

**Cardiff Council**

**Highway Maintenance Policy Document**

**Part B – 2024**



***FINAL – v2.13***



<b>Contents</b>		page
<b>1. Introduction</b>		10
<b>2. Service Management</b>		13
<b>2.1 Management &amp; Organization</b> .....		13
2.1.1 Quality Assurance Systems.....		13
2.1.2 Performance Management & Review.....		13
2.1.3 Health & Safety – Construction Design Regulations (CDM).....		13
<b>2.2 Policy, Strategy and Procedure Management</b> .....		14
2.2.1 General.....		14
2.2.2 Policy Review & Approval.....		14
<b>2.3 Allocation of Annual Budgets</b> .....		14
<b>2.4 Communications</b> .....		14
2.4.1 Customer Care & Management.....		14
2.4.2 Stakeholder Management.....		15
<b>2.5 Contracts and Suppliers</b> .....		15
2.5.1 General Procurement.....		15
2.5.2 Delivering Services .....		15
<b>2.6 Equality and Diversity</b> .....		15

## **Service Standards**

### **3 Safety Inspections**

3.1	<i>Carriageway Safety Inspections .....</i>	17
3.2	<i>Carriageways Under Housing Ownership.....</i>	17
3.3	<i>Council Owned Car Parks.....</i>	17
3.4	<i>Footway Safety Inspections.....</i>	17
3.5	<i>Footways Under Housing Ownership.....</i>	18
3.6	<i>Off Street Cycle-way Safety Inspections.....</i>	18
3.7	<i>On Street Cycle-way Safety Inspections.....</i>	18
3.8	<i>Rear Lanes (Adopted) .....</i>	19

### **4 General Inspections and Licensing**

4.1	<i>Third Party Claims .....</i>	20
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### **5 Carriageway & Footway Condition Surveys & Planned Maintenance**

5.1	<i>Carriageway and Footway Condition Assessments .....</i>	21
5.2	<i>Carriageway and Footway Surface Renewal and Reconstruction .....</i>	22
5.3	<i>Localised Highway Asset Improvements and Reconstruction .....</i>	22
5.4	<i>Mobility Access Improvements .....</i>	23

### **6 Cyclic / Routine Maintenance**

6.1	<i>Carriageway Markings Routine Maintenance .....</i>	24
6.2	<i>Drainage Gully / Catchpit Cleansing .....</i>	24
6.3	<i>Drainage Maintenance – Ditching, Hazarding and Letting .....</i>	24
6.4	<i>Drainage Repairs and Improvements .....</i>	25
6.5	<i>Highway Verges .....</i>	25
6.6	<i>Street Furniture Routine Maintenance.....</i>	26

6.7	<i>Traffic Sign Cleaning</i> .....	26
6.8	<i>Traffic Signs Routine Maintenance</i> .....	26

**7 Flood & Coastal Risk Management**

7.1	<i>Local Lead Flood Authority (LLFA)</i> .....	27
7.2	<i>Flood Risk Management Plan &amp; Strategy</i> .....	27
7.3	<i>Flood investigations</i> .....	27
7.4	<i>Flood Risk Schemes</i> .....	28
7.5	<i>Ordinary Watercourse Consents</i> .....	28
7.6	<i>Suds Approval Body (SAB)</i> .....	29
7.7	<i>Planning Authority Consultee Comments</i> .....	29
7.8	<i>Flood Risk Asset Register</i> . .....	29
7.9	<i>Non-Flood Risk Asset Register</i> .....	30
7.10	<i>Pumping Station and Groundwater Monitoring</i> .....	30
7.11	<i>Coal and non-Coal Tips</i> .....	30
7.12	<i>Enforcement</i> .....	31
7.13	<i>Shore Line Management Plan</i> .....	31
7.14	<i>Butetown Tunnel Drainage Maintenance &amp; Management</i> .....	32

**8 Highway Structures**

8.1	<i>General Inspections</i> .....	33
8.2	<i>Principal Inspections</i> .....	33
8.3	<i>Structural Review &amp; Assessment</i> .....	33
8.4	<i>Special Structural Inspections</i> .....	34
8.5	<i>Kerb Drainage to Structures</i> .....	34
8.6	<i>Structural Records</i> .....	34
8.7	<i>Abnormal Load Movements</i> .....	35
8.8	<i>Structural Works</i> .....	35

8.9	<i>Structural Painting .....</i>	35
8.10	<i>Structural Renewal .....</i>	36
8.11	<i>Technical Approval of Structures Supporting the Highway .....</i>	36
8.12	<i>Butetown Tunnel Structure Maintenance &amp; Management .....</i>	37

**9 Incident Response & Severe Weather**

9.1	<i>Incident Response.....</i>	38
9.2	<i>Winter Plan .....</i>	38
9.3	<i>Flooding.....</i>	39
9.4	<i>Dead Animals on the Highway.....</i>	39
9.5	<i>Live Animals on the Highway.....</i>	39

**10 Intelligent Transport Systems (ITS)**

10.1	<i>Intelligent Transport System Assets .....</i>	40
10.2	<i>Urban Traffic Control Room &amp; ITS Fault Management System .....</i>	44
10.3	<i>Highway Safety Inspections .....</i>	41
10.4	<i>Electrical Inspections .....</i>	41
10.5	<i>Routine Site Inspections of ITS Assets .....</i>	42
10.6	<i>Programmed Maintenance .....</i>	42
10.7	<i>Cyclic Maintenance .....</i>	42
10.8	<i>Reactive Maintenance .....</i>	43
10.9	<i>Energy Reduction .....</i>	43
10.10	<i>Electrical Energy Management .....</i>	43
10.11	<i>Technical Approval .....</i>	44
10.12	<i>New ITS Schemes and Developments .....</i>	46
10.13	<i>Butetown Tunnel Mechanical &amp; Electrical Maintenance &amp; Management .....</i>	46
10.14	<i>Recovering Costs of 3<sup>rd</sup> Party Damage to the ITS Asset .....</i>	46

**11 Public Rights of Way (PROW)**

11.1 Public Rights of Way – Changes to the Rights of Way Network ..... 47

11.2 Public Rights of Way – Maintenance ..... 47

11.3 Public Rights of Way – Obstructions and Other Nuisance ..... 48

**12 Street Lighting**

12.1 Why Do We Light the Highway ..... 49

12.2 Highway Safety Inspections ..... 49

12.3 Electrical inspections ..... 50

12.4 Non-Destructive Structural Inspections ..... 51

12.5 Electrical Energy Management ..... 51

12.6 Central Management System (CMS) ..... 52

12.7 Programmed Maintenance ..... 52

12.8 Cyclic Maintenance ..... 53

12.9 Reactive Maintenance ..... 53

12.10 LED Replacement Programme & Energy Reduction ..... 53

12.11 Light Levels for LED’s ..... 54

12.12 New Lighting Schemes & Developments ..... 54

12.13 Requests for New or Additional Lighting ..... 55

12.14 Requests to Move an Existing Street Light ..... 56

12.15 Technical Approval ..... 57

12.16 Attachments to Lighting Columns ..... 58

12.17 Managing Street Lighting Data ..... 60

**Appendices**

**A** Policy Change Schedule ..... 61

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## 1. Introduction

- 1.1 The Highway Maintenance Policy outlines Cardiff Council’s approach to highway maintenance within a legislative, corporate, and financial framework.
- 1.2 It defines the Council’s approach to highway maintenance and is based on current legislation and recommendations made in the latest national highway’s code of practice: Well Managed Highway Infrastructure – October 2016, utilising a risk-based approach methodology.
- 1.3 The Policy does not have any statutory status. The three-tiered approach for Cardiff Council’s highway maintenance policy documentation followed the Wales Audit Office (Audit Commission) recommendation of best practice in 2008.
- 1.4 The Policy’s three tiers are:
  - Part A - The Maintenance Policy (**Why we do it**). This sets out the Council’s statutory obligations and key principles which will provide the framework for Part’s B and C of the Policy which will provide the operational details.
  - Part B – The Standards (**What we do**). This will provide detail of what is required to be done to maintain the highway asset to satisfy the Council’s statutory obligations and the key principles established in Part A.
  - Part C - Working Instructions (detailed, **How we do it**). These will set out more detailed instructions and procedures required to undertake and complete specific maintenance activities to satisfy the Council’s statutory obligations and the key principles established in Part A.

This document is **Part B** of the Highway Maintenance Policy













- 1.5 The Highway Maintenance Policy will be periodically reviewed particularly in response to changes in legislation, the development of case law or Council reorganisation. This is the second Highway Maintenance Policy document Part B, the first was approved by Officer Decision 8<sup>th</sup> April 2014.
- 1.6 The Council’s Cabinet is responsible for the approval of any changes to the Highway Maintenance Policy Part A. In respect of Part B and Part C of the policy document, as stated in the approved executive report dated 16th February 2012 *“the City Services Chief Officer, in consultation with the Executive Member for Highways, to be authorised to approve these documents, and subsequent amendments to these as they become necessary, for example, because of operational experience or marketplace innovations”*.
- 1.7 **Purpose**  
The primary objective of this Highway Maintenance Policy is to set how the Council will deliver its statutory duty as the Highway Authority in maintaining the highway network within Cardiff.
- 1.8 **Scope**  
This Highway Maintenance Policy relates to the functions delivered by the **Highways Infrastructure and Operations Teams** that manage and maintain the highway network for which the Council is responsible as the Highway Authority. Reference in this document to highway network or highways relates to the adopted highway. For these purposes adopted highway only applies to a designated section of public maintained highway that has gone through a process for maintenance and inspection criteria as defined in the Highway Maintenance Policy Document Part C:001 Highway Safety inspections relating to areas marked pink on the councils GIS mapping system.

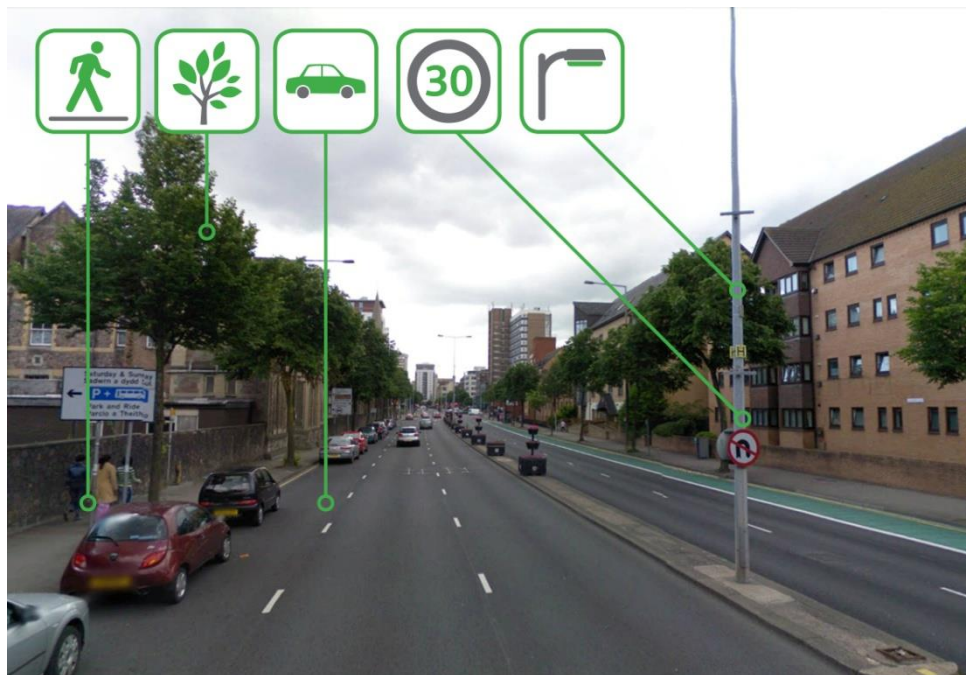
1.9 Below is a list of Highway and Transportation functions that have a direct relationship to the services delivered by the Highways Infrastructure and Operations Teams but are **not included in this policy** as they are managed in other areas of the service and/or under separate Policy:

- Accessibility by public transport
- Active travel and road safety
- Agreements made under Section 278 & 38 of the Highways Act
- Carriageways, footways, and associated infrastructure managed by other Council teams such as Housing, Parks etc.
- Civil parking enforcement
- Electric vehicle charging
- Highway licensing and enforcement
- Network management
- Passenger transport
- Planning
- Safer routes to school
- Strategic management and development of the cycle network
- Streetworks and the management of utility companies
- Traffic regulation orders (TRO)
- Traffic safety schemes
- Transport planning and vision
- Urban regeneration schemes
- Weed control.

### 1.10 Highway Infrastructure Assets

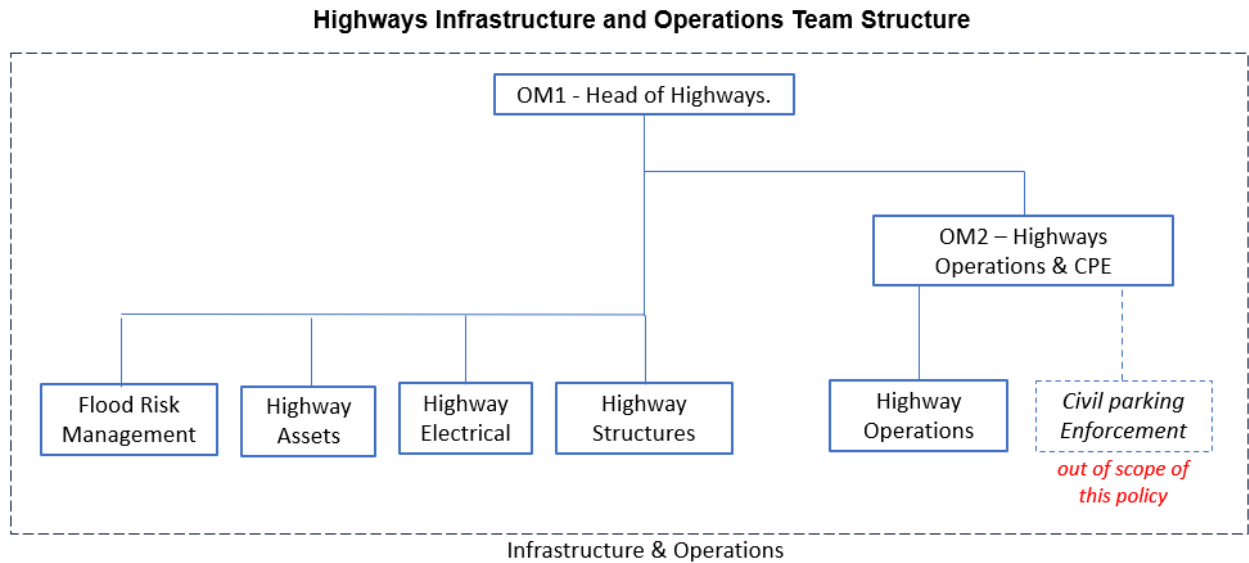
The Primary Highway Assets and associated services that the Council is responsible for are:-

	Carriageways (roads)		Footways (pavements)		Cycleways
	Public Rights of Way		Street Lighting		Street Furniture – including signs, road markings
	Safety & other Fencing		Highway Green & Open Space		Drainage & Flood Risk
	Highway Structures		Intelligent Transport Systems		Winter Maintenance



## 2 Service Management

### 2.1 Management & Organisation.



#### 2.1.1 Quality Assurance Systems

The Highway Operations team has accreditation applying quality system management principles and guidance, these being the BS ISO 9001:2015 Quality Management System Standard, National Highway Sector Schemes – NHSS 8 (street lighting and electrical apparatus) NHSS 10B (barrier repair on high-speed routes) and NHSS 12A/12B (traffic management set out), Highways also has accreditation to HEA/HERS (electrical accreditation).

#### 2.1.2 Performance Management & Review

The Service has adopted a “plan, do, check, act” framework for managing performance which has resulted in a framework of audits, management reviews and risk management considerations. Additionally, the Service is assessed by external parties periodically to verify compliance to the above accreditations.

#### 2.1.3 Health & Safety - Construction Design Regulations (CDM)

The Service’s Health & Safety Framework is driven by a Corporate Health & Safety Policy and bespoke Responsibility Appendices which specifies how the Service manages health & safety, regular reviews are undertaken to validate that the framework is working effectively.

## 2.2 Policy, Strategy and Procedure Management

### 2.2.1 General

The maintenance of Highways infrastructure is delivered to support the Councils strategic objectives defined in the Council’s Corporate Plan. The contribution of the Highway Maintenance service to this plan is defined in the current **Directorate Delivery Plan**.

Arrangements for the management of highway maintenance is set within the context of an overall asset management regime. The **Highway Asset Management Plan (HAMP)** is fundamental to demonstrating the value of highway maintenance in delivering the wider objectives of the Corporate Plan, transport policies and achieving value for money. The purpose of Cardiff Council’s Highways Asset Management Plan is to:

- Formalise strategies for investment in highway asset groups.
- Define service standards.
- Improve how the highway asset is managed.
- Ensure the most effective service is delivered within available resources.

The Highway Maintenance policy provides details of how highway infrastructure is maintained (based on the HAMP purposes above), and the standards to which work is done whilst satisfying the Councils wider objectives described in the documents above. All strategies, policies and procedure undergo the appropriate level of review and approval.

### 2.2.2 Policy Review & Approval

Policies and management arrangements will be clearly defined, formally approved and adopted by the Council and periodically reviewed. These management arrangements will include a regime of inspection and responses, in accordance with the principles of risk assessment and management.

## 2.3 Allocation of Annual Budgets

The Budget to deliver the Highway Maintenance service for each financial year is agreed through the cabinet approval process. Each annual settlement will have an influence on the size and extent of programmes of work and direct influence on strategies such as condition targets.

## 2.4 Communications

### 2.4.1 Customer Care & Management

Customer enquiries and reports of problems for highway infrastructure are logged directly by the customer on the Councils App.

The required response times to correspondence are in accordance with the corporate policy:

Customer Category	Response Time
Cabinet Member (Enquiry from Councillor)	7 Calendar days
Cabinet Member (Enquiry from AM/MP & Public)	14 Calendar days
Councillor	14 Calendar days
Public	21 Calendar days
Complaints	21 Calendar days

## **2.4.2 Stakeholder Management**

Customers are kept informed of details and developments relating to their enquiries.

Various appropriate communication channels are used to inform customers of the progress of their enquiries and to notify them of works being carried out on the Highway.

## **2.5 Contracts and Suppliers**

### **2.5.1 General Procurement**

The Highway Service complies with the Councils standing orders for contracts and procurement

### **2.5.2 Delivering Services**

The Council has an internal workforce that delivers certain maintenance operations which is supported with the use of external contractors. Whether an operation is carried out by the internal workforce or by external contractors is based on skills, competencies and capacity.

## **2.6 Equality and Diversity**

The Council has policies in place that embed equalities within the organisation and respond to the needs of citizens.

Council equalities policies will be appropriately followed when undertaking highway maintenance design, maintenance works and highway improvements. Beyond these and technical codes of practice, the following Equalities legislation is considered:

- Equalities Act 2010
- Inclusive Mobility (Department of Transport 2021)
- The Building Regulations Part M – Access to Buildings (2010)
- BS 8300 – Design of Buildings and their Approaches to Meet the Needs of Disabled People (2018)

The services covered within this policy will be monitored to ensure the needs of the diverse community are met and as additional requirements become apparent, they will be considered, and policy amended as appropriate. When policy is changed an evaluation will be undertaken to determine whether staff affected will require additional equalities training.

## Service Standards

This document describes the operational policies, standards and criteria of Cardiff Council for the management of its highway network and its highway assets based on HAMP strategies to formalise investment, define service standards, improve how the asset is managed and provide the most efficient service is delivered within available resources. It defines good practice within current budget levels, identifying frequencies for inspection as well as policy and strategy for the repair and maintenance of the adopted highway network. In some instances, further operational details are provided in a sperate Part C of this Policy.

These standards form the foundation for the management of the highway asset and the basis for the Highway Authority’s (Cardiff Council) statutory duties to maintain the highway network and provide a robust S.58 defence in the case of claims made against the authority. Inspections can be categorised into, planned safety inspections, reactive based on customer contact and technical surveys. Maintenance operations can be categorised as planned programmes of work and reactive works based on inspections or customer requests.

### 3 Safety Inspections – Overview



Safety inspections are designed to identify defects in highway assets likely to create a danger or serious inconvenience to users of the highway network. These assets will include, but not limited to:


- Carriageway and footway
- Utility covers or apparatus
- Overhanging tree growth or vegetation
- Grassed verges.
- Drainage gullies and manholes
- Street furniture
- Road markings
- Electrical apparatus
- Traffic signal equipment


Defects arising from safety inspections will be categorised as one of the following criteria which defines the response time for the repair:



- **Critical Defects**
- **Safety Defect**
- **Maintenance Defects**
- **Programmed Repairs**


The Council carries out comprehensive highway safety inspections utilising a risk-based approach methodology. The approach was produced under the County Surveyors Society Wales (CSSW) Asset Management & Performance Group HAMP project that developed a nationally (Welsh) consistent response to the Well Managed Highway infrastructure Code of Practice (2016). Details of the Council’s Highway Safety Inspection regime including investigatory levels and defect response times are contained in Part C of this Policy, refer to: **Part C: 001 - Highway Safety Inspections**





3.1	<b>Carriageway Safety Inspections</b>	
<p>The Council will undertake safety inspections on adopted carriageways to identify defects that are likely to create danger or serious inconvenience to users of the network.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		


3.2	<b>Carriageways Under Housing Ownership</b>	
<p>Safety inspections will be undertaken on some pre agreed housing owned carriageways which are listed in the carriageway and footway hierarchy document in AMX.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

3.3	<b>Council Owned Car parks</b>	 
<p>Safety inspections will be undertaken on Council owned car parks managed by the PTE Directorate which are listed in the carriageway and footway hierarchy document in AMX.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

3.4	<b>Footway Safety Inspections</b>	
<p>The Council will undertake safety inspections on adopted footways to identify defects that are likely to create danger or serious inconvenience to users of the network.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

<p><b>3.5</b></p>	<p><b>Footways Under Housing Ownership</b></p>	
<p>Safety inspections will be undertaken on some pre agreed housing owned footways which are listed in the carriageway and footway hierarchy document in AMX.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

<p><b>3.6</b></p>	<p><b>Off Street Cycleway Safety Inspections</b></p>	
<p>There are no routine safety inspections of the off street cycleway network.</p> <p>Customer requests for inspections or repairs in these areas are passed on to the Council section responsible for the land.</p>		

<p><b>3.7</b></p>	<p><b>On Street Cycleway Safety Inspections</b></p>	
<p>The Council will undertake safety inspections on the on-street cycleway network.</p> <p>Cycleways located in the carriageway will be inspected as part of the carriageway safety inspection regime and cycleways located in the footway will be inspected as part of footway safety inspection regime.</p> <p>Defects will be assessed in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

**3.8**



**Rear Lanes (Adopted)**





Safety inspections of adopted rear lanes will be undertaken on a reactive basis in response to customer complaints and requests.



Defects will be assessed in accordance with document: **Part C: 001 - Highway Safety Inspections**



<b>4</b>	<b>General Inspections and Licensing</b>
<p>Inspections that focus on ensuring the network meets the needs of users.</p> <p><b>Highway Inspections &amp; Licenses That are Out of Scope of This Policy</b></p> <p>Below is a list of Highway and Transportation functions and licensing/management activities that have a direct relationship to the services delivered by the Highways Infrastructure and Operations Teams but are <b>not included in this policy</b> as they are managed in other areas of the service and/or under separate Policy.</p> <ul style="list-style-type: none"> <li>• Streetworks – Inspections</li> <li>• Streetworks – Co-ordination of Works on the Highway</li> <li>• Licensing &amp; management of Construction Skips</li> <li>• Licensing &amp; management of Storage Containers</li> <li>• Licensing &amp; management of Scaffolding and Hoardings</li> <li>• Enforcement of obstructions and Illegal Deposits</li> <li>• Licensing &amp; management of Construction of Vehicle Crossovers</li> <li>• Enforcement of Illegal Signs and Goods</li> <li>• Licensing &amp; management of Street Cafés</li> <li>• Licensing &amp; management of Activity Sites</li> </ul>	

<b>4.1</b>	<b>Third Party Claims</b>	 
<p>Investigations will be made into all highway insurance claims and where a defence to any claim exists, the Council will use this defence robustly.</p> <p>As described above the Council carries out comprehensive safety inspections. Details of the Council’s Highway Safety Inspection regime can be seen in: <b>Policy Part C:001 - Highway Safety Inspections</b></p>		

<b>5</b>	<b>Carriageway &amp; Footway Condition Surveys &amp; Planned Maintenance</b>
<p>This service function covers the forward programming of carriageway and footway maintenance broadly set out in the Highway Asset Management Plan and is based on HAMP strategies to define service standards and improve how the asset is managed.</p>	

<b>5.1</b>	<b>Carriageway and Footway Condition Assessments</b>	 
<p>Condition assessments are undertaken on the carriageway and footway network primarily intended to identify defects in the highway which, if untreated, are likely to adversely affect its long-term performance and serviceability. These assessments contribute to a dynamic data set used to generate annual renewal and improvement programmes.</p> <p>The Council uses a number of manual and machine inspections to understand the condition of the highway network. These include:</p> <ul style="list-style-type: none"> <li>• <b>RoadAI</b> An artificial Intelligence (AI) technology tool recording high-quality video data from a moving vehicle which is post processed to assess road surface conditions quickly and accurately.</li> <li>• <b>Safety Inspectors Condition Assessment</b> As safety inspectors undertake their cyclic safety inspection an assessment of overall carriageway and footways condition is recorded.</li> <li>• <b>Engineering Inspections</b> A driven or walked visual inspection of the carriageway or footway that are assessed against their condition.</li> <li>• <b>SCANNER (Surface condition Assessment of the National Network of Roads)</b> SCANNER is a machine-based survey that assesses the surface condition of the A, B &amp; C class carriageways. This survey technique is used to collect the Welsh Assembly Government Performance Indicators and enable comparisons nationally.</li> <li>• <b>SCRIM (Sideways Force Co-efficient Routine Investigation Machine)</b> SCRIM is a machine-based survey that assesses the skidding resistance of the carriageway. All A and B and selected C and U class roads are surveyed annually.</li> </ul>		

<p><b>5.2</b></p>	<p><b>Carriageway and Footway Surface Renewal and Reconstruction</b></p>	 
<p>The Council will maintain the highway network adopting a risk-based approach with consideration to its usage, location and condition.</p> <p>These works usually involve replacing the entire footway or carriageway with new material or protecting the existing surface with an impermeable weatherproof overlay. Treatments include but are not limited to reconstruction, strengthening, resurfacing, inlay patching and preventative surface treatments such as micro asphalt and surface dressing. Other complimentary treatments are also undertaken to address particular forms of asset deterioration.</p> <p>These schemes are prioritised based on an evaluation of condition, usage and need with information obtained from network surveys (machine based &amp; visual described above), site inspections, safety inspector feedback and Councillor and customer requests and complaints. The data is collated and reviewed to form a draft priority list; final checks are made on each location identified on the list to determine the section that should be considered for treatment. The priority list is then finalised based on the budget available for that treatment programme.</p> <p>Contracts for these works are let throughout the year and the available budget will define the overall number of schemes delivered. Local members and residents will be notified of any proposed works. The decision to undertake maintenance schemes considers a balance between immediate need and the best long-term solution for the network, for example the use of preventative surfacing within the suite of treatment options enables us to make the best use of the limited resources.</p> <p>Carriageways and footways will be repaired using materials relevant to the use and location of the street and may be different to the existing surface.</p> <p>When continual vehicular damage is identified on existing slabbed footways they may be replaced with flexible surfacing. Treatment types may vary and will take usage and damage into consideration. For localised repairs, larger slabs may be replaced by smaller slabs, to reduce the likelihood of further failure from vehicle overrun and remove the inherent issues related to manual handling.</p>		

<p><b>5.3</b></p>	<p><b>Localised Highway Asset Improvements and Reconstruction</b></p>	 
<p>The Council will maintain the highway network adopting a risk-based approach with consideration to its usage, location, and condition.</p> <p>These localised highway asset improvements and reconstruction works often arise from network surveys, site inspections, safety inspector feedback and Councillor and customer requests and complaints. These improvements generally rectify ongoing asset deterioration which will enhance localised issues lengthening substantially the useful life of the asset. Any safety defects identified will be dealt with in accordance with the Part C Policy: <b>Part C:001 Highway Safety Inspections.</b></p> <p>These works usually involve replacing localised areas or elements of highway infrastructure which could include (but not limited to), paving, asphalt, kerbs, street furniture, drainage etc. These improvements are prioritised utilising a risk-based approach within available budget.</p>		

**5.4****Mobility Access Improvements**


The council is committed to carrying out improvements to the adopted highway to facilitate improved access for those users with increased mobility requirements.


To help improve mobility access an annual programme of installing dropped kerbs at junctions and minor re-profiling will be undertaken. Provision of pedestrian access beyond this on busier junctions and roads will need to be evaluated for traffic and pedestrian safety implications by the Council's Transportation Team.


Each request is considered on its own merits within available budget. The following criteria are considered when selecting schemes:

- Pedestrian usage
- Traffic volume
- Does the new crossing complete a missing link?
- Proximity to the nearest existing crossing
- Proximity to shops and leisure facilities
- Proximity to medical facilities
- Proximity to educational facilities
- Proximity to a bus stop
- Proximity to a care home or sheltered accommodation

<b>6</b>	<b>Cyclic / Routine Maintenance</b>
<p>This service function provides guidance on the service standards for regular aspects of highway maintenance that take place on a cyclic or routine basis.</p>	

<b>6.1</b>	<b>Carriageway Markings Routine Maintenance</b>	
<p>The Council will inspect road markings in response to complaints and adopt a risk-based approach within available budget for the prioritisation of their replacement.</p> <p>Regulatory road markings have cyclic inspections on selected routes during planned safety inspections. For details refer to: <b>Policy Part C:001 - Highway Safety Inspections</b></p>		

<b>6.2</b>	<b>Drainage Gully/Catchpit Cleansing</b>	
<p>The Council will provide a cyclic drainage gully cleansing service for the adopted highway network excluding adopted rear lanes, which are cleansed only on request.</p> <p>The Council is working towards cleansing all highway drainage gullies on a cyclic basis. However, reports of blocked gullies resulting in localised flooding are prioritised before moving onto cyclical gully cleansing activities. As a result, during periods of heavy/extended rainfall, cyclical operations may be delayed.</p>		

<b>6.3</b>	<b>Drainage Maintenance – Ditching, Hazarding and Letting</b>	
<p>The Council will provide cleansing and surface water drainage on adopted roads through; ditching, hazarding and letting functions in response to complaints and adopt a risk-based approach within available budget for the prioritisation of these works.</p> <p><b>“Ditching”</b> involves clearing the bottom of a ditch of any extraneous material which would obstruct the flow of water along it. Detailed inspections of ditches are carried out upon request. Defects arising from detailed inspections or complaints of flooding will result in a ditch cleansing operation, subject to funding.</p> <p><b>“Hazarding”</b> involves cutting back grass, soil, roots, grit and leaves from the edge of the carriageway to form a regular and stable roadside bank profile. Planned hazarding is undertaken in some locations as listed in the local schedule.</p> <p><b>“Letting”</b> involves the clearance of any build up of detritus or debris and reshaping of the existing channel at the edge of the carriageway to allow the discharge of storm water into an adjacent drainage ditch or land (this is termed as Riparian Liability).</p>		



**6.4****Drainage Repairs and Improvements**

The Council will maintain drainage gullies on the adopted highway network in response to complaints observation from other works or inspections and adopt a risk-based approach within available budget for the prioritisation of these works.

Where a given defect is highlighted by safety inspections, a repair will be undertaken to rectify the defect.

Where high pressure jetting proves unsuccessful during cleansing, the location of the blockage will be recorded, and an exploratory excavation undertaken in order to repair any evident damage. If additional drainage is required, a scheme will be devised to improve drainage at that location subject to available funding.

**6.5****Highway Verges**

In maintaining the highway verge regard will be made of the importance of nature conservation all of which is associated with satisfying the Council's statutory obligations primarily under the Highways Act 1980.

Routine grass cutting on highway verges is undertaken by the Council's Parks teams.


Reports of persistent verge damage will be inspected and assessed, and improvement works will be considered where appropriate adopting a risk-based approach within available budget.


Where appropriate the following improvements may be considered:


- Reconstruction of the existing verge to a hard surface.
- Restoration of the existing verge and application of protection methods.
- Reduction of verge width or total removal of the verge to increase carriageway area.
- Provision of Grasscrete (or similar).

Verges within the adopted highway are inspected on all routes during planned safety inspections. For details refer to: **Policy Part C:001 - Highway Safety Inspections**


In some instances, enforcement action may be taken on those damaging the verge or other preventative measures taken such as introduction of Traffic Regulation Orders.


<p><b>6.6</b></p>	<p><b>Street Furniture Routine Maintenance</b></p>	
<p>The Council will inspect street furniture in response to complaints and adopt a risk-based approach within available budget for the prioritisation of its replacement.</p> <p>Street furniture is inspected on all routes during planned safety inspections. For details refer to:  <b>Policy Part C:001 - Highway Safety Inspections</b></p>		


<p><b>6.7</b></p>	<p><b>Traffic Sign Cleaning</b></p>	
<p>As far as is reasonably practicable the Council clean traffic signs to keep them legible and adopts a risk-based approach within available budget for sign cleaning prioritisation.</p>		


<p><b>6.8</b></p>	<p><b>Traffic Signs Routine Maintenance</b></p>	
<p>The Council will inspect traffic signs in response to complaints and adopt a risk-based approach within available budget for the prioritisation of their replacement.</p> <p>All new signs are bi-lingual and manufactured in accordance with the Traffic Signs Regulations and General Directions 2016.</p> <p>Regulatory and warning signs have cyclic inspections on selected routes during planned safety inspections. For details refer to: <b>Policy Part C:001 - Highway Safety Inspections</b></p> <p>None of the inspection and repair activities described in this section apply to the treatment of electrical components. These inspections are managed by the Council’s electrical team and are described in section 12.</p>		


<b>7</b>	<b>Flood &amp; Coastal Risk Management</b>
<p>This service function covers all aspects and legislative requirements required of Cardiff Council as the Local Lead Flood Authority (LLFA) and the Suds Approval Body (SAB).</p> <p>This service function also covers aspects and legislative requirements required of Cardiff Council under the Mines and Quarries (Tips) Act 1969.</p>	


<b>7.1</b>	<b>Local Lead Flood Authority (LLFA)</b>	
<p>Cardiff Council under The Flood and Water Management Act 2010 is designated as The Local Lead Flood Authority. The LLFA has a strategic overview role to manage and mitigate for local flood risk. Cardiff Council is the designated LLFA for all areas within the authority’s boundary.</p> <p>Local Flood risk is designated as that from surface water, groundwater and ordinary watercourses</p>		


<b>7.2</b>	<b>Flood Risk Management Plan &amp; Strategy</b>	
<p>As defined in The Flood Risk Regulations (2009) and The Flood and Water Management Act (2010) the LLFA is required to have in place an adopted Flood risk Management Plan and Flood Risk Strategy. These documents are updated in line with the respective legislation and The Welsh Government Guidance.</p> <p>The Documents have been combined into one strategy known as The Local Flood Risk Management Strategy and can be viewed on Cardiff Councils website or a hard copy issued to any interested party.</p>		


<b>7.3</b>	<b>Flood Investigations</b>	
<p>As per the requirements of The Flood and Water Management Act 2010 an investigation will be undertaken by the LLFA upon the receipt of a report of a flood incident. Should the number of internally flooded homes reach the appropriate trigger level, a section 19 report (Flood and Water Management Act 2010) will be drafted and published on the council’s website.</p> <p>As per the councils adopted strategy, the Section 19 trigger is <u>when 20 properties have encountered internal flooding from the same source</u>. Internal flooding is categorised as the ingress of water from and external source.</p>		


<p><b>7.4</b></p>	<p><b>Flood Risk Schemes</b></p>	
<p>Schemes to lower the risk of internal flooding from a range of sources are undertaken following the 5 Business Case model. Schemes range from small scale localised schemes to extensive multi million pound schemes.</p> <p>Schemes are undertaken utilising internal, DCWW, Welsh Government and other external stakeholder funding.</p> <p>The five business case model has been designed and adopted by HM Treasury, The Welsh Government and The UK Office of Government Commerce.</p>		


<p><b>7.5</b></p>	<p><b>Ordinary Watercourse Consents</b></p>	
<p>The LLFA undertakes its duties and requirements as set out in The Land Drainage Act 1991 (as amended by The Flood and Water Management Act 2010).</p> <p>An alteration / interaction with an ordinary watercourse (i.e culvert / diversion) requires consent from the LLFA under Section 23 of The Land Drainage Act 1991.</p> <p>An Ordinary Watercourse is any River, Stream, Brook, Ditch, Drain, Culvert, Pipe or any passage of which water flows that is not designated as Main River on Natural Resource Wales database.</p> <p>The enforcement powers given to the LLFA under this act are permissive and decisions on whether to utilise these powers is based on the level of flood risk caused by the nuisance.</p>		


<b>7.6</b>	<b>Suds Approval Body (SAB)</b>	
<p>All developments over 100 square meters are required to obtain SAB approval along with other consents as per the enactment of Schedule 3 of The Flood and Water Management Act 2010 on 7<sup>th</sup> January 2019.</p> <p>A Pre-Application service is offered to applicants which can be taken jointly or separately to the planning department.</p> <p>All applications are assessed in line with the 6 Suds Standards, 12 principles and The Welsh Government Guidance.</p> <p>The 6 Standards are:</p> <ol style="list-style-type: none"> <li>1. Discharge Destination</li> <li>2. Discharge rate</li> <li>3. Water Quality</li> <li>4. Amenity</li> <li>5. Biodiversity</li> <li>6. Maintenance and Adoption</li> </ol>		


<b>7.7</b>	<b>Planning Authority Consultee Comments</b>	
<p>The LLFA are a non-statutory consultee to all planning permission applications submitted to the planning authority.</p> <p>Should the LLFA be consulted comments are returned withing the requested deadlines. All comments take into consideration, the SAB principles and standards.</p> <p>Current and predicted climate change impacts are also considered within any returned comments</p>		


<b>7.8</b>	<b>Flood Risk Asset Register</b>	
<p>As per Section 21 of The Flood and Water Management Act 2010, the LLFA has a duty to maintain a flood risk asset database (such as culverts and debris screens).</p> <p>The flood risk asset database is maintained and included within the highways AMX asset database. Asset locations and current condition are shared with other risk management authorities when requested.</p> <p>Approximately 100km of culverted watercourses and 40 debris screens.</p> <p>10 of the “critical” debris screens have telematic monitoring cameras and loggers installed. These assets feed into the managed “timeview” monitoring software</p>		


<b>7.9</b>	<b>Non-Flood Risk Asset Register</b>	
<p>A non-flood risk asset database is maintained and included within the highways AMX asset database.</p> <p>This database contains highway drainage assets, Suds assets and other drainage assets that are not considered to have a direct influence on flood risk as per the Welsh Government guidelines.</p> <p>Approximately 95k highway gullies, 250km of piped network and 150 SUDS assets.</p>		

<b>7.10</b>	<b>Pumping Station and Groundwater monitoring</b>	
<p>Management of 15 foul and groundwater pumping stations and associated infrastructure.</p> <p>These assets are maintained under departmental Service Level Agreements (SLA).</p> <p>Department SLA’S include: Housing, Waste, Harbour Authority and Strategic Estates</p> <p>SLA’S are renewed and signed at the beginning of the financial year.</p>		

<b>7.11</b>	<b>Coal and non-Coal Tips</b>	
<p>Duties are undertaken as required by the Mines and Quarries (tips) Act 1969. These include but are not limited to inspections, mitigation measures and remedial works.</p> <p>Coal and non-Coal tip assets are recorded on the highways asset AMX database.</p> <p>Coal Tip Categories:</p> <ul style="list-style-type: none"> <li>A – Low Risk</li> <li>B – Low / Medium Risk</li> <li>C – Medium / High Risk</li> <li>D – High Risk</li> </ul>		


<b>7.12</b>	<b>Enforcement</b>	
<p>Cardiff Council has permissive enforcement powers under numerous legislations.</p> <ul style="list-style-type: none"> <li>• Building Act 1984 - Utility Misconnection</li> <li>• Highways Act 1980 - Illegal discharge onto highway</li> <li>• Land Drainage Act 1991 - Unconsented Culvert</li> <li>• Mine and Quarries (Tips) Act 1969 - Groundwork on a coal tip</li> <li>• Article 4 of the Sustainable Drainage (Enforcement) (Wales) Order 2018</li> </ul>		


<b>7.13</b>	<b>Shore Line Management Plan</b>	
<p>Cardiff Council has a statutory duty to have an adopted shoreline management plan which identifies the most sustainable approach to managing the flood and coastal erosion risks to the coastline in the:</p> <ul style="list-style-type: none"> <li>• Short Term (0-20 years)</li> <li>• Medium Term (20-50 Years)</li> <li>• Long term (50 – 100 years)</li> </ul> <p>These timeframes are also known as epochs within the shoreline management plan.</p> <p>Cardiff Council is situated within SMP19 <b>Anchor Head to Lavernock Point (Severn Estuary)</b> which is led by The Environment Agency.</p> <p>Cardiff Council is responsible for 3 policy units:</p> <ul style="list-style-type: none"> <li>• <u>Car 1</u> – Cardiff Bay Barrage</li> <li>• <u>Car 2</u> – Western end of Cardiff Bay Barrage to mouth of River Rhymney at Rover Way</li> <li>• <u>Car 3</u> – Both banks of the River Rhymney from the mouth at Rover Way to the Lamby Way landfill site drain</li> </ul> <p>Cardiff Council has adopted the policy of Hold the Line for all 3 policy units.</p> <p>Hold the line is defined as keeping the line of defence in approximately the same location as it is now. Existing defences are maintained, replaced or upgraded along their current alignment. This may or may not include upgrades to counter climate change as sea levels rise.</p>		


<p><b>7.14</b></p>	<p><b>Butetown Tunnel Drainage Maintenance &amp; Management</b></p>	
<p>The management of the Drainage components of the Butetown tunnel are undertaken by the Flood &amp; Coastal Risk Management team. However, the management for the Structural and the Mechanical &amp; Electrical components of the tunnel are split between the Highway Structures Team and Highways Electrical Team respectively.</p> <p>Maintenance is generally delivered by the current term maintenance contractor and undertaken in accordance with the current Butetown Tunnel Services Maintenance Contract. However, some maintenance and inspection services are procured independently.</p>		





<b>8</b>	<b>Highway Structure</b>
<p>This service function covers all aspects of service delivery and standards for the ‘Structures’ inventory and is based on HAMP strategies to define service standards and improve how the asset is managed. The term structures incorporate vehicular over and under bridges, subways, footbridges, major retaining walls and large diameter culverts (&gt;0.9m). The authority has 1 tunnel within its inventory.</p>	


<b>8.1</b>	<b>General Inspections</b>	
<p>The Council will carry out general inspections on all Council Highways structures once every two years.</p> <p>General Inspections shall be recorded on the structures database. Defects and remedial works will be assessed, and appropriate action taken to maintain safety based on a risk-based approach with consideration to usage, location, and condition in line with available resources. Defects identified that are not prioritised for repair as described above are added to the structures work bank from which they can be considered for action in the future.</p>		


<b>8.2</b>	<b>Principal Inspections</b>	
<p>The Council will carry out principal inspections on all Council Highways Structures every six years.</p> <p>Principal Inspections shall be recorded on the structures database. Defects and remedial works will be assessed, and appropriate action taken to maintain safety based on a risk-based approach with consideration to usage, location, and condition in line with available resources. Defects identified that are not prioritised for repair as described above are added to the structures work bank from which they can be considered for action in the future.</p>		


<b>8.3</b>	<b>Structural Review &amp; Assessment</b>	
<p>The Council will carry out a Structural review on a structure every 12 years, in accordance with CS451. The review will determine if a further Load Capacity assessment is required on the structure.</p> <p>The Structural Review and any subsequent Load Capacity assessment will be recorded on the Structures database along with any action undertaken to maintain safety. The outcome of an assessment will depend upon the individual structural circumstances which apply at that location. For example, the structure may require a weight restriction to be imposed either as an interim or permanent measure, i.e. until appropriate strengthening works has been undertaken.</p>		


<p><b>8.4</b></p>	<p><b>Special Structural Inspections</b></p>	
<p>The Council will undertake special structural inspections as required when accidental damage, scour, post tensioned issues or other structural defects are identified.</p> <p>Special Structural Inspections are recorded on the structures database. Defects and remedial works will be assessed, and appropriate action taken to maintain safety based on a risk-based approach with consideration to usage, location, and condition in line with available resources. Defects identified that are not prioritised for repair as described above are added to the structures work bank from which they can be considered for action in the future.</p>		

<p><b>8.5</b></p>	<p><b>Kerb Drainage to Structures</b></p>	
<p>The Council will inspect the kerb drainage on the Leckwith, Southern Way, Grangetown, Cogan Spur and Taff &amp; eastern Bay Link viaducts annually.</p> <p>Kerb drains (Aqua Drains) will be cleared of detritus as required.</p>		

<p><b>8.6</b></p>	<p><b>Structural Records</b></p>	
<p>The Council maintains a database for all structures that support or cross the highway to ensure adequate records exist to identify liability for those structures.</p> <p>For structures maintained by the Highway Structures team the database contains archive construction drawings (where available), records of asbestos use, ecological surveys, inspection records and work records. A full inventory of retaining walls exists for highway structures, however, records of retaining walls under the ownership of others is yet to be developed.</p> <p>For structures that are owned privately (e.g. rail companies) or by other Council service areas (parks, harbour authority, housing etc), only the ownership details of these structures are recorded on the database.</p>		

<p><b>8.7</b></p>	<p><b>Abnormal Load Movements</b></p>	
<p>The Council will process notices (in accordance with Article 26,2,b of ‘The Road Vehicles (Authorisation of Special Types) General Order 2003 that all hauliers shall give in respect of all loads with laden dimensions exceeding:</p> <ul style="list-style-type: none"> <li>• 44,000 Kg (44t) gross weight</li> <li>• 2.9m (9’6”) overall width or</li> <li>• 18.65m (61’0”) rigid length</li> </ul> <p>The notice period a haulier gives shall be at least 2 clear working days for loads up to 80,000 kgs and at least 5 clear working days for loads over 80,000 kgs. The Form of Indemnity may be submitted any time before the movement.</p> <p>All notices correctly submitted will be assessed and the haulier will only be advised if any structures have insufficient strength to support the load, or if there is a height restriction.</p>		

<p><b>8.8</b></p>	<p><b>Structural Works</b></p>	
<p>The Council will assess, monitor, or repair defects to structures as deemed appropriate.</p> <p>To ensure the general maintenance of structures can be carried out efficiently defects and remedial works will be assessed from inspection reports and appropriate action taken to maintain safety based on a risk-based approach with consideration to usage, location, and condition in line with available resources.</p>		

<p><b>8.9</b></p>	<p><b>Structural Painting</b></p>	
<p>The Council will endeavour to re-paint all steel structures such that their structural integrity is not impaired.</p> <p>Inspections will identify the need for structural painting. Painting work is prioritised and programmed utilising a risk-based approach with consideration to usage, location, and condition in line with available resources.</p>		

**8.10****Structural Renewal**

The Council will endeavour to renew structures where remedial work is not economically viable.

Inspection reports will be assessed, and any structural renewals required will be prioritised utilising a risk-based approach with consideration to usage, location, and condition in line with available resources.

Where funding is not available to undertake necessary upgrades or repairs a weight restriction may be imposed either as an interim or permanent measure, depending on the circumstances which apply at that location.

**8.11****Technical Approval of Structures Supporting the Highway**

The Council will employ procedures for technical approval of structures on Council road schemes as set out in; 'Technical Approval of Highway Structures on County Roads' Highways England/Welsh government CG300.

Where instigated by third party works the Council will recover the expense of undertaking technical approvals. In instances where the structure will be transferred into Council ownership a commuted maintenance cost will be charged to the developer, to include costs of future inspection and maintenance for a period of 60 years.

The procedures are for new design, assessment of load carrying capacity or demolition of existing structures which support the highway. It is nationally applied using the Design Manual for Roads & Bridges on motorway and trunk roads and by all local authorities for the purpose of ensuring safety and durability of the highway network.


As Technical Approval Authority (TAA), the role of the Council is to agree the fundamental principles and parameters to be utilised in the design, in the form of an approval in principal (AIP) document and ensure that design and construction are completed in compliance with the AIP.

The purpose of the AIP stage is to enable the TAA to be satisfied, before detailed design proceeds, as to:

- The application of selected design documents.
- The adequacy of soil & other investigations.
- The loading and other design criteria proposed.
- The suitability of the design method.
- The provision made for the inspection and maintenance of the structure.

The role of the TAA is:


- To agree with the category of the structure and the need for AIP.
- To examine proposals at the preliminary stage and endorse the AIP.
- To receive the drawings, design or assessment and check certificates to signify compliance.
- To receive and endorse construction compliance certificate.
- To receive and examine the health & safety files, completing the technical approval procedure


<b>8.12</b>	<b>Butetown Tunnel Structure Maintenance &amp; Management</b>	
<p>The management of the Structural components of the Butetown tunnel are undertaken by the Highway Structures team. However, the management for the Drainage and the Mechanical &amp; Electrical components of the tunnel are split between the Flood &amp; Coastal Risk Management Team and Highways Electrical Team respectively.</p> <p>Maintenance is generally delivered by the current term maintenance contractor and undertaken in accordance with the current Butetown Tunnel Services Maintenance Contract. However, some maintenance and inspection services are procured independently.</p>		


<b>9</b>	<b>Incident Response &amp; Severe Weather</b>
<p>This service function is closely integrated with the operational arrangements for Safety/Reactive and emergency inspections and Highway Management &amp; Enforcement. It covers operational procedures to ensure service cover is '24-7' covering periods both during the normal working day and outside of normal working hours. It includes the specific function of Winter / Adverse Weather Service and plans for dealing with incidents that occur on or adjacent to the Highway Network</p>	

<b>9.1</b>	<b>Incident Response</b>	
<p>The Council will provide an emergency highway response service 24 hours a day 365 days a year over the whole of the adopted highway network.</p> <p>The Council provide an emergency service through normal resources during working hours and out of hours via an emergency call out system where levels of resources can be mobilised to respond and make safe emergencies on the adopted highway. The response time during normal working hours shall be no more than 2 hours. The operational criteria for responding to incidents are described in the Highway Operations Emergencies Manual.</p> <p>A limited resource is available and is secured by a standby arrangement. If additional resources are required these will be mobilised subject to availability.</p> <p>Details of this service can be seen in the Council's <b>Emergency Manual</b></p>		

<b>9.2</b>	<b>Winter Plan</b>	
<p>The Council will provide a full winter service between 1<sup>st</sup> November and 31<sup>st</sup> March to treat ice and snow in order to satisfy its obligations under section 150 of the Highways Act. Weather is monitored in October and April with resources being mobilised as required.</p> <p>Details of this service can be seen in the Council's <b>Winter Service Plan</b></p>		

<p><b>9.3</b></p>	<p><b>Flooding</b></p>	
<p>The Council has arrangements in place to manage the consequences of flooding and occurrences of severe weather.</p> <p>Details of these procedures can be seen in the Council’s <b>Cardiff Council Local Flood Risk Strategy</b> and associated action plans.</p>		

<p><b>9.4</b></p>	<p><b>Dead Animals on the Highway</b></p>	
<p>The Council as Highway Authority will remove any dead animal larger than a cat from any adopted <b>carriageway</b> where a speed limit of 50 mph or more applies.</p> <p>Where large dead animals are present on routes with a speed limit of 50 mph or more the Council will endeavour to move within 2 hours of notification to allow the safe passage of vehicular traffic on the highway. If this is not possible, the road will be made safe until such a time that the animal is removed.</p>		

<p><b>9.5</b></p>	<p><b>Live Animals on the Highway</b></p>	
<p>The Council will wherever possible endeavour to make the highway safe by the removal of the animals at the earliest opportunity.</p> <p>Where large animals (e.g. horses, cows, sheep, goats etc) are present on the adopted highway the Councils contractor will move them to a safe location or undertake any action that is deemed necessary to alleviate the immediate danger. Response is planned to be within 2 hours.</p> <p>Trading Standards, employ a dog warden for removal of stray dogs from the highway.</p> <p>In order to keep the nuisance of loose horses under control, a horse warden has been employed by Trading Standards who will undertake regular inspections of the known problem areas. A programme of horse collections and impoundments will be arranged periodically to ensure they are removed from council land.</p>		

## 10 Intelligent Transport Systems (ITS).

This service function covers all aspects of service delivery and standards for the Intelligent Transport System asset, including Traffic Signals, CCTV, Dynamic Signs, Tidal Flow System, Real Time Bus Information, Speed Cameras and the Fibre Optic Communication System and is based on HAMP strategies to define service standards and improve how the asset is managed.

### 10.1 Intelligent Transport System Assets



The following assets are managed as part of the Intelligent Transport System:

- Traffic Signals
- Automatic rising bollards
- CCTV systems
- Dynamic signing systems, including.
  - Variable message signs (VMS)
  - Rotating plank signs (RPS)
- Tidal flow system
- Real time bus information
- Speed cameras
- Fibre optic communication system
- Butetown tunnel mechanical & electrical systems

Maintenance of the ITS asset is generally undertaken by the Councils term contractors and is controlled by the Telematics/ITS Equipment Maintenance Contracts which are let on a periodic basis. These contracts contain all the requirements that the contractor must fulfil to appropriately maintain the ITS asset to the Council's Highway Electrical team requirements.

### 10.2 Urban Traffic Control Room & ITS Fault Management System



The Council operates a 24/7 traffic control room through which all ITS assets are routinely monitored for faults and operational effectiveness. Both the Urban Traffic Control system and various ITS systems are monitored and controlled from this facility.

When a fault is generated by the Urban Traffic Control system or ITS systems, depending on its nature, it will be passed to the appropriate term maintenance contractor or the Highway Electrical team for action. Completed repairs will be logged onto the system by the control room. If for a particular reason the fault cannot be closed down, it will be passed onto the Highway Electrical team for consideration and action.



**10.3****Highway Safety Inspections**

The cyclic network highway safety inspections will identify damaged, malfunctioning or missing apparatus and pass this information onto the Highway Electrical team.

Safety inspection frequencies are dependent on the network hierarchy and the assessments will be undertaken in accordance with document: **Part C: 001 - Highway Safety Inspections**

**10.4****Electrical Inspections**


Electrical inspections are undertaken on:


- Traffic Signals
- Automatic rising bollards
- CCTV systems
- Dynamic signing systems, including.
  - Variable message signs (VMS)
  - Rotating plank signs (RPS)
- Tidal flow system
- Real time bus information
- Speed cameras
- Fibre optic communication system
- Butetown tunnel mechanical & electrical systems


These inspections are primarily intended to identify electrical defects which are likely to cause a danger to network users.


All electrical installation inspections and testing is carried out in accordance with the IET Wiring Regulations: BS7671 latest edition by the Council ITS term contractors.


Full details of the electrical testing regime are contained in the current Telematics/ITS Equipment Maintenance Contracts.


<b>10.5</b>	<b>Routine Site Inspections of ITS Assets</b>	
<p>Site inspections of ITS assets are undertaken by the Term Maintenance Contractor.</p> <p>These inspections are primarily intended to identify defects which are likely to cause a danger or inconvenience to network users. These assessments contribute to a continually developing data set used to develop future renewal programmes.</p> <p>The assets included in this inspection regime, the frequency of inspections and the items or components included in these inspections are specified in the current Telematics/ITS Equipment Maintenance Contracts</p>		

<b>10.6</b>	<b>Programmed Maintenance</b>	
<p>The Council will repair and replace ITS assets utilising a risk-based approach with consideration to its usage, location, and condition within available budget. Programmed maintenance is undertaken by the Term Maintenance Contractor.</p> <p>The development of appropriate maintenance programmes is informed by:</p> <ul style="list-style-type: none"> <li>• Term maintenance contractor’s periodic inspections</li> <li>• Urban Traffic Control (UTC) real time faults</li> <li>• Council and 3<sup>rd</sup> party schemes that replace existing asset items</li> </ul>		

<b>10.7</b>	<b>Cyclic Maintenance</b>	
<p>The Council’s Term Maintenance contractor carries out cyclic maintenance on ITS assets.</p> <p>Full details of the cyclic maintenance activities are contained in the current Telematics/ITS Equipment Maintenance Contracts</p>		

<b>10.8</b>	<b>Reactive Maintenance</b>	
<p>Reactive maintenance is undertaken by the Term Maintenance Contractor and will normally be identified from:</p> <ul style="list-style-type: none"> <li>• Periodic inspections</li> <li>• UTC information</li> <li>• Customer complaints and reports</li> </ul> <p>Response times for reactive maintenance are categorised as either urgent or non-urgent. Full details of the fault classification and the response and repair regime are contained in the current Telematics/ITS Equipment Maintenance Contracts.</p>		

<b>10.9</b>	<b>Energy Reduction</b>	
<p>Wherever possible the ITS asset supports Cardiff’s corporate targets by improving the sustainability of the city both financially and environmentally, by reducing the operational energy requirements for the asset and associated CO2 emissions.</p> <p>Energy reduction approaches include:</p> <ul style="list-style-type: none"> <li>• Wherever possible new equipment is installed using extra low voltage (ELV) supplies.</li> <li>• New traffic signal heads will utilise LED technology.</li> </ul> <p>Wherever practical every effort will be made to introduce low energy product alternatives</p>		

<b>10.10</b>	<b>Electrical Energy Management</b>	
<p>The Council will maintain an inventory to comply with unmetered supply regulations and aid efficient energy management.</p> <p>The Councils energy for the ITS assets is procured via a CCS (Crown Commercial Services) framework that is managed via NPS (National Procurement Service (Wales)).</p> <p>ITS assets consume electrical energy. Most electrical supplies to these assets are un-metred (apart from ITS assets that are rated in excess of 500w) whereas supplies to homes and businesses are metered. The Council maintains an inventory of the equipment installed via the ITS Asset Management System. Energy is then calculated based on the inventory data and appropriate charge for the energy consumed.</p>		

**10.11****Technical Approval**

To ensure ITS designs are undertaken to Council requirements the Council will undertake technical approval of ITS assets on Council promoted road schemes and third-party development works usually via the s38 and s278 mechanism.


Council costs incurred for the technical approval of third-party works will be recovered from the developer or promoter. In instances where the ITS assets will be transferred into Council ownership a commuted maintenance cost will be charged to the developer, to include costs of future inspection and maintenance for a period of 20 years.


Technical approvals may be generally based on (but not restricted to) the following technical guidance:


- BS 7987 (HD 638) Road Traffic Signal Systems
- BS7671 -18<sup>th</sup> Edition – IET Wiring Regulations
- BS EN 50293 Electromagnetic Compatibility Road Traffic Signal Systems Product
- BS EN 12675 Traffic signal controllers – functional safety requirements Specifications
- TRG 0600 Self-Certification and Approval of Equipment for the Control of Vehicular and Pedestrian Traffic on Roads
- TR 2506 Performance Specification for Above Ground On-Crossing Pedestrian Detection Systems
- TR 2507 Performance Specification for Kerbside Detection Systems for use with Nearside Signals and Demand Units
- TR 2508 Performance Specification for Tactile Equipment for use at Pedestrian Crossings
- TR 2509 Performance Specification for Audible Equipment for use at Pedestrian Crossings
- TR 2523 Traffic Control Equipment Interfacing Specification
- MCE 0360 Urban Traffic Control - Functional Specification
- MCE 0361 High Capacity data transmission system for use in UTC
- TR 2500 A Specification for Traffic Signal Controller
- TSR&GD Traffic Signs Regulations and General Directions 2016
- The Zebra, Pelican and Puffin Crossing Regulations and General Directions 1997
- TA 89/04, Use of Passively Safe Signposts to BS EN 12767, DMRB, Vol 8, Section 2
- BS EN 12767, Passive safety of support structures for road equipment - Requirements and test methods, BSI.
- Road Traffic Regulation Act 1984.
- MCS 206, List of Drawings, Specifications and Instructions. HA.
- MCS 215, Traffic Signal Equipment On All Purpose Roads European Standard EN 12368:2000. BSI.
- Local Transport Note 1/98, The Installation of Traffic Signals and Associated Equipment.
- TR 2154, Light Signal for Control of Tramcars. HA.
- TR 2513 Performance Specification for Wig Wag Signal Control Equipment. HA
- Railway Safety Principles and Guidance, Part 2, Section E, Guidance on level crossings. HSE
- Chapter 3 of the Traffic Signs Manual. TSO
- Chapter 4 of the Traffic Signs Manual.
- Chapter 5 of the Traffic Signs Manual. TSO.
- BS 5489, Road Lighting. BSI. 22
- TR 2500, Specification for Traffic Signal Controller.
- BS 6100:1992 Building and Civil Engineering Terms. BSI.
- MCE 0108C, Siting of Inductive Loops for Vehicle Detecting Equipment at Permanent Road Traffic Signal Installations. HA.
- TAL 16/99, The Use of Above Ground Vehicle

- TA 12 Traffic Signals on High Speed Roads
- TA 84 Code of Practice for Traffic Control and Information Systems
- for All Purpose Roads
- TA 68 The Assessment and design of Pedestrian Crossings
- LTN1/95 – Assessment of Pedestrian Crossings
- LTN 2/95 – Design of Pedestrian Crossings
- Traffic Signs Manual Chapter 6 2019
- Adjacent and Shared Use Facilities for Pedestrians and Cyclists
- LTN 1/04, Policy, Planning and Design for Walking and Cycling, DfT 2004
- Application Guide 44 - MOVA Traffic Control Manual
- Application Guide 45 - Guide to MOVA Data Set-Up and Use
- BS 7818 1995 - Pedestrian Restraint Systems
- CDM Regs 2015
- DB 32 1992
- Guidance on the use of Tactile Paving Surfaces, Department of the Environment, Transport and the Regions & The Scottish Office, DTER, London,1998.
- BS 7997: Products for tactile paving surface indicators Specification, British Standards Institution (Draft), February 2002.
- Shared Use by Cyclists and Pedestrians, DTLR Local Transport Note 2/86, HMSO, August 1986.
- Audible and Tactile Signals at Pelican Crossings, DTLR Traffic Advisory Leaflet 4/91, HMSO, November 1991.
- Inclusive mobility 75 Audible and Tactile Signals at Signal Controlled Junctions, DTLR Traffic Advisory Leaflet 5/91, HMSO, December 1991.
- A design guide for the use of colour and contrast to improve the built environment for visually impaired people, Joint Mobility Unit, RNIB & University of Reading, 1997.
- Tactile paving, Technical Bulletin 9/96, Joint Mobility Unit, London, 1996.
- TA 84, The Code of Practice for Traffic Control and Information Systems
- Design Manual for Roads and Bridges (DMRB), Vol. 8, Section 1.
- Traffic Advisory Leaflet (TAL), Traffic Light Signals
- TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts, Detectors. DfT.
- TAL 3/97, “The MOVA Signal Control System”. DfT.
- TD 35/91, “All Purpose Trunk Roads MOVA System Of Traffic Control At Signals”. DMRB Vol.8, Section 1, Part 1. TSO.
- TAL 7/99, “The SCOOT Urban Traffic Control System”. DfT.
- TAL 7/00, SCOOT Gating. DfT.
- TAL 8/00, Bus Priority in SCOOT. DfT.
- TAL 9/00, SCOOT Estimates of Emissions from Vehicles.
- “A Review of Signal-controlled Roundabouts”, Traffic and Safety Committee, Traffic Management Working Group. CSS.
- LINSIG. JCT Consultancy.
- OSCADY Optimised Signal Capacity and Delay. TRL.
- ARCADY Assessment of roundabout Capacity and Delay. TRL.
- PICADY Priority Intersection Capacity and Delay. TRL.
- Road Research Technical Paper No. 56 - Traffic Signals, Webster and Cobbe, HMSO, out of print.
- TRL Report RR67 The prediction of saturation flows
- National Highways Sector Schemes for Quality Management in Highway Works 8, 9B & 10 Installation and Maintenance of Highway Electrical and/or Highway Electronic Equipment and/or Associated Highway Works 2007
- Highways Act 1990
- MCH1827B – Traffic Signal Controller and Works Specification and Configuration Forms 2006
- TA 89/05 USE OF PASSIVELY SAFE SIGNPOSTS, LIGHTING COLUMNS AND TRAFFIC SIGNAL POSTS TO BS EN 12767
- PUFFIN Good Practice Guide 2006
- TAL 999 20mph zones
- TAL 10-93 TOUCAN Crossing Guide
- TD 9/93 Highway Link Design
- TD 41/95 Vehicular Access to All Purpose Trunk Roads
- TD 42/95 Geometric Design of Major/Minor junctions



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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>DMRB, Vol. 6, Section 2.</li> <li>TAL 5/05, Pedestrian Facilities at Signal-controlled Junctions.</li> <li>TAL 2/03, Signal-control at Junctions on High-speed Roads.</li> </ul> | <ul style="list-style-type: none"> <li>TD 22/06 Grade Separated junctions.</li> <li>Traffic Signs Manual Chapter 8 – Part 1 and Part 2</li> <li>TAL 3-03 Equestrian Crossings</li> </ul> |
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<b>10.12</b>	<b>New ITS Schemes and Developments</b>	
<p>The Council receives requests for new and improved ITS installations. ITS requests come in many forms, through internal Council departments, developers, members of the public, Councillors etc.</p> <p>The process of implementing new ITS installations is generally managed and delivered by the Transportation team. The Highway Electrical team will provide detailed technical support to this process.</p> <p>New Highway Improvement Schemes will often add new ITS assets. When new traffic signals are installed, it may be necessary to upgrade existing ITS assets in the surrounding area in line with the appropriate guidance.</p>		


<b>10.13</b>	<b>Butetown Tunnel Mechanical &amp; Electrical Maintenance &amp; Management</b>	
<p>The management of the mechanical and electrical components of the Butetown tunnel are undertaken by the Highway Electrical team. However, the management for the drainage and structural components of the tunnel are split between the Flood &amp; Coastal Risk Management Team and Highway Structures Team respectively.</p> <p>Maintenance is delivered by the current term maintenance contractor and undertaken in accordance with the current Butetown Tunnel Services Maintenance Contract.</p>		

<b>10.14</b>	<b>Recovering Costs of 3<sup>rd</sup> Party Damage to ITS Assets</b>	
<p>When the ITS asset is damaged by 3<sup>rd</sup> party activities such as a road traffic collision the Council will endeavour to recover the cost of repair from the 3<sup>rd</sup> party.</p> <p>The Council will utilise a debt recovery agency to recover these costs. This cost will include a <b>20%</b> ancillary charge to cover the management and organisational costs incurred by the Council to replace and maintain this asset.</p>		

<b>11</b>	<b>Public Rights of Way (PROW)</b>
<p>This service function covers aspects of service delivery and standards for the management &amp; maintenance of Public Rights of Way.</p> <p>A Public Right of Way (PROW) is a highway over which the public has a right to pass and repass. These paths have a legal status and Cardiff Council has a statutory obligation to record and maintain them, they form the backbone of the off-road network in Cardiff, including portions of promoted long-distance trails and National Trails</p>	


<b>11.1</b>	<b>PROW – Changes to the Rights of Way Network</b>	 
<p>The Council will process a claim for a right of way (supported by evidence of twenty years usage) in accordance with Section 31 Highways Act 1980, Section 53 and Schedule 14 the Wildlife and Countryside Act 1981.</p> <p>Diversion or stopping up orders will be processed pursuant to Section 116, Section 118 or 119 Highways Act 1980 or in the case of orders made under planning permission Section 253 or 257 Town and Country Planning Act 1990.</p> <p>The Council has a duty to determine claims for new rights of way, diversions and stopping up of paths. Claimants are assisted by the provision of an application pack containing guidance notes.</p>		


<b>11.2</b>	<b>PROW – Maintenance</b>	 
<p>The public rights of way network will be maintained in accordance with Section 36 Highways Act 1980 and in accordance with recommendations made within the Rights of Way Improvement Plan (RoWIP).</p> <p>The public rights of way network consists of public footpaths, bridleways, restricted byways and byways open to all traffic.</p> <p>Both landowners and the highway authority (Council) have responsibilities in respect of rights of way. In general landowners are responsible for the maintenance and upkeep of gates and stiles and ensuring that overgrowth from their land does not encroach onto and obstruct a right of way and that any paths disturbed by ploughing are reinstated.</p> <p>The Council is responsible for removing growth from the surface of a path and ensuring the surface is safe and fit for ordinary traffic as befits the character of the way. There is no duty on highway authorities to improve the surface of rights of way or alter its character. The Council is also responsible for signposting footpaths, bridleways and byways where they leave metalled roads and elsewhere along the path to help people follow the route.</p>		

<b>11.3</b>	<b>PROW – Obstructions and Other Nuisance</b>	
<p>The Council will deal with obstructions to the rights of way network in accordance with the Highways Act 1980 as amended by the CROW Act 2000 and the methodology outlined in the RoWIP.</p> <p>In general, the Council is responsible for ensuring the surface of a right of way is free from obstruction and may take action against landowners who obstruct a right of way. It is normal to first attempt to remove the obstruction or abate a nuisance by negotiation resorting to the legal action only when negotiations have failed.</p>		



<b>12</b>	<b>Street Lighting</b>
<p>This service function covers all aspects of service delivery and standards for the street lighting inventory, including illuminated signs and bollards in the adopted highway. It covers all aspects of electrical and structural testing and includes the authority’s policies on energy and environmental light pollution and is based on HAMP strategies to define service standards and improve how the asset is managed.</p>	

<b>12.1</b>	<b>Why Do We Light the Highway?</b>	
<p>There is no statutory requirement on local authorities in the United Kingdom to provide public lighting. The following statutes empower local authorities to light roads but do not impose a duty. In England and Wales, the Highways Act 1980 empowers a Highway Authority to provide lighting for any highway or proposed highway for which they are, or will be, the Highway Authority.</p> <p>Road lighting encompasses the lighting of all types of highway and public thoroughfare, assisting traffic safety and ease of passage for all users. In this respect, good lighting can be one of the measures used to reduce night-time traffic collisions. It can allow pedestrians to see hazards, orientate themselves, recognise other pedestrians and feel more secure. It also has a wider social role, with the potential of helping to reduce crime and the fear of crime and can contribute to commercial and social use at night, of town centres and tourist locations, by improving the daytime and night-time appearance.</p> <p>Under the Highways Act 1980, Health and Safety at Work Act 2015 and the Electricity at Work Regulations 1989 the Council has a duty to maintain its street lighting assets in a safe condition.</p> <p>Having provided street lighting, illuminated signage and bollards, the Council has a duty of care to users of the highway network.</p> <p>The British Standards specification and codes of practice for lighting are not statutory requirements. They are provided to give local authorities and lighting bodies consistent and qualitative standards to work to. The Council is not duty bound to work to these but will be able to demonstrate any departure from national guidelines.</p>		

<b>12.2</b>	<b>Highway Safety Inspections</b>	
<p>The cyclic network wide highway safety inspections will identify exposed electrical elements which are reported to the Street Lighting team.</p> <p>Safety inspection frequencies are dependent on the network hierarchy and the assessments will be undertaken in accordance with document: <b>Part C: 001 - Highway Safety Inspections</b></p>		

**12.3****Electrical Inspections**

Electrical inspections are undertaken on:

- Streetlights
- Illuminated signs.
- Illuminated bollards (but not solar)
- Feeder Pillars.
- Subway lighting.


These inspections are primarily intended to identify electrical defects which are likely to cause a danger to network users. These assessments contribute to a continually developing data set used to develop future renewal programmes.


A visual inspection is carried out at the start of the Test & Inspection process. Should the asset being inspected, fail a visual inspection then the remainder of the process should not proceed. Failed apparatus will be reported back to the Highway Electrical Street Lighting team for further investigation.


All electrical inspections are undertaken on a maximum 6 year cycle in accordance with BS7671 – Requirements for Electrical Installations:


These electrical inspections include a visual inspection, and a Test & Inspection certificate is completed for each installation, which generally covers:




- A schedule of items inspected.
- Fault and additional information
- Identification criteria
- Cable and conductor check
- General checks
- Circuit details
- Test results


<b>12.4</b>	<b>Non-Destructive Structural Inspections</b>	
<p>Non-Destructive Structural inspections are undertaken on the following street lighting assets adopting a risk-based approach prioritising assets posing the greatest risk to network users:</p> <ul style="list-style-type: none"> <li>• High mast columns</li> <li>• Street lighting columns</li> </ul> <p>These inspections are primarily intended to identify structural defects which are likely to cause a danger to network users. These assessments contribute to a continually developing data set used to develop future renewal programmes.</p> <p>Non-destructive structural inspections are undertaken on a maximum 6 year cycle in accordance In line with EN40, GN22, and PLG 06, the industry guidelines recognise the need for structural testing and the non-destructive test method should determine whether a deteriorating lighting column either satisfies the service criteria or is in danger of collapse, the structural inspection could include:</p> <ul style="list-style-type: none"> <li>• Visual inspection</li> <li>• Force Deflection Test – Conclusive Result</li> <li>• Handheld Force Deflection Test – Indicative Result</li> <li>• Ultrasonic (Loss of Section) Test – Indicative Result</li> <li>• Load calculation</li> </ul> <p>Failed apparatus will be reported back to the Highway Electrical Street Lighting team for further investigation.</p>		


<b>12.5</b>	<b>Electrical Energy Management</b>	
<p>The Council will maintain an inventory to comply with unmetered supply regulations and aid efficient energy management.</p> <p>The Councils energy for street lighting assets is procured via a CCS (Crown Commercial Services) framework that is managed via NPS (National Procurement Service (Wales)).</p> <p>Street lighting and illuminated signs and bollards consume electrical energy. The electrical supplies to streetlights are un-metred whereas supplies to homes and businesses are metered.</p> <p>The Council measures the hours of operation and energy use is calculated and the appropriate payment made to the energy supplier.</p>		

<b>12.6</b>	<b>Central Management System (CMS)</b>	
<p>The Council has a Central Management System which provides remote monitoring and management of street lighting by using state of the art real time communication. The CMS was introduced when LED street lighting was introduced.</p> <p>The Central Management System provides many benefits to the operation and management of the street lighting asset, including:</p> <ul style="list-style-type: none"> <li>• Reduced maintenance costs by identifying inoperable lights.</li> <li>• Provides real-time reports on energy consumption.</li> <li>• Fault reporting.</li> <li>• The CMS allows Officers to control lighting levels to support improving energy efficiency and therefore maximise saving potential, whilst allowing the management of any concerns relating to lighting levels.</li> <li>• The CMS allows integration with other technology to managing city infrastructure.</li> <li>• The introduction of LED technology (see below) with a Central Management System provides improvements in the management of street lighting.</li> </ul>		

<b>12.7</b>	<b>Programmed Maintenance</b>	
<p>The Council will undertake programmed repairs and replacements on the following street lighting assets:</p> <ul style="list-style-type: none"> <li>• Streetlights.</li> <li>• Illuminated signs.</li> <li>• Illuminated bollards.</li> <li>• Feeder pillars.</li> <li>• Belisha beacons at zebra crossings.</li> </ul> <p>Asset replacement is not automatic, a risk-based approach is adopted prioritising assets posing the greatest risk to network users. Consideration to usage, location and condition within available budget will be made and the replacement of faulty equipment will be prioritised. Existing street lighting schemes will generally be replaced on a like for like positional basis using specified equipment. There are several criteria used to prioritise and determine appropriate replacement programmes for street lighting assets, including:</p> <ul style="list-style-type: none"> <li>• Ongoing deterioration of asset condition and failures</li> <li>• Electrical testing results</li> <li>• Structural testing results</li> <li>• Energy reduction programmes including introduction of LED's.</li> <li>• Implementation of new technology</li> <li>• Faults identified through CMS monitoring.</li> </ul>		

<b>12.8</b>	<b>Cyclic Maintenance</b>	
The Council will carry out lens cleaning of LED lamps as part of the 6 yearly electrical testing regimes.		
<b>12.9</b>	<b>Reactive Maintenance</b>	
<p>The Council or its contractor will carry out reactive maintenance on the street lighting asset resulting from:</p> <ul style="list-style-type: none"> <li>• Third party accident damage and vandalism</li> <li>• Identified failures from inspections, customer complaints and Central Management System.</li> </ul> <p>The scheduling to rectifying these damaged or missing assets adopts a risk-based approach prioritising assets posing the greatest risk to network users. Consideration to usage, location and condition within available budget will be made.</p> <p>The call out response time for emergency defects is 2 hours (includes faults in the control of the District Network Operator or Independent District Network Operator)</p>		
<b>12.10</b>	<b>LED Replacement Programme &amp; Energy Reduction</b>	
<p>In 2016, the Council’s Cabinet approved the procurement of LED street lighting on the strategic road network with the implementation of 13,600 LED streetlights. In 2021, Cabinet approved the procurement of a further 24,000 LED streetlights on residential roads.</p> <p>The efficiencies associated with LED and its reduced energy consumption will contribute towards the Councils carbon reduction targets, it is now the product of choice and conversely the production of traditional lighting assets has reduced.</p> <p>The LED street lighting programme supports Cardiff’s corporate targets by improving the sustainability of the city both financially and environmentally, by reducing the operation energy requirements for lighting and associated CO2 emissions. Furthermore, the LED street lighting technology adopts intelligence led approaches to managing infrastructure by the introduction of a Central Management System.</p> <p>Prior to the introduction of LED’s and to identify the most appropriate LED product for use in Cardiff a trial of numerous lanterns took place which included comprehensive stakeholder consultation. A pilot LED lighting scheme was delivered in a residential setting which provided positive feedback from residents giving a good indication of the acceptance of this new LED street lighting technology.</p> <p>A Central Management System was introduced when LED street lighting was implemented the benefits of which are described above.</p>		

<b>12.11</b>	<b>Light Levels for LED's</b>	
<p>The LED implementation described above for both residential streets and the strategic network specifies a white light of 3000 kelvins. This is a warmer light colour that matches the existing white light already located in residential areas so the effect on individuals was minimum as the apparent change will be minor. Minimal complaints were received relating to LED installation and any issues reported were efficiently managed through minor adjustments and the CMS system.</p> <p>Lighting levels of 4000 kelvins are used at zebra crossing locations so pedestrians are more visible to traffic as they approach the crossing.</p> <p>As discussed above a comprehensive trial of LED street lighting lanterns took place which included stakeholder consultation. Complaints relating to lighting levels will be reviewed on a case-by-case basis.</p>		

<b>12.12</b>	<b>New Lighting Schemes and Developments</b>	
<p>The Council receives many requests for new and improved lighting. New street lighting requests come in many formats, through internal Council departments, developers, members of the public, Councillors etc.</p> <p>New street lighting can only be installed through the following processes:</p> <ul style="list-style-type: none"> <li>• New developments that are adopted by the Council (see technical approval below)</li> <li>• New highway improvement schemes (including road safety and traffic management)</li> <li>• New community safety schemes.</li> <li>• Supported assessments made by the street lighting team following public, police, senior officer, Community Council or Councillor requests.</li> <li>• New lighting columns installed as part of programmed replacements.</li> </ul> <p>When highway improvement schemes, new traffic management schemes, traffic management features, or pedestrian crossings are installed it may be required to upgrade existing street lighting in the surrounding area in line with the appropriate guidance. These improvement schemes may include (but not limited to):</p> <ul style="list-style-type: none"> <li>• Controlled and pedestrian crossings</li> <li>• Traffic calming</li> <li>• Car parks</li> <li>• Road alignment alterations</li> <li>• Junction improvements</li> <li>• Road safety enhancements</li> <li>• New installations</li> </ul>		

**12.13****Requests for New or Additional Lighting**

Requests for additional street lighting for any purpose other than Council schemes may be **rechargeable**, this will be confirmed to the person(s) making the request prior to the commencement of any work.

Any requests will initially consider:

- The reason for the request
- The impact of change on the existing lighting layout
- The future servicing of the unit
- The impact of the proposal on neighbours, communities and other highway users

The Council will deal with each request on its individual merit, adopting a risk-based approach to prioritising requests that alleviate the greatest risk and add maximum benefit to network users.

Requests are registered and may be undertaken should budgets become available.

Factors that may be considered (but not limited to) are:

- Consequence of the proposed change
- Impact on the existing lighting arrangement
- Impact on any other stakeholders
- Road safety issues
- Environmental issues
- Crime prevention
- Traffic and/or pedestrian volumes

**12.14****Requests to Move an Existing Street Light**

Any requests for the relocation of an existing streetlight will initially consider:

- The reason for the request
- The impact of change on the existing lighting layout
- The future servicing of the unit
- The impact of the proposal on neighbours, communities and other highway users

The Council will deal with each request on its individual merit, adopting a risk-based approach to prioritising requests that alleviate the greatest risk and add maximum benefit to network users.

Requests are registered and may be undertaken should budgets become available.

There are some instances where residents can pay for the relocation of street lighting assets for personal reasons, such as the relocation of a lighting column when constructing a Council approved vehicle crossover. This is subject to the appropriate site assessment by the Highway Electrical Street Lighting Team but there is no guarantee that relocation works will be undertaken.

Factors that may be considered (but not limited to) are:

- Consequence of the proposed change
- Impact on the existing lighting arrangement
- Impact on any other stakeholders
- Road safety issues
- Environmental issues
- Crime prevention
- Traffic and/or pedestrian volumes



**12.15****Technical Approval**

To ensure street lighting designs are undertaken to Council requirements the Council will undertake technical approval of Street Lighting assets on Council promoted road schemes and third-party development works usually via the s38 and s278 mechanism.

Council costs incurred for the technical approval of third-party works will be recovered from the developer or promoter. In instances where the street lighting assets will be transferred into Council ownership a commuted maintenance cost will be charged to the developer, to include costs of future inspection and maintenance for a period of 20 years.

Technical approvals will be generally based on (but not restricted to) the following technical guidance:

- BS5489-1:2020 Design of Road Lighting
- BSEN13201-1 2014 Guidelines on selection of lighting classes
- BSEN13201-2 2015 Performance Requirements
- BSEN13201-3 2015 Calculation of Performance
- ILP TR12 Lighting of Pedestrian Crossings
- ILP TR24 Practical Guide to the Development of a Public Lighting Policy for Local Authorities
- ILP TR25 Lighting for Traffic Calming Features
- ILP TR30 Guidance on the Implementation of Passively Safe Lighting Columns and Signposts
- GN01 Guidance for the reduction of obtrusive light GN05 Using LEDs
- GN06 Retro fitting LED luminaires on existing lighting columns
- GN08 Bats and artificial lighting
- GN22 Asset Management Toolkit (Replaced TR22 – Managing a vital asset: Lighting supports)
- PLG01 Central Management Systems
- PLG02 The Application of Conflict Areas on the Highway
- PLG03 Lighting for Subsidiary Roads
- PLG07 High Masts for Lighting and CCTV
- PLG08 Guidance on the Application of Adaptive Lighting within the Public Realm
- PLG09 Ensuring Visibility within Short Tunnels
- PLG23 Lighting for Cycling Infrastructure
- PLG26 Corrosion Protection of Minor Structures
- GP03 Code of Practice for Electricity Safety in Highway Electrical Operations
- GP10 Safety during the Installation and Removal of Lighting Columns and similar Street Furniture in the Proximity to High Voltage Overhead Lines
- G39 Working in the Vicinity of the DNO
- GS06 Avoiding Danger from Overhead Power Lines
- HERS Highway Electrical Registration Scheme
- BS7671 18th Edition Amendment 2:2022
- BS7430:2015 Code of Practice for Protective Earthing of Electrical Installations
- CDM 2015
- Highways Act 1980
- BSEN 40-3-1 Lighting Columns Design and Verification – Specification of Characteristic Loads
- BSEN 40-3-3 Lighting Columns Design and Verification – Verification by Calculation
- PD6547:2004 Amendment 1:2009 Guidance on the use of 40-3-1 and 40-3-3

**12.16****Attachments to Lighting Columns**

Generally lighting columns have not been designed to accommodate the stresses induced by attaching extraneous objects such as signs, banners, CCTC equipment etc. Generally, attachment will not be permitted on any unit, where attachments are permitted, they must fully satisfy the appropriate consideration and approvals as listed in this section. Any promoter's contractor undertaking approved works relating to street lighting assets must be HEA registered with the appropriate sector scheme approval for working on street lighting equipment. Where attachments to columns are made there may be a charge associated for it which will be agreed with the Highway Electrical Street Lighting Team

**Columns as a Support for Signs.**

Street lighting columns are not to be used as supports or additional support of a sign requiring two posts unless the column has been designed for that purpose. Requests for mounting signs on street lighting columns will only be considered when accompanied by an appropriate structural assessment of that column for the proposed loadings placed on it by the new sign, in accordance with Cardiff Council Highway Electrical Street Lighting Team requirements. Other safety considerations may also prevent signs being mounted on lighting columns.

**Columns as Supports for Banners.**

For a street lighting column to be considered as a support for an advertising sign or banner the following requirements must be met by the promoter making the request:

- Provide an appropriate structural assessment in accordance with Cardiff Council Highway Electrical Street Lighting Team requirements for proposed loadings placed on the existing column by the new sign or banner.
- Demonstrate that there are no other safety issues created through the placement of the sign or banner on the existing column.
- The Council will be indemnified for all liabilities associated with the sign or banner.
- All costs associated with the approval and erection of the banner or sign will be met by the promoter.
- Contact details of the promoter must be made available.
- Proactive and reactive maintenance arrangements must be provided and approved in case of future need of removal or repair.

**Temporary / Permanent Electrical Supplies from Columns.**

Electricity supplies to street lighting columns are generally unmetered (see Electrical Energy Management above). For a supply from a column to be considered the following criteria must be met:

- Approval must be requested and granted from the Highway Electrical Street Lighting Team prior to any connections are made.
- Attachments must have an UMSUG code.
- The promoter will be required to declare and pay for their energy consumption via their own MPAN agreement with the energy provider.
- The promoter must pay for all electricity consumed.
- All equipment must be individually isolatable.
- Supplies must conform to BS7671.
- The Council will be indemnified for all liabilities associated with the equipment supplied from the lighting column.

**Festive Lighting.**

The Council supports the provision of festive lights primarily to encourage commercial activity, it recognises the desire of smaller communities to have festive lights although column mounted festive lights may not be appropriate for all communities. The Highways Act 1980 Section 178 requires that anyone who wishes to fix overhead apparatus over, along or across a road (including associated footways and verges) must first obtain consent from the roads authority (the Council). Consent can be obtained from the Highway Electrical Street Lighting Team, but the following standards must be met:

- The connection of catenary wires will not be permitted to any street lighting assets.
- Installations must comply with:
  - Health & Safety at work act 2015
  - The Electricity at work regulations 1989
  - Construction, design management regulations 2020
  - Requirements for electrical installations – BS7671
- The applicants appointed Contractor shall as a minimum competency requirement ensure anyone associated with the works onsite be registered with the Highway Electrical Registration Scheme (HERS), to National Highway Sector Scheme NHSS 8, evidence of these qualifications must be supplied to the Highways Electrical Street Lighting team. This will not override the requirement for all electrical works to be carried out by a qualified Electrician. Non-Electricians are not permitted to carry out any electrical works on the network in any shape or form.
- Proactive and reactive maintenance arrangements must be provided and approved in case of future need of removal or repair.
- The Council will be indemnified for all liabilities associated with the festive lights.
- Equipment must be UMSO (un-metered supply organisation) rated to allow for the payment of electricity consumed.
- The charge for electricity shall be calculated from the length of period applied for and total electrical load to be connected to the street lighting supply as detailed in the annual application form. The charge shall be a fixed cost covering the proposed installation.
- The promoter will be required to declare and pay for their energy consumption via their own MPAN agreement with the energy provider (National Grid).
- The promoter must undertake an appropriate structural assessment in accordance with Cardiff Council Highway Electrical Street Lighting Team requirements for proposed loadings placed on the existing column by the festive lighting.

**Support of Flower Baskets.**

Street lighting columns should not normally be used as supports for flower baskets of any kind. From time to time the Council may approve the attachment of flower baskets. However, prior to erection the following requirements must be met by the promoter making the request:

- Provide an appropriate structural assessment in accordance with Cardiff Council Highway Electrical Street Lighting Team requirements for proposed loadings placed on the existing column by the new baskets.
- Demonstrate that there are no other safety issues created through the placement of the basket on the existing column.
- Proactive and reactive maintenance arrangements must be provided and approved in case of future need of removal or repair.


**Columns Supporting CCTV cameras.**

The Council deploys CCTV systems in areas suffering from crime and anti-social behaviour and to support traffic regulation orders. These act as a deterrent, a detection tool and reassurance to the public and businesses. Dedicated supports designed for CCTC applications should be used. In the event of a fault the Council accepts no liability to the loss of income or service. In instances where temporary CCTV installations are required approval must be granted subject to the following criteria:

- Provide an appropriate structural assessment in accordance with Highway Electrical Street Lighting Team requirements for proposed loadings placed on the existing column by the new camera.
- Demonstrate that there are no other safety issues created through the placement of the camera on the existing column.
- All equipment must be individually isolatable.
- Supplies must conform to BS7671.
- The promoter will be required to declare and pay for their energy consumption via their own MPAN agreement with the energy provider.
- The promoter must pay for all electricity consumed.

**Columns Supporting Mobile Communications Devices (e.g. 5G).**

At time of preparation of this document this is an evolving technology. Appropriate consultation must be made by any promoter requesting the use of lighting columns in association with mobile communication requirements. The promoter must engage with the Highway Electrical Street Lighting Team to establish their requirements, costs, approvals, and the effects of the request on the street lighting asset.

<b>12.17</b>	<b>Managing Street Lighting Data</b>	
<p>The street lighting asset is currently managed by the Mayrise asset management system.</p> <p>The Mayrise system provides the following management functionality:</p> <ul style="list-style-type: none"> <li>• Asset register</li> <li>• Energy management</li> <li>• Fault management</li> <li>• Links to CMS</li> </ul>		

### Appendix 1 - Policy Change Schedule

Details of amendments for Document (insert version here) issued (insert date):

No	Page No.	Policy Number & Name	Description of Change	Date Changed
1				
2				
3				
4				