatus, the Council will inform the relevant undertaker of the defect and may issue a Section 81 Defective Apparatus Notice. Where the undertaker fails to maintain the defective apparatus after it has been reported or where immediate emergency work is required to make a site safe, the Council has the power to execute any emergency works needed as a consequence of the failure and may recover from the undertaker any costs reasonably incurred in executing the works.

#### Restriction of Works Following Substantial Road or Utility Works

Under Section 58 of NRSWA, where substantial road works (resurfacing or carriageway reconstruction) are to be carried out, the Council has the power to restrict the execution of streetworks for a period of twelve months following the completion of the major works. Advance notice in the form of a proposed restriction is given at least 3 months prior to the commencement of the major works to enable undertakers to carry out any works required before the restriction becomes enforced.

#### Coordination of Streetworks

The Council has a duty to coordinate the execution of streetworks undertaken on its network. This duty extends to the coordination of the Council's own works and the works of other street authorities that affect the Council's network. In addition, the Council has the power to give directions to undertakers as to the timing and placement of apparatus if proposed works are likely to cause serious disruption to traffic.

## **APPENDIX 6 – Adoption of Highway Infrastructure**

The Council may by agreement, under Section 38 or 278 of the Highway Act 1980, adopt highways so that they become public highways and maintainable at the public expense. Typically, such agreements relate to new highway developments that are being constructed by third parties. Where this is the case regulatory inspections will be undertaken by the Council to ensure that the works are being constructed in accordance with the approved drawings and specifications. This ensures that the Council does not inherit undue maintenance liabilities beyond the scope of the Section 38 agreement.

The cost of making the agreement, approval of proposed designs, specifications and inspections are all met by the third party under the terms of the Agreement. On-going maintenance liability of any non-standard infrastructure is funded via a commuted sum, paid by the third party.

Unless agreed otherwise, Section 38 inspections will be undertaken at the following stages:

- The commencement of works
- At completion of formation levels
- Prior to backfilling drainage
- At completion of sub-base levels
- At completion of binder course levels
- Prior to the commencement of the maintenance period
- Prior to adoption

(Or any other occasion deemed necessary by the inspector)

Identified defects are remedied at the third party's expense.

Remote footways forming a separate access to the individual or small group of properties shall not normally be adopted.

Separate areas allocated for vehicle parking/or access to remote garages and parking areas and drives to individual or small groups of properties shall not normally be adopted.

There is scope for external bodies to manage and maintain planted and landscaped areas of designated highway subject to agreement and licence arrangements with the Council.

## **APPENDIX 7 – Licensing**

The Council, as the Highway Authority, has the power to enter into agreement for licensing a number of activities on the public highway. These include:

Highways Act 1980:

- Section 38: Adoption of new developments by agreement
- Section 115-E: Permitting occupation of the highway (e.g. Table and Chairs)
- Section 116: Stopping - up or diversion of highways
- Section 139: Control of builders' skips
- Section 142: Licence to plant trees in highway
- Section 169: Control of scaffolding
- Section 171: Control of deposit of building materials and making of excavations in street
- Section 177: Restriction on construction of buildings over highways
- Section 178: Restrictions on placing rails, beams etc. over highways

Regulatory inspections are undertaken to identify un-licensed activities on the public highway and to ensure that, where licenses are in place, any required precautionary measures are being adhered to.

An example would be the placing of skips on the public highway. A license is required for this and we would normally stipulate that motorists and other users be protected by the placing of warning lamps on the skip and/or a coned off safety zone be provided.

Regulatory inspections regulate these activities. They are normally undertaken at the same time as safety inspections, or as otherwise required by the type of activity.

## **APPENDIX 8 – Winter Service, Weather and Other Emergencies**

### Winter Service

Ice and snow affects the safety of the traveling public and the availability and reliability of the highway network throughout the winter period. As such the successful delivery of the winter service is key to supporting the economic and social well-being of Herefordshire.

The Council's policies and strategies associated with winter service are detailed in the Winter Service Plan available via the Council's website.

### Weather and Other Emergencies

The management of major emergencies will tend to be led by the emergency services. As a Highway Authority has an important role in ensuring resilience and continuity of service of the highway network. The Council will seek to minimise the impact of extreme weather events, flooding, natural disasters and civil emergencies by coordinating their resources with emergency services. The Council will develop and maintain plans to enable efficient and effective response to highway related emergencies.

During such events the Reactive Maintenance processes are typically adopted to manage the immediate effects.

In the event of severe flooding in Herefordshire, procedures defined in the County Flood Plan will apply. At such times, the aim of the Highway Maintenance Service is to endeavour to provide its normal range of services, as far as is practicable. Emergency support provided by voluntary agencies will enhance our response capabilities. The Council will liaise with utility companies and national agencies, including Government, where necessary.

We may also implement the Major Emergency Response Plan and activate the following:

- Traffic diversion schemes (incl. publicity thereof), in conjunction with the Police and Highways Agency.
- Undertaking emergency engineering work
- Maintaining school transport services
- Issuing sandbags
- Officers attending Control Centres
- Co-ordinating the Council's response from its Emergency Control Centre and Directorate Control Points
- Implementing and co-ordinating voluntary action support
- Arranging emergency transport facilities
- Assisting in the provision of a media and information service, including a public help line telephone number which has been notified through the media services

- Providing traffic diversion information, in conjunction with the Police and Highways Agency

In the event of other major emergencies affecting Herefordshire the procedures defined in the Major Emergency Response Plan apply. We 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 County Emergency Plans

Following such events and where the opportunity exists to do so, we seek to obtain grant aid to:

- Meet the cost of reactive measures
- Provide alleviation works

Where successful in its application, the Council directs all resources obtained, in accordance with any specified spending instructions, and, for highway maintenance, towards routine and programmed works to mitigate the long-term effects of such events on the sustainability of the highway network.

The Council will take account of and implement the recommendations of the Department Transport's 2012 Resilience Review.

## **APPENDIX 9 – Street Lighting, Signals and Signs**

### Street Lighting

The Council understands that the provision of lighting can provide a safer, more secure night-time environment and its proper management is important to minimise environmental impact.

There is no statutory duty to provide street lighting but where it exists we have a duty to maintain it. The Council's approach to the provision of street lighting is as follows:

- Roads in rural areas are generally not lit except where problems of night-time road safety and perceived personal security exist.
- Roads in urban areas are generally lit.

### Traffic Signals

Due to the rural nature of the county, the Council is only responsible for a limited number of traffic signals. Traffic signals provide a vital role in enabling efficient movement of traffic in urban areas as well as safe crossing points for pedestrians.

### Illuminated Signs

Illuminated signs are generally provided in urban areas where visibility of traffic signage at night is specifically required.

All street lighting, traffic signals and illuminated signs units managed by the Council shall be maintained to a standard that ensures so far as reasonably practicable, their safe, economic, effective and reliable operation. The approach will be detailed in the Council's TAMP and specific street lighting and traffic signals Life Cycle Plan. The Council shall:

- Carry out planned inspections that attempt to act in a preventative manner to reduce in-service faults; these will take place on a cyclical basis on all electrical assets to test for satisfactory operation and verify the inventory details.
- Seek to maintain an up-to-date inventory of all illuminated street assets to assist satisfactory implementation and management of the network and to ensure accurate assessment of the electrical energy consumed.
- We will have reactive repair capability to ensure prompt responses to identified defects within timescales appropriate to the problem.
- In conjunction with our inspections, we will undertake preventative maintenance on the integral components, to seek to achieve the optimum life of each as well as maintaining

acceptable levels of illumination.

- Utilise industry best practice guides, such as the Code of Practice for Street Lighting ("Well Lit Highways") to develop specific and detailed processes and procedures.

#### Non-Illuminated Traffic Signs

The Council will via regular highway inspections identify signs that present a risk to users. These defects will be dealt with in the timescales set out in this document.

All signs will be in accordance with the current manual of Traffic Management practices and procedures and the Traffic Sign Regulations and General Directions (2002). Post/sign type, material and size will be as appropriate for the particular site.

#### Minimising Sign Clutter

Well-managed Highway Infrastructure

##### RECOMMENDATION – MINIMISING CLUTTER

Opportunities to simplify signs and other street furniture and to remove redundant items should be taken into account when planning highway infrastructure maintenance activities.

Signing the Way

##### RECOMMENDATION – DE-CLUTTERING TRAFFIC SIGNS

Removing street clutter caused by unnecessary signs, can improve traffic flow as well as improving the attractiveness of the local environment.

The Council recognises the potential impact that excessive signs can have on the environment. Where opportunities have been identified, the Council will work in line with Department for Transport and recognised guidance to undertake audits of areas of the highway where signage clutter may exist. Signs and street clutter that have the potential to be removed will be identified and consultation undertaken with stakeholders prior to carrying out signage improvement works.

## **APPENDIX 10 – Road Markings and Studs**

Road markings and studs are utilised to define carriageway lanes and edges, warnings, parking and waiting restrictions and to convey give way and other instructions to road users in a manner clearly visible by day or night.

The Council shall identify road markings and studs requiring maintenance using a system of regular highway safety inspections outlined in this document. This will also include night inspections to identify reflectivity of studs.

Road marking and stud defects of a non-hazardous nature shall be collated in a forward programme of works and replacement or repair works ordered in batches. Wherever possible these batches of works shall be contained within individual safety inspection zones or on a specific route. The processing of each batch shall be in line with the available resources and shall normally take place at a frequency not less than quarterly. However, when resources are constrained higher risk defects and hazardous marking defects will be prioritised over non-hazardous marking defects.

Road markings on Strategic Routes and at known accident sites will be renewed when more than 30% of their area has become ineffective. Mandatory markings at junctions with Strategic Routes should be maintained to the same standard as Strategic Routes.

Centreline markings will only be used on roads wider than 5.5m.

Edge of carriageway markings will be considered where their use would present a demonstrable safety benefit.

Extruded thermoplastic lines will be used where there is no existing marking and screed thermoplastic will be used to re-trace existing lines.

The use of road studs on B class or lower categories of roads will be assessed to consider whether they would present a demonstrable safety benefit.

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The Council will consider replacement of studs when, prior to the winter period, on Strategic Routes the number of installed studs that are reflective fall below 60% and on other routes fall below 40%.

## **APPENDIX 11 – Skid Resistance**

As a road surface ages the skidding resistance will change, typically this will end up with a reduction of resistance. There are a number of factors contributing to this, traffic flow, weathering, seasonal changes, geographic location and the type of stone and binder used in the road surfacing. The maintenance of adequate levels of skidding resistance on running surfaces is an important aspect of highways maintenance, and one that contributes significantly to highways safety.

Skidding resistance is an important carriageway attribute as it ensures that vehicles can grip the carriageway, particularly when cornering or breaking. Loss of control as a result of poor skidding resistance can be a cause or contributory factor in accidents. A road surface provides its skidding resistance from its texture, which comes primarily from the aggregate.

As the surface ages and is used it gradually loses its original texture properties; this is not uniform however and specific sections of road will be subjected to increased wear i.e. bends, junctions etc. Accordingly, to ensure potential risks are managed effectively, there is a need to monitor skid resistance, particularly on the more heavily trafficked parts of the network.

The Council will seek to minimise the risk of skidding on high speed roads by undertaking a programme of skid resistance testing, treatment and warning measures.

### Relevant Documentation

Well-maintained Highways: Code of Practice for Maintenance Management.

The Highways Agency Standard HD28/15 'Skid Resistance'.

Traffic Signs Regulations and General Directions (2002).

Interim Advice Note IAN 49/03

Highways Agency Standard HD28/04, Skid Resistance

### Policy

This policy follows recommendations for methods of working set down in Section 9.8 of the Code of Practice. The Code of Practice in turn is based on the Highways Agency Standard HD28/15, Skid Resistance, modified for use on local authority highway networks.

Skid resistance testing is carried out annually on the A Road Network, these are detailed at the end of this section. Additionally further sections may be surveyed, where a risk based review has identified the specific need, anywhere on the network where the surfacing is suspect or where there is a history of loss of control accidents.

Sites that are identified as being below the required threshold are prioritised for maintenance in an annual surfacing programme of works.

Measurement of skidding resistance

Our existing approach to maintaining skid resistance levels has evolved over time to meet the changing needs of our network, from the base of technical note HD28/94. Surveys have been carried out in both directions of the A road network annually. The Sideways Force Coefficient Routine Investigation Machine (SCRIM) (in accordance with BS 7941, Part 1) is usually used to collect skid resistance data. The results will be calculated using the method as described in HD28/15.

Investigatory Levels

The findings of these surveys will be used (in conjunction with accident statistics) to analyse trends and to initiate further investigations to assess maintenance needs to ensure the safety of road users. Investigatory Levels are based upon the recommended levels set out in HD28/15 and are set out below:

*Table 11: Site Categories and SCRIM Investigatory Levels*

Site Category	Definition	Minimum Investigatory Level
B	Dual Carriageway non-event	0.30
C	Single Carriageway non-event	0.35
Q	Approaches to and across major or minor junctions, and approaches to roundabouts	0.45
K	Approaches to pedestrian crossings and other high risk situations	0.50
R	Roundabout	0.45
G1	Gradient 5-10%, longer than 50m	0.45
G2	Gradient 10%, longer than 50m	0.45
S2	Bend (not subject to 40mph limit or lower) >100m and <500m	0.45
S3	Bend (not subject to 40mph limit or lower) <100m	0.55

Investigatory levels will be reviewed if a significant change to the network occurs by senior staff who are authorised to do so.

Site Investigations

Site investigation will be carried out

- to determine whether a surface treatment is justified to reduce the risk of accidents, specifically wet-skid accidents, to determine whether some other form of action is required

or

- to determine whether the site should be kept under review.

Site investigations will be carried out as soon as is practicable by suitably experienced highway assessors. The results of a site investigation will be recorded and kept on file.

The outcome of a site investigation will result in one or more of the following:

1. Keep the site under review.
2. Change the investigation level (IL).
3. Treatment to mitigate the risk of wet-road skidding accidents.

#### Use of warning signs

In the time between the investigation and the implementation of the treatment, warning signs may be used.

Permanent warning signs (slippery road warning sign Diagram 557, Traffic Signs Manual Chapter 4.) will be erected following a site investigation, they will provide an effective warning and be securely mounted this will be done as soon as is practicable if recommended following a site investigation.

#### Newly Laid Road Surfaces

When new construction and resurfacing is carried out, the Polished Stone Value (PSV) of the stone used and the texture depth of the new surface shall comply with the requirements of HD28/15 or any superseding document.

Newly laid asphalt surfaces can exhibit lower skid resistance than the same surfaces after a period of trafficking, which could be because of the binder film that initially coats the aggregate particles. Measurements on a limited number of road surfaces have shown that the skid resistance can be affected in both wet and dry conditions and this potentially gives rise to additional accident risk to road users. However, this characteristic of new surfaces is not fully understood, particularly in relation to the duration of the effect and influence of different types of asphalt surfacing materials, and is the subject of ongoing research.

Temporary warning signs will be used on all new asphalt surfaces and be erected by the surfacing contractor before the new surface is opened to traffic, after 6 months the signs will be removed.

#### Prioritisation of treatments

With limited budget resources treatment to mitigate the risk of wet road skidding accidents must be prioritised so that highest risk sites are dealt with first. The following site characteristics are taken into account when prioritising resources:

- If there is a history showing a clear risk with wet-skidding accidents;
- Where skidding resistance is substantially below the IL; and,
- Low skid resistance combined with low texture depth.

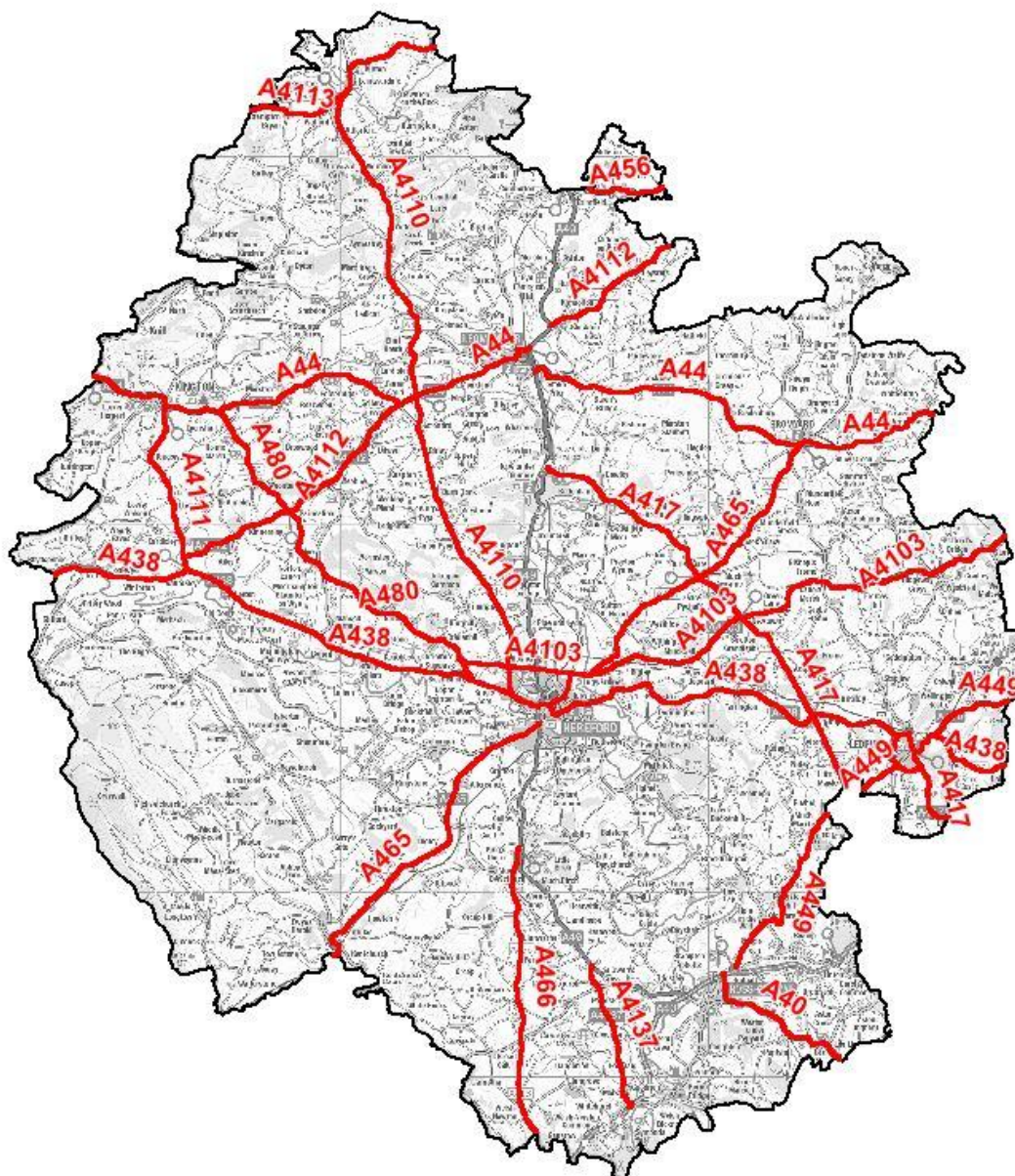


Figure A11: SCRIM Survey Network

Table A11: SCRIM Survey Roads

ROAD	FROM	TO
A40	County Boundary (Glos.)	Hildersley Roundabout
A4103	A480 Stretton Sugwas	County Boundary (Worcs)
A4110	A438 Whitecross Roundabout	A4113 Leintwardine
A4111	A438 Willersley	A44 Headbrook Roundabout
A4112	A4111 Eardisley	County Boundary (Worcs)
A4113	County Boundary (Powys)	County Boundary (Salop)
A417	A49 Trunk	County Boundary (Glos)
A4172	A438 Trumpet Crossroads	County Boundary (Glos)
A4137	A49 Trunk	A40 Trunk
A438	County Boundary (Powys)	County Boundary (Worcs)
A44	County Boundary (Powys)	County Boundary (Worcs)

A449	M50	County Boundary (Worcs)
A456	County Boundary (Salop)	County Boundary (Salop)
A465	County Boundary (Gwent)	A44 Bromyard
A466	County Boundary (Gwent)	A49 Trunk
A480	A44 Lyonshall	A438 Hereford

## **APPENDIX 12 – Safety Barriers and Fences**

Safety fences and barriers provide separation for traffic and vulnerable road users from each other and other hazards, e.g. watercourses.

Fences may be installed by the Council for the protection of road users and/or pedestrians. Fences covered under this policy include steel safety fences, pedestrian guard rail, concrete barriers, fences (excluding safety fences), walls, antiglare screen fences and environmental barriers.

Fences may also be used to define the edge of carriageway and/or the boundary of an adjacent property owner's land. In most cases this fencing will be owned by the adjacent property owner. Should 3<sup>rd</sup> Party fencing become defective, we will contact the owner of the fencing to request them to make it safe.

In general the decision to fence land rests with the owner and occupier of the land fronting onto the highway, in most locations they will be liable if damage is caused by his animals straying onto the highway. The Council on the other hand has no general obligation to fence off its highways. Any fencing along the boundaries of the highway is therefore generally the responsibility of the adjoining landowner/user. In some circumstances, however, fencing for the protection of wildlife may be the property of the Council.

The Council shall ensure that all safety barriers owned as the highway authority are inspected bi-annually. Where remedial works have been identified to any Council fencing, these shall be prioritised for repair.

Highway visibility fencing condition will be monitored via highway safety inspections detailed in this plan. Defects will be dealt with in accordance with the risk based categorisations and prioritise set out above.

## **APPENDIX 13– Trees, Shrubs and Hedges**

The Council recognises that trees, shrubs and hedges are important for amenity and nature conservation reasons and should be preserved, but they can present risks to the highway users and adjoining land users if they are allowed to become unstable or block visibility.

Any tree that may overhang or have the potential to fall on the Highway, not just those located on Highway land are collectively called 'highway trees'. In rural areas work to highway trees will be mainly reactive, in response to safety concerns raised by the public or identified via highway safety inspections. In urban areas proactive management is will be used where possible, otherwise will also be reactive, stemming from highway safety inspections. The safety inspection and defect remedial action and re-inspection process outlined in this document will ensure that risk from highway trees is monitored, reviewed and action taken when necessary.

Where tree maintenance is require a qualified arboriculturalist will be used to inspect trees of specific concern. Work is only undertaken after informing/consulting with adjacent property owners, unless it is very urgent. Work to trees in Conservation Areas and trees subject to Tree Preservation Orders will require the authorisation of the Tree Preservation Officer.

The Council shall attend to trees and shrubs on the highway to abate a statutory nuisance or a hazard or to carry out remedial work to make good damage or decay or deformed growth.

Where a tree owned by an adjacent property is considered to present a risk to the safety of the highway user or encroaches onto the highway, the Locality Steward will contact the owner of the land and require him to undertake work at his expense to mitigate the effect.

With the exception of recently constructed highways where land has been procured by the council, almost all hedges are owned by the adjacent property owner. Where a problem is identified the property owner will be contacted and asked to cut back branches that are overgrowing the highway. If the owner fails to undertake this work within a reasonable period (usually 21 days) then the Council may, by serving notice in accordance with the provisions of Section 154 of the Highways Act, require the owner to undertake the work. If this work is not completed within 14 days then the Council may undertake the work themselves and seek to recover any costs from the property owner concerned.

The Council will carry out other work such as pruning to reduce shade or to remove branches overhanging adjacent property only in exceptional circumstances.

Where an obstruction to a sight line, street light, road sign etc or a potential hazard (as defined in the appropriate Procedure) has been identified, these shall be prioritised to allow works to be undertaken as part of the cyclic maintenance programme.

Any person(s) responsible for the design of a new planting scheme on highway land shall seek the

approval of the Council's Arboriculture Officer and the Highways Asset Manager.

With the exception of urgent safety work, work to trees and hedges will be undertaken outside the bird nesting season.

## **APPENDIX 14 – Verges and Highway Vegetation**

Grass is cut for safety purposes to maintain visibility for highway users and to ensure that road and footway widths are not reduced by overgrowing vegetation. In locations where no footway exists there may be a need to provide a safe refuge on the highway verge for pedestrians, particularly on busy roads, however legal there is no legal obligation to provide this.

Grass cutting in urban areas, and on housing estates, is carried out by for amenity purposes to a higher frequency than that required for highway safety.

Rural carriageways will be cut with a single swathe width (1 metre), increasing in width to incorporate appropriately sized visibility splays at junctions, bends and in front of signs, which will be depended upon assessment at each location. Often verges are wider than 1 metre and the vegetation beyond this point will remain largely untouched at these locations, so allowing nature to run its course. Rural and Urban highway verges will be cut a minimum of two times per year. The first cut will generally be undertaken for completion before the late May bank holiday. The second cut for completion before the August bank holiday.

In line with a risk based approach, the number of cuts for verges will be subject to ongoing monitoring and review, should the growth be higher than anticipated the number of cuts may be increased.

In parishes where Lengthsmen Schemes are in place, responsibility for highway and amenity cutting may be transferred to the parish.

Urban grass cutting for amenity purposes will be cut based on agreed level of service established via the Annual Plan, once available budgets are known.

Should invasive plant species such as Japanese knot weed, Ragwort, Broad Leaf Dock, Curled Dock, Creeping Thistle or Spear Thistle be identified on land that is owned by or under the responsibility of the Council, the Operations Manager or his representative. This person shall assess measures needed to remove the causes of future risk.

## **APPENDIX 15 – Parish Lengthsman**

A number of Parish Councils have entered into an agreement to carry out minor highway maintenance works via locally employed Parish Lengthsman to meet the requirements of both the Council and the Parish. Council maintenance standards are specified in a Parish Lengthsman Scheme Agreement,