Appendix 1

Blaenau Gwent

County Borough Council

Highway Asset Management Plan

2023 – 2028

01June 2023

Document Control

Version Number	Amendments Made	Date
V3.0	Document review – Original	June 2023
Next Review Due		May 2025

Council Approval

Version Number	Council Committee	Date
V3	Scrutiny Committee Cabinet Council	20th June 2023

Responsibility for the Manual

The responsibility for the delivery of and updating of this plan are shown below:

Council Officer	Responsible for
Head of Community Services	Ensuring compliance with the manual and updating of the manual

This set of documents outlines the methods and specifications for the recording and maintenance of all highway assets and has been divided into the following sections:

Section 1: Introduction/Policy

Section 2: Highways Asset Management Strategy for the Adopted Highway

Section 3: Highways Data Management Plan for the Adopted Highway

Section 4: Highways Asset Maintenance Plan for the Adopted Highway

Section 5: Risk Based Approach Methodology for the Adopted Highway

Section 6: Highways Drainage Cleansing Service for the Adopted Highway

Section 7: Skid Resistance Policy for the Adopted Highway

Appendix;

A. Asset Hierarchy
B. Frequency of Inspections
C. Defect Type and Intervention levels
D. Competency Requirements (To be developed)
E. Extract From Highways Act 1980
F. Identified Highest Priority Classified Road Repairs 2023/24 and Assessment Matrix Example
G. Traffic Sensitive Streets
H. Performance Indicators PI's

Section 1

BLAENAU GWENT COUNTY BOROUGH COUNCIL

HIGHWAYS ASSET MANAGEMENT PLAN

INTRODUCTION AND POLICY

2023 - 2028

Date	02/06/2023
Author	David Watkins
Issued to	
Version No.	

1 Introduction

1.1 Purpose

1.1.1. The purpose of this manual is to document how the council manages highway maintenance. The manual shows how the council aims to meet its duties as the highway authority. It documents the methods used to ensure that the risk to users is appropriately monitored and managed.

1.2 Scope

1.2.1 The Highway Asset Management Plan (HAMP) describes how the council will maintain the road network under its control. It details the procedures used to plan and execute of all works and functions associated with the management, operation and maintenance of the highway asset including how the activities are monitored to ensure compliance with council policies.

1.3 Plan Objectives

1.3.1 The HAMP guides Blaenau Gwent County Borough Council acting as the Highway Authority, in the management of the adopted highway network to ensure that:

- All assets continue to deliver a service to the community and highway users at an agreed level.
- There is clear direction for Elected members and Council staff to make informed decisions regarding the adopted highway network.
- Legislative requirements are satisfied.
- Exposure to safety risk is mitigated to agreed and acceptable levels.
- Asset purchases, increases or construction are only approved after whole life costs and benefits are assessed and agreed.
- Clear and transparent allocation of responsibilities for the management of individual assets is recorded.

1.4 Legal Requirements

1.4.1 As the Highway Authority the council has a duty to meet the requirement of the following legislation:

- **The Highways Act 1980:** This places a duty upon Highway Authorities to maintain highways, adopted and maintainable at public expense, and to keep them safe for public use
- **New Roads and Street Works Act 1991:** This places a duty upon Highway Authorities to co-ordinate all works in the highway for the purposes of ensuring safety, minimising inconvenience to highway users, and protecting the highway and apparatus in it.
- **The Traffic Management Act 2004:** This places a duty on Highway Authorities to ensure the expeditious movement of traffic on their road network and networks of surrounding authorities.

1.5 National Guidance

1.5.1 To assist authorities in meeting their duties the following National Guidance is provided. The methods adopted in this manual are based upon the contents of the following:

- "Well-Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group, 2016"
- "Risk Based Approach: Method", 2018, CSSW, 2018
- "Highway Inspection Defect Recording Manual", CSSW, 2018

1.6 Relevant Council Plans and Documents

1.6.1 This manual is part of a proposed suite of documents that will support the council's approach to managing the highway asset. These will include:

- Highway Asset Management Plan.
- Highway Data Improvement Plan.
- Annual Status and Options Reports.

1.7 Definitions

1.7.1 Asset(s): Any physical item(s) the Highway Authority acquires or constructs which gives a benefit or service to highway users.

1.7.2 Asset Group/Class: Any assets that are of similar type, role or construction.

1.7.3 Asset Lifecycle: The period of time from asset acquisition to disposal, or renewal.

1.7.4 Asset Management: Activities and practices through which the Highway Authority optimally manages all assets including intellectual property associated to the adopted network, their performance, safety risk and expenditure over their lifecycle for the purpose of achieving the agreed objectives of the Highway Asset Management Plan.

1.7.5 Asset Management Plan: An agreed plan that details the financial expenditure on and technical treatments to, an asset or asset class over its lifecycle to optimise its availability to highway users.

1.7.6 Asset Register: A record of asset information considered worthy of separate identification.

1.7.7 Level of Service: The agreed, measurable service standard set for an asset, group of assets or asset class against which the Highway Authorities performance can be assessed.

1.7.8 Whole of Life Costs: The sum of all costs incurred by an asset over its lifecycle, containing any construction, capital, maintenance, and disposal costs.

Section 2

BLAENAU GWENT COUNTY BOROUGH COUNCIL

HIGHWAYS ASSET MANAGEMENT STRATEGY

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
Issued to	
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1 Executive Summary

1.1 Highway asset management is defined as:

1.1.1 "A strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers"

1.1.2 The adoption of an asset management approach is now deemed by Welsh Government as a proven means to demonstrate effective husbandry of the highway network by providing significant financial understanding. This strategy records and reports how Blaenau County Borough Council will adopt and use these principles to manage the public highway assets.

1.1.3 This Strategy commits Blaenau Gwent County Borough Council to:

a. Affordable Standards: the strategy establishes standards that can be afforded with current budgets and communicates them to the public and other users such that they know what service to expect.

b. Long Term Planning: the strategy enables the medium term (10 year) and long term (20 year) time periods to ensure the correct balance of short-term fixes, preventative actions and replacement of aged assets.

c. Budget Allocation: the strategy requires data to be collected about the highway assets that will enable informed decisions to be made about how best to spend the available budgets.

d. Managing Risk: the strategy requires the analysis of asset data to gauge and manage the risk associated with any decisions resulting from the strategy.

1.2 The implementation of the strategy will support:

a. The introduction of Whole of Government Accounts (WGA) and specifically the Chartered Institute of Public Finance and Accountancy (CIPFA) Transport Asset Code.
b. The continuing desire by Welsh Government to see Authorities use asset management for highways, to realise and demonstrate the associated cost benefits and transparent governance of the assets associated with the road network.
c. The need to manage increasing budget pressures resulting from the national and local financial position.
d. The agreed aims of Blaenau County Borough Council's Corporate Plan 2022-2027

1.3 The extent of the adopted highway is held by Blaenau Gwent County Borough Council, and the highway asset is any structure, system, construction, or land associated with the adopted highway.

1.4 As of February 2023 the Council, in its role as Highway Authority, have assets made up of the following major asset groups:

- 518 Km of carriageway,
- 52 road bridges, 35-foot bridges and 11 subways.
- 188 storm water culverts of which 73 are classed as “critical”
- 68 large culverts >0.90m
- 12,936 streetlights, of which 12,936 are lit between the hours of dusk and midnight and then 05:00 a.m. and dawn and 190 are not currently illuminated,
- 40 sets of traffic signals, (including Pelican, Puffin and Toucan crossings),
- 1,798 Illuminated traffic signs and bollards,
- 13,500 road gullies,
- 21,867m of safety barrier
- 464m Pedestrian barrier
- I tunnel (Cwm Bypass)
- 232 Retaining walls

A full list of highways assets is available electronically from file.

1.5 The HAMP relates only to the Council’s obligations as a Highway Authority and therefore only includes those assets on the publicly adopted highway. Private streets and roads transferred to social landlords are not included the extents of the adopted highway are available via the Council’s web site.

1.6 Blaenau Gwent County Borough Council as a landowner is responsible for assets that are not classed as adopted highway, such as Council owned streets and footways, and will maintain these in a safe state, as required by legislation or judicial precedent, however, this may be below the level of service afforded to the adopted highway network.

1.7 All public enquiries or complaints that are highway related are dealt with through the Council’s customer call centre and “My Council Services” (MCS) systems. These include contacts using telephone, e-mail, or social media platforms and face-to-face and are recorded and logged onto a highways database, (currently Mayrise), and these are electronically transferred to the relevant sections and officers for action or comment. This flow of information is analysed to ensure that all communications are within the Council’s targets for dealing with such interactions.

1.8 As part of the highway asset management process, BGCBC will consult the general public on general highway related matters via the Council’s website. It is proposed that this is carried out bi-annually from 2023/24. The survey will ask the same questions so that customer trends and satisfaction rates can be assessed.

HIGHWAY ASSET MANAGEMENT STRATEGY

1 Introduction

1.1 This document summarises Blaenau County Borough Council's asset management planning practices for the period 2023 until 2028. It details the tasks and activities that are required through the year and provides details of the instruction documents, spreadsheets and template documents required of this strategy.

2 Asset Management Policy Statement

2.1 Blaenau Gwent County Borough Council Highways Asset Management Policy Statement confirms the Council's commitment to:

- Applying asset management systems to manage its adopted highway asset
- Publish a Highways Asset Management Plan (HAMP)
- Report achievements and performance annually

3 Performance Indicator Returns

3.1 Blaenau Gwent County Borough Council will collate data to report out several National and local suites of performance indicators. Whilst this data does not form part of the HAMP it does provide results which are required to be included in performance reports.

4 Highways Asset Maintenance Plan

4.1 The HAMP for the adopted highways 2023-2028 records the methods used to manage the road assets, specifically it records how and when the Authority:

- Inspects
- Categorises and prioritises reactive repairs
- Assesses condition
- Identifies and prioritises sites or assets for replacement or strengthening
- Prepares works programmes
- Procures and manages works
- Records and reports Costs
- Records and responds to customer contacts

5 Annual Status and Options Report (ASOR)

5.1 An Annual Status and Options Report (ASOR) will summarise the status of each asset group in terms of its condition, compliance with meeting repair standards, level of public complaint/contact etc. The report will describe the result of the previous year's investment in terms of meeting the target service standards. The status report will enable the Council to note if the standards in the HAMP are being met or not. Based upon the current status, the report will then set out the options available to the Council for the future. These will include relevant data sufficient to enable the Council to choose how to best allocate the following years budgets and to decide whether any of the service standards contained in this HAMP need to be revised. In particular they will address the types of works that are planned and state the approach to be used.

6 Asset Levels of Service

6.1 Fundamental requirement of a HAMP is to record the service standards that the Council is aiming to deliver for each asset group and the plan will endeavour to identify any risks that may prevent the plan being realised. The strategy will reflect local context in terms of traffic levels, customer preferences and the Council's corporate strategies.

7 Annual Works Programme

7.1 The Annual Programme once agreed and scrutinised will detail each asset class with a proposed schedule of works together with the current target Level of Service.

8 Annual Updating Regime

8.1 It is intended that the HAMP documents and spread sheets are reviewed and updated annually, and in line with the County Surveyors Society (Wales) (CSSW) training workshops the following timetable will be utilised:

Blaenau Gwent County Borough Council Annual HAMP Update Programme

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Annual Policy Review												
2	Data Assessment												
3	Asset Valuation												
4	Collation of Performance Information												
5	Maintenance Manual Update												
6	Annual Status and Options Report												
7	HAMP Update and Sign Off												
8	Works Programme												

Section 3

BLAENAU GWENT COUNTY BOROUGH COUNCIL

HIGHWAYS DATA MANAGEMENT PLAN

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
Issued to	
Version No.	

1 Introduction

1.1 Asset Data

1.1.1 This Plan records the data held about each of the Asset groups that make up the road asset, it details where the data is stored, and the systems used for data storage. It identifies how and when this data is updated, verified, and validated, and where data or system deficiencies exist these are acknowledged and, either a plan is included for how and when improvements will be made to the data systems or an explanation why the data is not recorded.

1.2 Types of Data

1.2.1 The type of data required to manage all asset classes will include:

Inventory: the number, location, size, type and age of the components that make up each asset.

Condition: measurement and a rating of the condition of the asset from testing, visual or other means.

Inspection: the inspection regime, inspection results and actions initiated by the inspection.

Use: the use of individual asset, such as traffic counts or heavy vehicle routes etc.

Safety: records of accidents or incidents that occur on the asset.

Cost: details of the unit cost of common activities and the overall cost to enable cost benchmarking.

1.3 Asset Management Data Uses

1.3.1 The use of asset management data allows BGCBC to:

- Provide public information to offer greater transparency
- Monitor and report on the condition of the assets that make up the highway network
- Predict and report on funding needs
- Identify and prioritise sites, areas or assets for maintenance work
- Monitor and report the performance of assets to inform local and national Key Performance Indicators (KPI)
- Assess the expected life of individual assets or asset components
- Place a value on the asset and calculate depreciation due to age and use to comply with Whole of Government Accounts (WGA)

1.4 Data Management

1.4.1 It is essential that the quality of the asset data that BGCBC hold is known and that the appropriate measures are taken to maintain this data. It is also important to identify where there are deficiencies and the timescales for collecting this data. Not all data needs to be collected, and BGCBC will identify those sets that have low-cost benefit together with any relevant review dates and reasoning.

1.5 Roles, Responsibilities

1.5.1 The designated officer who will assume the responsibility for data management for the asset group is as follows:

Asset Group	Person Responsible for Asset Data
Carriageways	**Team Leader - Highways**
Footways/Footpaths	**Team Leader - Highways**
Cycleways	**Team Leader – Green Team**
Highways Drainage	**Team Leader - Highways**
Land Drainage Systems	**Team Leader - Engineering**
Street Lighting& Illuminated Signs	**Team Leader – Street Lighting**
Non-illuminated Signs	**Team Leader - Highways**
Structures	**Team Leader - Infrastructure**
Traffic Signals	**Team Leader – Street lighting**
Street furniture	**Team Leader - Highways**
Highways Verges	**Team Leader - Highways**

1.5.2 It is the responsibility of the officer listed above to ensure that data relating to the asset group for which they are responsible is updated, verified, validated, and reviewed as shown in the following sections and that any actions required to improve data are reported to the Highway Asset Management Officer.

1.5.3 Overall the responsibility for road asset data quality lies with The Head of Community Service.

1.6 Data Updates

Inventory Updating Timings	
Type	**Timing**
New Assets – Council Built	Annually update in November
New Assets - Adoptions	Within 3 months of confirmation of order
Major maintenance e.g. resurfacing	Annually update in November
Removals	Within 3 months of confirmation of order

1.7 Data Verification

1.7.1 In BGCBC individual officers, as part of their job description are responsible for individual or groups of assets classes. Where these officers gather new data in the course of their duties, a random sample no smaller than 10% will be abstracted and its accuracy verified by a line manager, colleague, or highway operative. Any inaccuracies or deficiencies in the data will be re-surveyed and re-verified by the same officer that carried out the original verification, the name, data and sample size will be attached where suitable as meta-data to the new data.

1.7.2 Where data is received for outside sources, the receiving officer or officer responsible for the asset will require the data provider to furnish an assurance or meta-data to prove a verification process. This will be then added to the new data as meta-data when entered into the appropriate electronic system.

1.8 Data Validation

1.8.1 BGCBC, hold large sets of asset data that will be used on an annual basis providing important information to programme future works, Key performance indicators and valuations etc. This data can lie dormant for long periods of time, and so errors can arise due to inadequate systemic updates. Therefore, at the bi-annual and end of the HAMP 2023-2028 this data will be verified by each officer responsible for that asset to ensure that the data is correct and current by selecting a random 10% of that data, and resurveying that data.

Section 4

BLAENAU GWENT COUNTY BOROUGH COUNCIL

HIGHWAYS ASSET MAINTENANCE PLAN

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
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1 Introduction

1.1 Scope

1.1.1 This manual is part of a suite documents that comprise Blaenau Gwent County Borough Council's (BGCBC) policy in managing highway maintenance. It details how the adopted highway network is categorised into a hierarchy and how this network is inspected and repaired. This maintenance manual will have a proposed lifespan of 5 years (2028) and will be updated by the end of 2024 and 2026.

1.2 Purpose

1.2.1 This document will detail how the Highway Authority (HA) carries out its duties and demonstrate that the safety risks to users are appropriately managed with regard to both local, national and UK guidance.

1.3 Legal Requirements

1.3.1 The Highway Authority has a duty to meet the requirements of the Highways Act 1980, The New Roads and Streetworks Act 1991 and The Traffic Management Act 2004. These acts require the HA to maintain the highway at public expense, to co-ordinate all works in the Highway and to ensure the expeditious movement of traffic.

1.4 Guidance

1.4.1 BGCBC has reviewed, refreshed and aligned its highway asset management policies and procedures and this manual is the result. It has been produced to reflect the local conditions that take into account the guidance produced by the County Surveyors Society (Wales), (CSS Wales) – CSSW Nationally Consistent Response to the Code of Practice 2016 and the 'Well Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group 2016' (WMHI 2016).

2 Roles Responsibilities and Competencies

2.1 The roles, responsibilities and competencies required of those involved in managing the council's highway asset are defined below:

Roles and Responsibilities

Role	Responsibility
Councillors (Executive Member for the Environment)	Approve the use of this document as council policy.
Team Manager Highway Maintenance	Develop the policy and standards, ensure their effective implementation, moitor the results, and undertake an annual risk assessment update.
Highway Maintenance Team Leader - reactive maintenance	Develop the policy and standards to be used, ensure their effective implementation, monitor the results, and undertake an annual risk assessment update.
Infrastructure Team Leader	Undertake inspections on Highway structures to check that they are safe for use and fit for purpose and to record the data on the structures AMX database system.
Highway Inspectors	Carry out inspections as per the inspection regime, recording the appropriate data for input into the “Mayrise” system.
Highways On-Call (Standby) Officers	To record, inspect and or assess any highways safety related report ensuring that this risk is mitigated until working hours.
Works Gangs	Carrying out repairs as per the repair regime and record the required data for input into the “Mayrise” system.
Contractors	Carry out repairs as instructed and record the required data for input into the “Mayrise” system.

3 Competencies and Training

3.1 The CSSW HAMP Project are currently working on a suite of competency and training requirements to meet the 2016 Code of Practice recommendations. Once completed this section of the maintenance manual will be updated. However, Blaenau Gwent County Borough Council highways inspectors undertake highways competency inspection training every 2 years. As identified in Appendix D.

4 Network Hierarchy

4.1 Establishing the Network Hierarchy

4.1.1 Within the both the CSS(Wales) and the Well Managed Highways Infrastructure CoP (WMHI) 2016 guidance, road hierarchy should be based on use, function, and the exposure to safety risk, at present the hierarchy is exclusively based on the road classification, which does not reflect this in all cases. Unlike in England, the process to alter the road classification is time consuming and costly, so it has been determined that the road classification need not be altered.

4.1.2 BGCBC in conjunction with CSS (Wales) have produced a revised road hierarchy based on the actual or estimated traffic flows. This has been used to produce a table that when populated has given an indication of the safety risk that a user can expect to be exposed to when passing any condition variation, (a sudden of dramatic change in the nature of the asset likely to increase the risk of harm) in a carriageway's surface. Therefore, all roads have been divided into network hierarchy categories that reflect their use, function, and the exposure to safety risk, this enables the creation of inspection and repair regimes that mitigate this.

4.1.3 CSS (Wales) and WMHI 2016 guidance suggests that a category of 'minor road' be included for traffic flows of below 200 movements per day. BGCBC have included this category into the Local Access Road definition, on the basis the traffic movements are so small that it offers no discernible benefit to determining highway safety risk within the Borough.

4.1.4 The highway assets have been divided into network hierarchy categories that reflect use and function. This enables the inspection and repair regimes to be related to their associated risk.

4.1.5 The network hierarchies have been derived in accordance with the Code of Practice "Well-Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group, 2016" and the CSSW "Risk Based Approach: Method". Details of how the hierarchies were derived is held in the "4RA Annual Highway Asset Risk Review 2018" as an excel document.

"Details of the hierarchies used for each asset group can be found in appendix A. The details of the hierarchy allocated to each individual asset are held in the council's asset management systems (Mayrise)."

4.2 Regional Consistency

4.2.1 CSSW recommends that to achieve regional consistency consultation is undertaken with neighbouring authorities to enable consistent hierarchies to be allocated to assets which cross boundaries. At this time the consultation process is yet to be completed once done the assets with differing hierarchies between the council and a neighbouring authority will be listed in appendix A along with the reason for the difference.

4.3 Update and Review

4.3.1 The hierarchies are reviewed on an ongoing basis where changes to the asset occur and or significant changes in use happen (e.g. significant changes in traffic volume). As a minimum the hierarchy is reviewed and confirmed every 2 years. Records of the review are held in the "Blaenau Gwent County Borough Council 4RA Annual Highway Asset Risk Review". Any resultant recommended changes to the hierarchy will be proposed to council and their approval recorded.

4.4 Carriageways

4.4.1 The Well-maintained Highways Infrastructure (WMHI) 2016 Code of Practice Section A:4.3.11 states: -

"The carriageway hierarchy will not necessarily be determined by the road classification, but by functionality and scale of use. Table 1 is intended to be used as a reference point from which to develop local hierarchies. The descriptions relate to the most usual circumstances encountered in the UK. There are likely to be, some very significant variations and Authorities should take their own circumstances into account."

4.4.1.1 The table below is abstracted from the WMHI 2016:

Table 1 – Factors to Consider - Carriageways

Category	Type of Road General Description	Description
Motorway	Limited access -motorway regulations apply	Routes for fast-moving long-distance traffic. Fully grade separated and restrictions on use.
Strategic Route	Trunk and some Principal 'A' class roads between Primary Destinations	Routes for fast-moving long-distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
Main Distributor	Major Urban Network and Inter-Primary Links. Short - medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.
Secondary Distributor	B and C class roads and some unclassified urban routes carrying bus, HGV and local traffic with frontage access and frequent junctions	In residential and other built-up areas these roads have 20 or 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons. In rural areas these roads link the larger villages, bus routes and HGV generators to the Strategic and Main Distributor Network.
Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In urban areas these are residential or industrial interconnecting roads with 20 or 30 mph speed limits, random pedestrian movements and uncontrolled parking. In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two-way traffic.
Local Access Road	Roads serving limited numbers of properties carrying only access traffic	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and

		unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.
Minor Road	Little used roads serving very limited numbers of properties.	Locally defined roads.

4.4.1.2 In Blaenau Gwent, the WMHI2016 Section 4: Table 1 (above) has been considered and the table below has been developed and will be utilised when defining hierarchy:

Table 1.1 Carriageways	
Strategic Route – Carriageway Hierarchy Strategic Route (CHSR).	Route enabling travel between regionally important locations, (in this document these routes are based on local significance and not on traffic volumes) in Blaenau Gwent the WMHI 2016 has been considered and only the A467, A4046 and the A4048 – Tredegar to Blackwood fit these criteria.
Main Distributor – Carriageway Hierarchy 1 (CH1) Blaenau Classification – A	Routes that have between 10,000 and 20,000 + vehicle movements per day. In Blaenau Gwent the WMHI 2016 has been considered and only the A467 (Brynmawr to Newbridge), A4248 (Brynmawr to Blaenavaon), A4046 (Ebbw Vale to Aberbeeg) and the A4048 (Tredegar to Blackwood) fit the criteria.
Secondary Distributor – Carriageway Hierarchy 2 (CH2) Blaenau Gwent Classification – B	Routes that have between 5,000 and 10,000 vehicle movements per day and as set out in the WMHI 2016 these may include B and C class routes, should have maximum 30mph speed limits, have high pedestrian footfall, and are generally bus routes. This criteria has been applied to the network.
Link Road – Carriageway Hierarchy 3 (CH3) Blaenau Gwent Classification – C	Routes that have between 1,000 and 5,000 vehicle movements per day and as set out in the WMHI 2016 these may include lesser used urban streets with random or tidal pedestrian footfall. This criteria has been applied to the network.
Local Access Road – Carriageway Hierarchy 4 (CH4) Blaenau Gwent Classification – U	Routes that have between 200 and 1,000 vehicle movements per day and as set out in the WMHI 2016 these may include roads serving limited numbers of properties carrying only access traffic. This criteria has been applied to the network.
Minor Road – Carriageway Hierarchy 5 (CH5)	Routes that have less than 200 vehicle movements per day as set out in the WMHI 2016. Access to properties (houses and farms)
Note: The number of roads currently listed in this table will change as traffic flows increase or decreases and will be reassessed at the “Mid Life Update” of this plan.	

4.4.2 As of February 2023 there are 438km of roads on the adopted network with Unique Street Reference Numbers (USRN) that are maintained at public expense but, as traffic flow data has not been routinely collected since 2012, to establish vehicular flows for each street an estimation exercise has been undertaken based on local knowledge, engineers estimates and where possible, cross referenced with any ad hoc data that is available to the HA.

4.4.3 Each street has been subject of a desktop exercise to determine the maximum vehicular movements per day split into 6-hour periods: 00:00 to 06:00, 06:00 to 12:00, 12:00 to 18:00, and 18:00 to 00:00. This allows engineers to have a better understanding and therefore more accurately model the usage profile of any given road. Until more accurate data is available this method will be used and revisited by the end of 2024 and 2026 to ensure that traffic flows for any given street remain as consistent as the data allows.

4.4.4 The table below has been produced to aid highway engineering staff to estimate the maximum expected vehicle movements on any given road:

Table 1.2

Estimated Maximum Traffic Flow

	00:00 – 06:00	Total	06:00 – 12:00	Total	12:00 – 18:00	Total	18:00 – 00:00	Total	Daily Total
	Vehicle every		Vehicle every		Vehicle every		Vehicle every		
Very High	2.5 seconds	8640	1.25 seconds	17280	1.25 seconds	17280	2.5 seconds	8640	51840
High	5 seconds	4320	2.5 seconds	8640	2.5 seconds	8640	5 seconds	4320	25920
Medium	30 seconds	720	7.5 seconds	2880	7.5 seconds	2880	10 seconds	2160	8640
Low	90 seconds	240	30 seconds	720	30 seconds	720	60 seconds	360	2040
Very Low	5 minutes	72	2 minutes	180	2 minutes	180	5 minutes	72	504

4.5 Footways

4.5.1 The following hierarchies included in the CSS (Wales) and WMHI 2016 guidance have been considered when establishing the footway hierarchy:

Table 1.3 Footways

Category	Description
Pedestrian Areas in City Centre Shopping/Business Areas	Very Busy areas of towns as cities with high public space and Street scene contribution
Pedestrian Areas in Town Centre Shopping/Business Areas	Busy urban shopping and business areas and main pedestrian routes
Footways Outside Public Buildings or Facilities	Footways outside busty public buildings such as train/bus stations, hospitals, schools and colleges or small parades of shops etc. that experience significantly higher levels of use than the adjacent footways
Link Footways	Footways linking housing or industrial estates to other centres or routes

Local Access Footways	Footways in housing areas
Minor Footways	Rural footways with infrequent use

4.5.2 Both the CSS (Wales) and the WMHI 2016 suggests that a category of 'minor footway' be included where footfall is described as 'little used rural footways serving very limited numbers of properties', BGCBC have included this category into the Local Access Footway on the basis the footfall counts are so small and offers no discernible benefit to determining highway safety risk.

4.5.3 BGCBC has not historically collected routine pedestrian footfall figures, to establish a base figure for pedestrian footfall an estimation exercise has been undertaken based on local knowledge and where possible cross referenced with any ad hoc data that is available to the HA. BGCBC is intending to investigate ways to determine figures in future years

4.5.4 Each footway has been the subject of a desktop exercise to determine the maximum pedestrian movements per day split into 6-hour periods: 00:00 to 06:00, 06:00 to 12:00, 12:00 to 18:00, and 18:00 to 00:00. This allows engineers to have a better understanding and therefore more accurately model the usage profile of any given footway. Until more accurate data is available this method will be used and revisited annually as set out in the Highway Asset Management Plan (HAMP) to ensure that pedestrian footfall flows for any given footway remain as consistent as the method allows.

4.5.5 The table below gives an estimation of the maximum expected pedestrian movements over any part of a street:

Table 1.4

Estimated Maximum Pedestrian Footfall

	00:00 – 06:00	Total	06:00 – 12:00	Total	12:00 – 18:00	Total	18:00 – 00:00	Total	Daily Total
	Movement every		Movements every		Movement every		Movement every		
Very High	5 min	72	10 seconds	2160	5 seconds	4320	15 seconds	1440	7992
High	30 min	18	15 seconds	1440	10 seconds	2160	30 seconds	720	4338
Medium	1 hour	6	90 seconds	240	30 seconds	720	1 min	360	1326
Low	3 hours	2	3 min	120	90 seconds	240	3 min	120	482
Very Low	6 hours	1	10 min	36	6 minutes	60	10 min	36	133

4.5.6 Combining tables – and – the hierarchies for BGCBC footways are:

Table 1.5				
BGCBC Footway Hierarchy				
Category	**CSSW Description**	**WMHI 2016 Description**	**Estimated Maximum Pedestrian Footfall**	**Location**
Main Distributor	High use pedestrianised zone and footways in town centres	High use pedestrianised zone and footways in town centres	Very High	Abertillery TC Ebbw Vale TC Tredegar TC Brynmawr TC The Works site EV including the train station & General Offices
Secondary Distributor	Footways outside busy public buildings such as train/bus stations, hospitals, schools and colleges or small parades of shops etc. that experience significantly higher levels of use than the adjacent footways	Busy urban shopping and business areas and main pedestrian routes	High	Blaina TC Llanhilleth TC Nantyglo Garn Cross Cwm Ebbw Vale All school and college entrances including leisure and sports facilities and residential footways housing estates.
Link Access	Footways linking housing or industrial estates to other centres or routes	Linking local assess footways through urban areas and busy rural footways	Medium	Cycleways, non-residential footways
Local Access	Footways in housing areas/ Rural footways with infrequent use	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs/little used rural footways serving very limited numbers of properties	Low/Very Low	All other footways

4.6 Structures

4.6.1 The CSSW guidance indicate that structures require a slightly different approach to carriageways and footways and the hierarchy should be based more on risks to the functionality of the network. The structures hierarchies have been defined as follows:

Table 1.6 Structures	
Category	Description
Vital Structure	structure that is vital to the network and if required to have restricted use or removed from service would result in significant adverse disruption/delay to traffic movement
Important Structure	A structure that is deemed important to the functioning of the networks and restricted use or loss would cause disruption to traffic movement
Standard Structure	All other highway related structures

4.6.2 All structures across the Blaenau Gwent network have been listed and considered then given a hierarchy in line with the above categories. Details of the hierarchies used for each asset group can be found in appendix A. The details of how the hierarchies were derived are held in the council's "4RA Annual Highway Asset Risk Review 2018".

4.7 Street Lighting

4.7.1 In recent years BGCBC has invested in options to reduce the Council's Carbon footprint through changing lanterns to LED and adopted a policy of risk assessed switch off or part night lighting of streetlights to achieve this. Historically the safety hierarchy of streetlights has been based on the electrical safety of individual columns, however, to ensure that there was no increased safety risk or legal issues by deactivating lights across the County Borough a safety risk assessment exercise was undertaken to identify those lights that were to remain on during the hours of darkness. This included roundabouts, junctions, roads with traffic calming and lights within 30 mph areas to meet the requirement of the Road Traffic Regulation Act 1984, Section 82(1)(a).

4.7.2 Maintenance of the asset is carried out via a small internal team which is supported by an external contractor who supports at times when required for attendance for faults and outages. The inspection regime is included in appendix B.

4.8 Traffic Signals

4.8.1 Based on the CSSW guidance the following hierarchies have been used:

Table 1.7 Traffic Signals	
Category	Description
Vital Junction	Due to the limited number of traffic signal-controlled junctions in the Borough all illuminated traffic signals at any junction in the Borough are classed as vital
All other Signals	This will include all illuminated pedestrian signal crossings

4.8.2 BGCBC maintain their traffic signal assets via a small internal team supported by external contractors the hierarchy is therefore set as per table 1.7 and maintenance and call out regimes are included in this document.

4.9 Regional Consistency

4.9.1 Consultation has been undertaken prior to adopting this policy with Caerphilly, Torfaen, Monmouth and Newport HA's and nationally with all Local Authorities in Wales via the CSS (Wales) HAMP project, to ensure that a broadly consistent approach to Highway Asset Management is taken. BGCBC has confirmed that where routes cross into neighbouring Authorities hierarchies and so inspection regimes have a high level of commonality.

4.10 Update and Review

4.10.1 The carriageway hierarchies and associated inspection frequencies will be reviewed by the end of 2023 and again in 2024 for the lifecycle of this plan, and will only be altered if:

- Evidence is available to prove that the current traffic flow data has changed
- Case law is cited to which the CSS Wales HAMP project accept is relevant
- New statue or guidance is issued

5 Inspection Regime

5.1 Types of Inspection

5.1.1 In order to monitor the condition and repair needs of the asset the council deploys a regime of inspections of varying types and frequencies.

5.1.2 The council undertakes the following types of inspection:

- **Reactive Inspections/Response:** inspections undertaken in response to the notification to the authority of potential defects by other sources (council employees, members of the public, emergency services etc.).

- **Planned/Routine Inspections:** A regime of planned inspections the purpose of which is to identify defects that have the potential to cause harm to users and to identify defects that require repair in order to prevent escalation of deterioration and increased (avoidable) maintenance needs.
- **Condition Surveys:** A regime of condition surveys that record the condition of components of the asset such that a programme of renewal/replacements can be derived. Condition surveys can be visual, or machine based and may include testing where such is appropriate for the asset type.

Planned routine inspections are a combination of:

- **Driven Inspections**: inspections of the carriageway undertaken with a driver and a Highway Inspector, carried out from a slow-moving vehicle at a speed appropriate to the road conditions.
- **Walked Inspections:** inspections undertaken by a Highway Inspector on foot at a walking pace on the footway, where the footway and carriageway are assessed.

5.2 Inspection Frequencies

5.2.1 Reactive Inspections

5.2.1.1 Where a "safety" defect is notified to the council by a third party an inspection of the defect will take place within 48 Hours and action will be taken as per the Council's repair regime. (See section 6.1.1) repair regime for details of safety defect criteria).

5.2.1.2 Where a "maintenance" defect is notified to the council by a third party an inspection of the defect will take place within 7 Days and action will be taken as per the Council's repair regime. (See section 6.1.1) repair regime for details of maintenance defect criteria).

5.2.2 Routine Inspection Frequencies

5.2.2.1 Routine Inspection frequency is based on the Network Hierarchy. It has been determined using the CSSW Highway Asset Risk Review Method and is reviewed every 2 years. The frequency of routine inspections is shown in Appendix B along with the CSSW minimum recommended standards.

5.2.3 Inspection Tolerance

5.2.3.1 Due to the effect of adverse weather and to allow for sickness or leave it is possible that the specified frequencies cannot be met in some circumstances. For this reason a tolerance in frequency of inspections is permitted with details provided in Appendix B. Any changes to the frequencies must be approved by the Director of Community Services before they are implemented.

5.2.4 Inspection Schedule

5.2.4.1 Inspection routes in compliance with the regime above are held in the council's asset management system (Mayrise). The asset management system (Mayrise) contains details of the inspection regimes, the inspections undertaken and the date of the next scheduled inspection. The use and character of a road will be considered when scheduling inspections, for example to avoid periods with higher numbers of parked vehicles. Best endeavours will be made to ensure that the timing of the inspection enables defects to be identified effectively.

5.2.5 Inspected Assets

5.2.5.1 The assets inspected during the routine inspection include (but are not limited to) the following:

- Carriageways
- Footways
- Covers, Gratings & Frames (inc. Statutory Undertakers apparatus)
- Kerbs, Edgings and Channels
- Drainage
- Guardrails, Fencing and Restraint Systems
- Verge, Trees and Hedges
- Road Studs and markings
- Signage
- Street Lighting,
- Traffic Systems, Controlled Crossings, Illuminated Bollards and Cabinets
- Cleanliness and Weed Growth

5.2.6 Recording of Inspection Records

5.2.6.1 Records of the inspection and the resulting observations are recorded in hard copy notebooks (diaries) the hand-written notes are then transferred by the inspectors into the Mayrise system daily, work is currently underway to move to an electronic system to prevent double handling of information.

5.2.7 Condition Assessments

5.2.7.1 BGCBC undertake the following condition assessments on their highway assets. The frequency of condition assessment is given in Appendix B. The visual condition assessments intervals for carriageway and footway are being reviewed and this document will be updated following the results of the review.

a) Carriageways

i. SCANNER (Surface **Condition Assessment** of the National Network of Roads)

SCANNER is a machine condition survey undertaken from a vehicle moving at traffic speeds. The results of the survey are held offsite by WDM and accessed via the WDM / WIP online interface.

ii. SCRIM (Sideway-force Coefficient Routine Investigation Machine)

The SCRIM data measuring wet road skidding resistance is stored in the Mayrise asset management system.

iii. Visual Condition Assessment

A visual condition survey of all roads has been undertaken using the CSSW Visual Condition Assessment Method. The carriageway condition has been assessed by a CSSW trained inspector. Carriageway visual condition information is stored in the Mayrise database.

SCANNER and SCRIM surveys are arranged via a central contract managed by the Welsh Government. The contract covers A, B and C Roads. SCANNER surveys are not undertaken on the unclassified road network.

b) Footways

Visual Condition Assessment

A visual condition survey of all footways has been undertaken using the CSSW Visual Condition Assessment Method. The footway condition has been assessed by a CSSW trained inspector. Resulting condition information is stored in the Mayrise database.

c) Structures

Visual Condition Assessment

Structures are inspected using two levels of inspection:

i. General Inspections (GIs'); GIs are visual inspections, possibly with some hands-on and basic assessment e.g. hammer tapping and measurements.

ii. Principal Inspections (PIs); PIs are a more detailed visual inspection, with hands-on assessment of most/all elements plus detailed assessment e.g. hammer tapping, half-cell, chloride measurements etc.

A General Inspection involves recording the extent and severity of observed defects on a form the data from which is subsequently entered into the CSS Bridge Management System "Asset Management Expert" (AMX) data base.

A Principal Inspection involve the creation of a detailed report along with the data recorded on the form. The results of these inspections are also entered into the BGCBC Bridge Management System (AMX).

d) Street Lighting

The condition of street lighting assets is assessed as follows:

i. Visual Condition

Visual condition assessment is carried out on an adhoc basis during maintenance visits with any obvious defects or poor condition assets being reported and actioned accordingly.

ii. Electrical Safety

Electrical testing is carried out by an external contractor on all equipment. The results of the electrical testing are entered onto the Mayrise asset management system.

iii. Lighting Column Structural Testing

A programme of structural testing is being undertaken on all lighting columns using an external contractor. The results of the structural testing provide condition rating as follows:

- Red: Programme for removal (normally within 5 days)
- Amber: Retest within 3 years
- Green: Retest within 6 years

The results of the structural testing are entered onto the Mayrise asset management system.

Vi Remote Monitoring

The council operates a remote monitoring system on 12,936 street lights the system, Telensa, allows wireless remote control for each street and real-time fault monitoring to identify and react to outages.

6 Repair Regime

6.1 Repairs identified via inspection or by 3rd party notification, are prioritised for repair based upon the risk that pose to users. The methods used to do this are set out below.

6.1.1 Defect Categories

6.1.1.1 The data recorded during inspections is used to determine defect categories. Defect categories prioritise repairs using the defect response times adopted by the council and shown below:

Defect Categories	Description	Response Time
Critical Defect	A situation where the inspecting officer considers the risk to safety high enough to require immediate action, e.g. Collapsed cellar, missing utility cover, fallen tree, unprotected opening	2 Hours*
Safety Defect	Service requests or defects requiring a response as soon as possible to remove a potential risk of injury to users	By end of Next Working Day
Maintenance Defect (High)	Other defects that warrant treatment, in order to prevent them deteriorating into a safety defect prior to the next scheduled inspection	10 Working Days (a working day is Monday to Friday and includes bank holidays)
Maintenance Defect (Medium)	Defects that warrant treatment to prevent them deteriorating into a safety defect prior to the next scheduled inspection	30 Working Days
Maintenance Defect (Low)	Other defects that warrant treatment, in order to prevent them deteriorating to such an extent that additional works or costs are incurred	As per the local works programme

Response time for critical defects refers to the time to attend site, make safe or repair will then be asap thereafter. Making safe may constitute displaying warning notices, coning off or fencing off to protect the public from the defect.

6.1.2 Defect Types and Intervention Levels

6.1.2.1 Details of the defect types identified and the intervention levels that have been prescribed for each defect category are provided in Appendix C.

6.1.3 "24 Hour" Emergency Cover

6.1.3.1 The Council operates an emergency service via an out of hours Contact Centre "Car Call" based in Abertillery between 16:00 and 08:00 when the office is closed. Incidents are reported to the contact centre who forward them to the Duty Officer and emergency response is provided if required.

6.1.3.2 This service provides where necessary an immediate and co-ordinated response to maintain highway safety at all times. Hazards dealt with include problems such as flooding, ice and snow, unsafe street works, abandoned vehicles, traffic signal failure, electrical danger at street lighting installations, and clearing of the highway following a road traffic accident.

6.1.3.3 An incident log is produced by the Contact Centre for every out of hours period. When action can be safely deferred, this log is used to initiate any additional action required in respect of particular incidents on the next working day.

6.1.4 Works Ordering

6.1.4.1 Works orders are generated automatically using the council's asset management system (Mayrise) following the input of the inspection records.

6.1.5 Recording of Repair Records

6.1.5.1 On completion of the repair the works representative record details of the type of work undertaken, the materials used and the dimensions of the repair in hard copy and pass the information to the business support team.

6.1.5.2 The business support team update the Council's asset management system (Mayrise) with the supplied information.

6.1.5.3 The defect will only be deemed 'fully repaired' once all records have been entered into the asset management system.

7 Winter Maintenance

7.1 Section 111 of the Railways and Transport Act 2001 amended Section 41(1A) of the Highways Act 1980 (duty of a highway authority to maintain the highway) which reads:

a) The authority who are for the time being the highway authority for a highway maintainable at public expense are under a duty, subject to subsection (2) and (3) below, to maintain the highway.

b) (1) In particular, a highway authority is under a duty to ensure, so far as is reasonably practicable, that the safe passage along the highway is not endangered by snow and ice.

This is not an absolute duty, given the qualification of 'reasonable practicability', but it does effectively overturn previous legal precedence, albeit not with retrospective effect. Well-Managed Highway Infrastructure recognises that it is not practical or possible to provide the service on all parts of the network and ensure that running surfaces are kept free of ice and snow at all times, even on treated parts of the network. To comply with the legislation BGCBC have formulated and agreed a Winter Maintenance Plan, which is updated annually.

8 Flooding

8.1 Heavy Rain

8.1.1 BGCBC have an extensive historic database of the possible locations of flooding to the highway network and have formulated a system of pre-inspection and cleansing using the Gully and Culverts Maintenance Schedule. All roads within the Borough have some method of transporting rainwater from their surface, this ranges from a channel at the side of the carriageway through a formal system of gullies and outfall pipes creating a storm water system. The most common type of highway drainage system employed in BGCBC is of the gully and outfall pipe system. It is recognised that in times of storm the highway can flood and cause a danger to highway users, to reduce the risk of this BGCBC carry out routine cyclical gully maintenance. Gullies located in the adopted highway are inspected, and where necessary cleansed on a cycle determined by the route of a single gully machine operated by dedicated highway operatives to ensure the drainage system is functioning correctly. The Gully cleansing schedule also includes a list of what has been identified as "critical gullies" gullies that are known to be at risk to flooding which are inspected and cleansed more often, normally every four weeks.

It must be noted that the primary function of a highway drainage system is to reduce the risk of flooding to the highway; it is not to protect adjacent landowners. It is accepted that by cleansing the highway drainage system some landowners adjacent to the highway gain a

benefit from this operation, however, road safety is the primary consideration when prioritising operations during storm events.

8.1.2 BGCBC realise that due to the unique topography of "the three Valley's" covering BGCBC, that watercourses feeding the Ebbw Fach, Ebbw Fawr and Sirhowy rivers have in the past caused severe flooding to the highway network. A schedule of culvert entrances known or likely to cause such flooding is held by BGCBC and these are inspected and cleansed as per the maintenance schedule for Gullies and Culverts.

9 Statutory Undertakings (Utility Companies)

9.1 The condition and management of the highway is affected by third party works. The management of these third-party activities is governed by legislation (New Roads and Street Works Act (NRSWA) 1991). The manner in which the council complies with its duties under this act is set out below.

9.1.1 Street Works

9.1.1.1 All utility activity undertaken on the council's highway network is co-ordinated by the Street Works Team and recorded within the Mayrise asset management system. The Street Works Team ensure that all statutory undertakers comply with the New Roads and Street Works Act (NRSWA) 1991 and all amendments as notified in the Traffic Management Act 2004, to ensure that all works undertaken on the highway are completed to the required standards and are programmed to achieve the least disruption to members of the public.

9.1.2 Procedures

9.1.2.1 The detailed procedures used for undertaking this work include:

- **street works licenses;** the license that utilities must apply for in order to work on a council road
- **street works register;** the register kept by the council in the "Mayrise" asset management system that records where and when utilities are working on the highway
- **notices of works;** the notices that have to be issued prior to works commencing, that should be issued by the organisation that is carrying out the works (which may be the council)
- **restrictions on works**; preventing works being carried out on roads that have been recently resurfaced for a period of time after completion of those works
- **co-ordination of works;** coordinating works in an appropriate sequence and at appropriate intervals where more than one organisation needs to work on the same street
- **designation of protected streets,** where the council can assign a protection on specific streets being used by utilities
- **standards of re-instatement**; the council's specification for what the standards of reinstatement should be on categories of road including materials and depths etc.
- **apparatus affected by highway works:** where the council notifies utilities where road works are planned to ensure that provision is made for the protection or diversion of the existing utility apparatus

9.1.2.2 Utility works have a significant effect upon the condition of the highway and the user's perception of it. In the future ASOR reporting will reference the number of openings made and the standards of reinstatement being achieved such that a true picture of condition and its causes are known.

9.1.3 Reinstatement Specification

9.1.3.1 The works carried out by Statutory Undertakers are controlled and co-ordinated by a BGCBC officer dedicated to dealing with the New Roads and Street Works Act 1991 utilising the specification for the Reinstatement of Openings in Highways 2nd edition 2006. All non-emergency works are presented to the South East Wales Highway Authorities and Utilities Committee, where suitable timings and working practices are agreed in order to resolve any local conflicts.

10 Verge Maintenance

10.1 BGCBC utilises the in-house grounds maintenance resource to cut and manage the highway verge, visibility splays and any associated shrubs or trees contained therein. Grass cutting is carried out from April until September each year on a rolling programme. The extents of the asset are recorded and held on the Council's GIS database. Weather permitting this gives a maximum number of 4 cuts per year. All arising's are removed from the highway via mechanical sweeper and from footways by air blower. On high speed or traffic sensitive streets where traffic management is deemed to be required the cutting regime will be organised on a risk basis. Depending on location the grass and vegetation is cut using a variety of mechanical methods appropriate to the site and time of year.

11 Cost Recording

11.1 The cost of the activities required to maintain the highway are recorded to enable them to be monitored and managed. The coding used to record costs is shown below.

11.1.1 Cost Coding

Highway maintenance costs are allocated to one of the following categories.

Cost Category	Activity
Planned Maintenance - Preventative	Planned maintenance activities that are designed to ensure that more expensive future repairs may not be needed.
Planned Maintenance - Corrective	Planned maintenance activities that correct the condition of the asset and which would not cost significantly more if delayed.
Routine Cyclic Maintenance	Scheduled works consisting of activities that are based on a prescribed time interval.
Routine – Reactive Maintenance (Emergency)	Reactive repair of potentially dangerous defects identified from inspection or customer complaint / notification.
Routine - Reactive Maintenance (Non-Emergency)	Other less urgent minor repairs
Routine – Inspection and Survey	Cost of specialist inspection and surveys
Operating Costs	Costs of operating elements of the asset
Overhead	Internal costs associated with the management of the asset. NB it is accepted that these costs may not be available at an asset group level
Loss	Money expended that is effectively "lost" to the council from which no benefit to the asset or user is gained.

Improvements	Works that add new infrastructure to the asset.

11.2 Reviewing and Reporting of Costs

11.2.1 Outturn cost information is used for status reporting (ASOR) including reporting if sustainable levels of investment are being made in each asset and for the reporting of future funding needs.

12 Risk Management

The risks associated with maintaining the highway are managed using the methods described below. This includes how the methods comply with the risk-based approach required by the Code of Practice.

12.1 Code of Practice

12.1.1 A revised Code of Practice (the code) for Highways "Well Managed Highway Infrastructure" was published in October 2016 providing guidance that authorities are expected to follow and may rely upon when defending themselves against third party claims.

12.1.2 The most significant change to the previous guidance, proposed by the new CoP, is the introduction of a risk-based approach to all decision making to be undertaken by each authority individually.

12.1.3 CSSW have developed a method in response to the code that it recommends authorities adopt. The method includes development of Hierarchy, Inspection Regime and Repair Regime for the highway assets, along with recommended minimum standards for inspection and defect repair.

12.2 Use of the CSSW Risk-Based Approach

12.2.1 The Highways sections intention is to undertake an annual risk assessment as detailed in the "CSSW Highways Asset Management Framework Recommended Practices - Task 4 Annual Performance & Risk Review". With the results being recorded in the "4RA Risk Assessment – Spreadsheet"

12.2.2 The details of the asset hierarchy, inspection and repair regimes adopted by the council and where they differ from (exceed) the CSSW recommended standards is detailed later in this document.

12.3 Blaenau Gwent Corporate Risk Management

12.3.1 The Council manages risk via the 'County Council Risk Management Framework, September 2017'. An electronic copy of this document can be found at http://intranet/facilities-services/insurance-risk-management/risk-management.aspx

13 Procurement

Detail of how maintenance works for each asset are procured are shown below. Works are procured using a combination of internal and external resources.

13.1 Principle

Day to day highway maintenance is mainly undertaken by in house council resources. Where specialist skills are required, external contractors are employed. How the service is delivered for each asset is shown below.

Asset	Work Type	In-House or Contractor	Contract Details
Carriageway	Routine and Reactive	In-house	NA
	Planned	Resurfacing –Contractor	All schemes tendered - either individually or in batches
		Surface Dressing –Contractor	All schemes tendered - either individually or in batches
Footways	Routine and Reactive	In-house	NA
	Planned	Reconstruction – Contractor	Site Specific Contract
		Resurfacing – Contractor	All schemes tendered - either individually or in batches
		Slurry Seal – Contractor	All schemes tendered - either individually or in batches
Street Lighting	Routine and Reactive	In-house	NA
	Planned	Column (New / Replacement) – Contractor	All schemes tendered - either individually or in batches
		Luminaire (New / Replacement) – Contractor	All schemes tendered - either individually or in batches
Highway Structures	Routine and Reactive	Contractor	All works tendered - either individually or in batches
	Planned	Contractor	All schemes tendered - either individually or in batches
Traffic Signals	Routine and Reactive	Contractor	Outside contractor (Centregreat) contract ends March 2024
	Planned	Contractor	Outside contractor (Centregreat) Contract ends March 2024
Street Furniture	Routine and Reactive	In-house	NA

13.2 Contract Reviews

13.2.1 Contracts are reviewed under the evaluation of Contractors Performance section on the South East Wales Framework, as and when contracts are put out to Tender and awarded on the framework.

14 Asset Register and Inventory

The asset register defines the roads that belong to and are maintained by the council. The inventory of the highway assets is based on the asset register and contains the detailed information required to manage the asset. The information includes amount, size, construction material, current condition etc.

14.1 Asset Register

14.1.1 The definitive record of the roads that are the council's responsibility including the full list of adopted streets is located on the Street Gazetteer held in the council's highway asset management system (Mayrise),

15 Inventory

15.1 A data assessment spreadsheet is located and maintained under the Mayrise and GGP accounts. The spreadsheet records the specific inventory held for each highway asset. The quality of the inventory details held is recorded on the data assessment spreadsheet. The data is held for each asset in the following software systems:

- Carriageways and Footways – Mayrise
- Structures and Drainage – "Asset Management Expert" (AMX) Data Base
- Street Lighting and Traffic Signals – Mayrise

16 Data and System Improvement

16.1 The quality of the inventory details held is reviewed annually based on the information recorded on the data assessment spreadsheet. A plan for improvements to data and the highway asset management system are recorded in the Highway Data Improvement Plan.

17 Budget Allocation

The budget for highway maintenance is set annually by the council. Status reports are provided to assist the council in establishing the overall budget. The highway maintenance budget is allocated between asset groups and work types in accordance with the method set out below.

18 Annual Status and Options Reporting

The Annual Status Options Reports (ASORs) are provided by annually detailing the current condition of the asset.

The Options Report (OR) detail the options available for its future maintenance/management based on differing budget scenarios and are provided prior to the updating of the HAMP.

19 Annual Budget Setting

The budget for highway maintenance and how it is to be split between asset groups and between routine and planned works is determined following the review by the council committee of annual status and options reports (ASRs and OR). By Council Members and in coordination with the Head of Community Services and Highway Maintenance Manager.

20 Confirmation of Service Standards

Service standards are chosen based on the options presented in the OR. The standards are based upon the allocated budget and the estimated amounts of work required to achieve them.

21 Updating of Highway Asset Management Plan

The service standards, works required and proposed budgets are detailed in the Highway Asset Management Plan (HAMP), which is reviewed annually and updated annually.

22 Customer Consultation

Customer consultation is used to understand how the condition and management of the highway asset is viewed by the road users, including identifying any aspects that may need to be improved.

23 Customer Relationship Management System

The 'Connect to Blaenau Gwent Contact' (C2BG) receives communications from the public (customer) and members of the council. Each request is logged on a database and referred to the relevant Officer for attention. The target to determine appropriate action is ten working days.

Progress in dealing with complaints is monitored and pursued to a conclusion. When the matter has been addressed, the database is updated to record the action taken and, where applicable, the date on which the defect was rectified. Subsequently, the customer is advised of the action taken where necessary.

The council also provides a customer contact application for use on smartphones (ABAVUS) that allows customers to report queries and complaints.

24 Roadwork's Reports

Public frustration can stem from delays caused by roadworks. To provide the public and others with information on where disruption to road traffic can be expected, a weekly Roadwork's Report is circulated to third parties and emergency services. This information is also available via the council's web site (www.blaenau gwent.gov.uk). The weekly Roadwork's Report gives details of works being undertaken on all classified routes, including the nature and anticipated duration of the works, and the method of traffic management being employed. Additional publicity is provided where exceptionally severe traffic delays are anticipated.

25 Third Party Claims

Third party claims are made against the council when members of the public believe that negligence on the part of the council, has resulted in injury or property damage.

25.1 Processing 3rd Party Claims

The details of the third-party claim process can be found with members of our insurance section. BGCBC handles claims internally, up to £250,000.

25.2 Review of Claims

The Highways Service Manager receives an annual report from the Insurance team. The report details:

- the number of claims
- a breakdown of the type of claim (personal injury/property damage),
- the asset to which it refers,
- the specific details of the claim and
- whether the claim was successful or repudiated.

25.3 Reporting Claims Outcomes

The Service Manager reviews the information and includes a summary of the claims data in the ASORs.

26 Traffic Management

The Council as local traffic authority has a duty to manage the road network to secure the expeditious movement of traffic on the network and facilitate the same on road networks for which

another authority is the traffic authority. The duties are set out in the Traffic Management Act 2004 and the arrangements that the Council has in place to meet these duties is detailed below.

Full details of the arrangements put in place for managing traffic on the county's roads including the following items can be found in BGCBCs Streetworks Register and Standard Traffic Manuals.

26.1 Traffic Manager

The Council has appointed a "traffic manager" to perform such tasks as the authority consider will assist them to perform their network management duty. – The Traffic Manager for BGCBC is Clive Rogers (Head of Community Services).

26.2 Traffic Disruption

The Council has in place processes for ensuring that the authority identifies cause, or potential to causes of road congestion or other disruption and takes action in response to (or in anticipation of) anything so identified.

26.3 Policies and Objectives

The Council has determined specific policies or objectives in relation to different roads or classes of road in their road network and have procedures in place to monitor the effectiveness of their decision-making processes and the implementation of their decisions and assess their performance in managing their road network.

26.4 Traffic Sensitive Streets

The county contains a number of streets that due to the amount or make up of traffic that use them have been designated as traffic sensitive and have working time restrictions placed upon them. The list of traffic sensitive streets is contained in appendix G.

27 "Cyclic" Planned Maintenance

Cyclic maintenance activities include gully emptying and verge maintenance. The frequencies at which Cyclic Maintenance activities are conducted are shown below.

Activity	Frequency
Gully Cleansing	
Standard Gullies	On a cycle determined by the route of the single gully cleaning machine
Priority/Critical Gullies	May – October every eight (8) weeks November – April every four (4) weeks
Road Signage Cleaning	
All Road/Highway Signage	As identified through routine highway inspection regimes
Grass Cutting*	
Urban Roads	Four cuts per year
Rural Roads	Two cuts per year
Visibility Splays	Minimum four cuts per year
Safety Cutting	Additional cuts where unusual growth has created a hazard as identified by inspection
Weed Removal	
Weed Spraying	Twice per year footways, channels and kerbs
Application of Retarders	Limited use only
Noxious Weed Removal	Selective spraying and hand pulling where weeds constitute a menace
* Grass cutting comprises a one metre swathe immediately adjacent to the carriageway or footway. Where rare flowers exist in the verge, cutting is delayed until after the seeds have set	

There are currently no cyclic maintenance activities undertaken for lighting or structures assets.

28 Highway Works Scheme Prioritisation Regime

Assets that are identified as in need of substantial repair or replacement are included on a works programme of potential schemes. A prioritisation regime is used to identify which of the proposed schemes should be undertaken during the following year/s.

29 Rolling Programme

A list of schemes to be entered onto the annual programme/s is produced to meet the standards, strategies & budgets for each asset and treatment type as detailed in the Highway Asset Management Plan (HAMP). This list contains more schemes than it is possible for fund and as such a list of reserve sites is also produced to be used if the originally selected sites cannot be undertaken due to unforeseen circumstances.

30 Scheme Prioritisation

Details of the prioritisation processes can be found in appendix F.

31 Performance Monitoring Regime

To ensure that the standards set out in this manual are adhered to the council operate a performance monitoring regime as set out below.

31.1 Operational Performance Measures

A series of operational performance measures are used to monitor ongoing activities such as inspections and routine and reactive repairs.

The operational measures are designed to enable the service manager to take corrective action if performance has fallen below the required standards. As such the reporting of these measures is undertaken at frequencies within the year i.e. monthly, quarterly etc.

31.2 Performance Indicators

CSSW has developed a suite of performance measures designed to enable authorities to monitor the performance of their highway assets. The PIs are detailed in Appendix H. The council has adopted the recording and reporting of these PIs to enable review of progress in meeting condition targets set in the asset management plan and to facilitate appropriate comparison with peer authorities.

31.3 Benchmarking

The council will participate in appropriate benchmarking activities using the data recorded for appropriate Performance Indicators (PIs). This benchmarking is facilitated via the CSSW HAMP project. It is recognised that some of the measures are a direct result of council choice in terms of standards and targets adopted and as such comparison with other authorities may not be appropriate. There are elements of performance however where understanding equivalent performance in similar authorities will enable the authority to share and learn from good practice and to implement improvements. The council actively pursues this via collaboration facilitated by CSSW and the various committees and groups that CSSW support.

Section 5

BLAENAU GWENT COUNTY BOROUGH COUNCIL

RISK BASED APPROACH METHODOLOGY

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
Issued to	
Version No.	

1 Introduction

The risks associated with maintaining the highway are managed using the methods described below. This includes how the methods comply with the risk-based approach required by the Code of Practice.

1.1 Code of Practice

1.1.1 A revised Code of Practice (the code) for Highways "Well Managed Highway Infrastructure" was published in October 2016 providing guidance that authorities are expected to follow and may rely upon when defending themselves against third party claims.

1.1.2 The most significant change to the previous guidance, proposed by the new CoP, is the introduction of a risk-based approach to all decision making to be undertaken by each authority individually.

1.1.3 CSSW have developed a method in response to the code that it recommends authorities adopt. The method includes development of Hierarchy, Inspection Regime and Repair Regime for the highway assets, along with recommended minimum standards for inspection and defect repair.

1.2 Use of the CSSW Risk-Based Approach

1.2.1 The Highways Department undertake an annual risk assessment as detailed in the "CSSW Highways Asset Management Framework Recommended Practices - Task 4 Annual Performance & Risk Review".

1.2.2 The details of the asset hierarchy, inspection and repair regimes adopted by the council and where they differ from (exceed) the CSSW recommended standards is detailed later in this document.

1.3 Blaenau Gwent Corporate Risk Management

1.3.1 The Council manages risk via the 'County Council Risk Management Framework, September 2017'. An electronic copy of this document can be found at http://intranet/facilities-services/insurance-risk-management/risk-management.aspx

1.3.2 The following is based upon the 'CSSW's Risk Based Approach to Highway Management – Rationale Behind the Approach'.

1.3.3 Blaenau Gwent County Borough Council accepts both the County Surveyors Society (Wales) (CSS Wales) and 'Well Managed Highway Infrastructure: A Code of Practice, UK Roads Liaison Group 2016' (WMHI 2016), method to use asset information to produce risk assessments, informed by usage data, (including the reference documents used to compile this code of Practice). This is based on the simple premise that if an asset exists and it contains a variation in its condition, but no-one uses it, the safety risk is zero. As more people use the asset then it is argued that the probability of them being physically affected by the variation increases and this can be modelled mathematically.

1.3.4 It is now possible to acquire and analyse data regarding areas where the condition of an asset varies from its previous inspection or original state. Categorising the type size and location of the Condition Variation (CV) will be used as a reference in establishing the foundation for setting the Council's highway asset hierarchies and repair regimes. These records will also be used to inform and influence annual budget assessment and allocation.

1.3.5 The current draft Highway Asset Management Plan 2019-2025 had two bi-annual reviews to confirm and/or alter the hierarchies based on any changes to the data affecting the asset, such as increased traffic flows, changes to condition data etc. This document will do the same.

1.4 Establishing Hierarchies

1.4.1 The CSSW's Risk Based Approach to Highway Management – Rationale Behind the Approach and the WHMI 2016 requires that highway assets are split into hierarchies, but the latter states that **'*hierarchy will not necessarily be determined by the road classification, but by functionality and scale of use*'**, Blaenau Gwent County Borough Council have considered the examples provided in the Code of Practice (CoP) and determined that the major factor determining safety risk is use. Others factors specific to the asset are incorporated into final hierarchies and where this is the case these have been noted.

1.5 Carriageway Traffic Counts

1.5.1 BGCBC does not have and cannot be reasonably expected to have up to date use information for every street, therefore, Officers have devised methods of estimation, detailing their assumptions which are based on specific knowledge and experience of the Borough and the street concerned.

1.5.2 All local roads are already described a class; A, B C or Unclassified and historically BGCBC has based its highway hierarchy exclusively on its road classification, as these were set prior to local government reorganisation in 1996, and the process for changing them is time consuming and costly, it has been decided that road classification will be only a consideration in the establishment of the current hierarchy. Whilst road class is broadly indicative of use and so safety risk, nationally and locally, there are major variations that means keeping the hierarchy based only on road classification is not appropriate in Blaenau Gwent.

1.5.3 The Department of Transport collects and publishes 761 traffic counts on A class roads in all local authorities in Wales, and in 2017-18 these show a range of annual traffic (AADT) from 83,000 to 431. Analysis of this data shows that approximately 29% of the counts fall in the range of 10,000 to 20,000 vehicle movements per day, with approximately 52% falling in the range of 500 to 10,000. The 19% of roads with higher counts are those feeding and linking the cities in the southeast and north.

1.5.4 It should be noted that in Wales Trunk roads are maintained by The South East Wales Trunk Road Agency (SEWTRA) and so the data highlighted are not BGCBC maintained roads.

1.5.5 To establish a hierarchy based on national and local traffic counts BGCBC uses the CSSW developed table below, with the 10,000 to 20,000 movements per day as the datum. It is this range that has been taken to represent a generic busy main distributor type road.

Table 1.8	
Carriageway Hierarchy Level	**Approximate Traffic Flow**
Strategic Route	Based on Local Importance
Main Distributor	10,000 - 20,000
Secondary Distributor	5,000 - 10,000
Link Road	1,000 - 5,000
Local Access Road	200 – 1,000
Minor Road	Below 200

1.5.6 BGCBC have concluded that the category of Minor Road can be incorporated into the category above and inspection frequencies can be carried out at the higher level appropriate to a Local Access Road.

1.5.7 Due to current lack of traffic flow data, a model based upon local knowledge has been developed to better describe estimated traffic movements. Based on four, six-hour time segments a total number of traffic movements has been based on the combined Highway network sections experience to determine 5 categories as shown in the following table:

Table 1.9									
Estimated Maximum Traffic Flow									
	00:00 – 06:00	Total	06:00 – 12:00	Total	12:00 – 18:00	Total	18:00 – 00:00	Total	Daily Total
	Vehicle every		Vehicle every		Vehicle every		Vehicle every		
Very High	2.5 seconds	8640	1.25 seconds	17280	1.25 seconds	17280	2.5 seconds	8640	51840
High	5 seconds	4320	2.5 seconds	8640	2.5 seconds	8640	5 seconds	4320	25920
Medium	30 seconds	720	7.5 seconds	2880	7.5 seconds	2880	10 seconds	2160	8640
Low	90 seconds	240	30 seconds	720	30 seconds	720	60 seconds	360	2040
Very Low	5 minutes	72	2 minutes	180	2 minutes	180	5 minutes	72	504

1.5.8 The length of time placed in the 'Vehicle Movement Every' column is based on an estimate of traffic flow based on the number of car lengths at 4m between vehicles travelling 30 mph, thus 1,25 seconds is approx. 4 car lengths, 2.5 seconds is approx. 8 car lengths, 5 seconds is approx. 17 car length etc.

1.6 Footways

1.6.1 Due to the current lack of pedestrian count data, a model based upon local knowledge has been developed by BGCBC to better describe estimated pedestrian movements. Based on six-hour time segments a total number of pedestrian movements has been based on the combined highway network to determine 5 categories as shown in the following table:

Table 1.10									
Estimated Maximum Pedestrian Footfall									
	00:00 – 06:00	Total	06:00 – 12:00	Total	12:00 – 18:00	Total	18:00 – 00:00	Total	Daily Total
	Movement every		Movements evert		Movement every		Movement every		
Very High	5 min	72	10 seconds	2160	5 seconds	4320	15 seconds	1440	7992
High	30 min	18	15 seconds	1440	10 seconds	2160	30 seconds	720	4338
Medium	1 hour	6	90 seconds	240	30 seconds	720	1 min	360	1326
Low	3 hours	2	3 min	120	90 seconds	240	3 min	120	482
Very Low	6 hours	1	10 min	36	6 minutes	60	10 min	36	133

1.6.2 From the above BGCBC has established the hierarchy as identified in the table below:

Table 1.11				
BGCBC Footway Hierarchy				
Category	**CSSW Description**	**WMHI 2016 Description**	**Estimated Maximum Pedestrian Footfall**	**Location**
Main Distributor	High use pedestrianised zone and footways in town centres	High use pedestrianised zone and footways in town centres	Very High	Abertillery TC Ebbw Vale TC Tredegar TC Brynmawr TC The Works site EV including the train station & General Offices
Secondary Distributor	Footways outside busy public buildings such as train/bus stations, hospitals, schools and colleges or small parades of shops etc. that experience significantly higher levels of use than the adjacent footways	Busy urban shopping and business areas and main pedestrian routes	High	Blaina TC Llanhilleth TC Nantyglo Garn Cross Cwm Ebbw Vale All school and college entrances including leisure and sports facilities and residential footways housing estates.
Link Access	Footways linking housing or industrial estates to other centres or routes	Linking local assess footways through urban areas and busy rural footways	Medium	Cycleways, non-residential footways

Local Access	Footways in housing areas/ Rural footways with infrequent use	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs/little used rural footways serving very limited numbers of properties	Low/Very Low	All other footways

1.7 Structures

1.7.1 In BGCBC the structures hierarchy is calculated against the safety risk for users in association with the risk to the functionality of the network, such as loss or restriction (weight limit) of the asset. In BGCBC where a structure is the primary method of gaining access to a community even though this might be for a small number of people then the structure has been categorised with regard to those users rather than the network as a whole.

1.7.2 The hierarchy has been defined as follows:

1. Vital Structure: This is a structure that is vital to the network and if restricted or out of service would cause very significant adverse effects, such as, major traffic delays or loss of access to emergency services etc.

2. Important Structure: This is a structure that is important but not vital to the functioning of the network and if restricted or out of service would result in inconvenience to the network, such as, slower or longer routes due to diversion or longer times to access for emergency services.

3. Standard Structure: This category contains all other structures.

Initially the above categories have been matched to the hierarchy for roads and footways as these have already defined use parameters:

Table 1.12	
Road Bridges, Culverts, Retaining Walls etc.	
Carriageway Hierarchy	Structure Hierarchy
Strategic Route	2. Important Structure
Main Distributor	
Secondary Distributor	
Link Road	3. Standard Structure
Local Access Road/Minor Road	

Table 1.13	
Road Bridges, Culverts, Retaining Walls etc. (Footways)	
Footway Hierarchy Category	**Structure Hierarchy**
Pedestrian Areas in City Centre Shopping/Business Areas	2. Important Structure
Pedestrian Areas in Town Centre Shopping/Business Areas	
Footways Outside Public Buildings or Facilities	
Link Footways	3. Standard Structure
Local Access Footways/Minor Footways	

1.8 **Street Lighting**

1.8.1 In recent years BGCBC has invested in options to reduce the Council's Carbon footprint through changing lanterns to LED and adopted a policy of risk assessed switch off or part night lighting of streetlights to achieve this. Historically the safety hierarchy of streetlights has been based on the electrical safety of individual columns, however, to ensure that there was no increased safety risk or legal issues by deactivating lights across the County Borough a safety risk assessment exercise was undertaken to identify those lights that were to remain on during the hours of darkness. This included roundabouts, junctions, roads with traffic calming and lights within 30 mph areas to meet the requirement of the Road Traffic Regulation Act 1984, Section 82(1)(a).

1.8.2 Maintenance of the asset is carried out via a small internal team which is supported by an external contractor who supports at times when required for attendance for faults and outages. The inspection regime is included in appendix B.

1.9 **Traffic Signals**

1.9.1 All traffic management assets across the network in Blaenau Gwent have been assigned an initial category on the hierarchy of the road it is located on as set out in the table below:

Table 1.14	
Carriageway Hierarchy	**Traffic Management Hierarchy (As per highest Carriageway hierarchy)**
CHSR	Primary Junction
CH1	
CH2	Secondary Junction
CH3	Local Junction
CH4	

1.9.2 All other traffic management assets (pedestrian crossings) are assigned the hierarchy of the adjacent road or footway hierarchy (the highest of the two).

1.9.3 Other highway Assets not covered above e.g., Drainage, Street Furniture.

Drainage and street furniture assets for the purpose of this HAMP are mainly items that are inspected during routine inspections and as such the appropriate carriageway or footway hierarchy dictates the frequency on inspection and will influence the categorisation and response to defects.

Section 6

BLAENAU GWENT COUNTY BOROUGH COUNCIL

HIGHWAY DRAINAGE CLEANSING SERVICE

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
Issued to	
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1 The Service

1.1 As the Highway Authority, Blaenau Gwent County Borough Council has a duty imposed by the Highways Act 1980, to maintain a network of roads that is safe to use. To minimise the safety risk to users, due to standing and running water, systems of road drains, channels, gutters and pipes have been provided to drain rainwater off the road surface. These drains channel and gutter require regular inspection and where necessary maintenance work to ensure they work as designed.

1.2 To carry out this operation Blaenau Gwent County Borough Council employ a dedicated road drain cleansing vehicle (Gully suckers X 2) and crew of two operatives. The road drains, channels and gutters serving the highway are inspected and cleansed on a scheduled basis, with identified “critical” gullies being inspected and cleansed more often, to ensure the safety risk of flooding is minimised. A schedule of inspections and/or cleansing has been complied and records of inspections and work carried out are kept providing a defence under Section 58 of the Highways Act 1980.

2 The Asset

2.1 The Authority at February 2023 has approximately 13,500 highway drains/gullies of various types and construction in the highway. This is serviced by underground drainage pipework together with associated inspection chambers and catch-pits whose maintenance lies with Blaenau Gwent County Borough Council. The rainwater from the highway system is discharged into storm water systems across the 3 valleys.

2.2 Welsh Water or national Resources Wales are responsible for combined and surface water sewers and watercourses including the three main rivers; Ebbw Fach, Ebbw Fawr and Sirhowy that are running through the County Borough.

3 Operational Policy

3.1 Planned gully cleansing operations will be carried out during normal Council working hours with records being kept of work carried out and amounts of waste generated. Each working day a crew will be assigned either:

- a predetermined schedule of tasks to inspect, cleanse and report or cleanse and report any defects about the road gullies and drains,

. 3.2 Prefilling of the Gully sucker with water will take place at predetermined locations across Blaenau Gwent and the vehicle will always be parked up under cover and refilled as appropriate. During days when compulsory testing is required on the Gully sucker or when it is unavailable due to mechanical breakdown the operatives will be supplied with an alternative method of transport and detailed to inspect a geographical zone only, with cleansing works being carried out as and when the vehicle becomes available. Gullies on very busy roads i.e. category CH1 and CH2 will be inspected and cleansed at quieter times, that could include weekend working.

3.3 Where reports of ponding or flooding due to defects in the road drainage system are received the safety risk associated with that location will be assessed, and a works programme, generated if appropriate and required and will provide a target completion date for these proposed actions.

4 Cleansing Frequency

4.1 The authority has a detailed cleansing schedule for gullies/drains on the highway network including a course of initial visual inspections to identify obviously blocked road drains. Where defects are not immediately visually apparent and rainfall results in water ponding due to the road drain not working, the Authority will, when resource allows carry out proactive surveys and record the location of any problem areas. All reports from non-authority agencies and individuals will be investigated based on the timescales and resources available, and any works resulting from these inspections will be included in the non-scheduled works programmes. The Authority will endeavour to visit every gully drain and culvert within a twelve-month period.

5 Operational Issues

5.1 It is accepted that the policy of inspection and then cleanse of gullies will rarely identify any blocked connecting pipes or carrier drains. These will become apparent after rainfall and where these cause a significant safety risk to highway users they will be addressed as they are reported or observed.

5.2 Where the gully drain has been cleansed, and evidence shows that the majority of blockages are caused by outside influences such as tree root ingression or by damage by Statutory Utility contractors. As these problems are discovered an assessment of the safety risk will be carried out and this then fed into an ongoing planned works programme for excavation and repair. This programme will be prioritised, however where the damage can be proved to be as a result of Statutory Undertakers the Authority will utilise the provisions of the New Street Work Act 1991 to reclaim any costs incurred.

5.3 There will be streets and individual sites where access to a gully or series of gullies will be prevented by parked vehicles, where this is the case, the crew has been instructed to attempt to identify the owner and have the car moved at the first visit. This information will be logged on the daily work sheet as this will have an effect on the number of gullies that be cleansed in any day. If the owner cannot be found at the time of the first visit, then the crew will make a further attempt within 5 working days, if this is unsuccessful or operationally impractical, the safety risk of not cleansing the gully will be assessed and a decision recorded. If after reference to the Gully cleansing Risk Matrix the safety risk is deemed as significant then other agencies will be employed to remove the obstruction on the highway.

6 Unscheduled Cleansing (Reactive Drainage Work)

6.1 Where blocked gullies are reported outside the cleansing schedule these will initially be assessed by an experienced officer using the Gully Cleansing Risk Matrix and any appropriate action taken in line with the guidance. If the officer decides to vary from the guidance, then, the reasons for this deviation, and the actions taken, will be recorded.

7 Blaenau Gwent County Borough Council's Responsibilities and Duties

7.1 There is a perception that home/landowners adjacent to the highway are owed a 'duty of care' to have the road drainage protect their property in times of rainfall or storm. To date the legal system does not recognise this and holds that if the Authority has an agreed schedule of maintenance and this in compliance then the Highway Authority has a defence under Section 58 of the Highway Act 1980. The Authority will always investigate these complaints/requests for service in a timely manner but not

always have the resources or ability to rectify them to the satisfaction of the resident or landowner with regard to their property.

7.2 It is known that untreated discharge from gully cleansing operations carry high levels of pollutants. To minimise the environmental effects, where it is obvious, or it has been recorded that a road drain discharges directly into a watercourse cleansing operation will carried out in line with the following hierarchy:

1. Hand cleansing
2. Cleansing using clean water (high pressure jetting)
3. Cleansing using vacuum action only
4. Cleansing using vacuum action and clean water (high pressure jetting)

The 'blow back' facility should not be used on these drains as pollutants contained in the vehicle holding tank are harmful to the environment and are not adequately filtered.

7.3 **Sandbags**

BGCBC keep a minimum stock of 2000 sandbags for highway and other emergencies and will issue these on occasions to the general public at risk to flooding.

GULLY CLEANSING RISK MATRIX

Measured and Scheduled response will have a tolerance of 10% to allow for unforeseen emergencies and operative sickness.

Description	Safety Risk Score
Strategic Route	
Main Distributor	
Secondary Distributor	
Link Road	
Local Access Road	
Description	Safety Risk Score
Located where if blocked will cause a known significant safety danger to highway users	2
Located where if blocked will require an on-site assessment of the safety danger to highway users	1
Located where if blocked does not cause a safety danger to highway users	0
Description	Safety Risk Score
Gully is located where a drivers view of any standing water would be obscured, such as a dip or a corner	2
Gully is located where the drivers view of any standing water is not obscured or on a hill where the gully above and below is also blocked	1
Gully is located on a hill and the gully above and below are working	0
Description	Safety Risk Score
If blocked will allow rainwater to flow over vehicle wheel track	3
If Blocked will allow rainwater to flow over footway	2
If blocked rainwater will remain within carriageway channel	1
If blocked rainwater will not flow over footway	0
Add Scores from Road Classification, Cleansing Priority, Road Alignment and Gully Sensitivity	
Response	Safety Risk Score total
Immediate response (area made safe and gully attended within 24 hours)	**11-15**
Measured response (gully attended within 1 calendar month)	**6-11**
Schedule response (gully will be cleansed next cycle)	**0-5**

Section 7

BLAENAU GWENT COUNTY BOROUGH COUNCIL

SKID RESISTANCE POLICY

FOR THE ADOPTED HIGHWAY

2023- 2028

Date	01/06/2023
Author	David Watkins
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1 Introduction

1.1 This instruction sets out Blaenau County Borough Council's approach to monitoring skid resistance of carriageways and interpreting data arising from any measurement made. It also sets out the requirements to ensure that new surfacing will have appropriate surface characteristics to develop adequate levels of skid resistance. It makes reference to the Highways England's Standards HD 28/15 and HD 36.(DRMB 7.5.1).

1.2 This instruction applies to all surfaced carriageways and surfaces designed to be shared with pedestrians on the adopted highway network. Requirements for surfaces used only by pedestrians will be described separately.

1.3 The procedures adopted to monitor skid resistance on the network are risk based and rely on an integrated approach involving Blaenau Gwent County Borough Council highway and traffic practitioners and outside Contractors.

1.4 In this document, the term "skid resistance" refers to the frictional properties of the road surface measured using a specified device under standardised conditions. The term always refers to measurements made on *wet* roads, unless specifically stated otherwise. These measurements are used to characterise the road surface and assess the need for maintenance but ***cannot be related directly to the friction available to a road user making a particular manoeuvre at a particular time***.

1.5 This Instruction has been made to accommodate the changes in procedures introduced in the Highways English Standards HD 28/04 and IAN 98/08.

1.6 All data related to the measurement and ongoing monitoring of skid resistance is to be treated as confidential between the Council and its Consultant and must not be communicated to Third Parties (including the Police) without the written consent of Blaenau Gwent County Borough Council.

2 Road Network Identified for Routine Monitoring

2.1 Network Review

A annual risk assessment of the BGCBC network is undertaken to confirm that the Sideways-force Coefficient Routine Investigation Machine (SCRIM) network meets the requirements of the Highways Act 1980 and current maintenance guidance. The skid resistance of all the network was assessed using five years of Injury Road Traffic Collision data and Traffic Information supplied by BGCBC. It was concluded that the risk of Road Traffic Collisions (RTC's) occurring on the Classified Un-numbered Roads (R) and the Unclassified roads (U) was low enough to not warrant an annual survey. It was also noted that many of the Rural R and U roads were unsuitable for SCRIM survey due to lane width preventing the vehicle obtaining survey speed.

2.2 Principal Road Network (PRN) and B Classified Road Network (CRN)

For the purposes of this instruction the PRN and CRN are defined as the roads which generally carry 'A' and 'B' road traffic.

2.3 **Method of Survey**

2.3.1 Routine monitoring of skid resistance is carried out using a SCRIM vehicle operated in accordance with BS 7941–1 and HD28. The Single Annual survey method will be used to determine the Characteristic SCRIM Coefficient (CSC) for 10m sub-sections of the network. Under this procedure the extent of the A and B road networks identified in Appendix A will be surveyed once each year and in successive years the surveys will be carried out in rotation during early season, mid-season and late season.

Please note: All references to CSC in this policy will also include the following caveat:

"Until the fourth year of operation, i.e. when an early, mid or late season survey is repeated, the Mean Summer SCRIM Coefficient equivalent will be quoted, where the single summer reading will be adjusted by the SCRIM Seasonal Factor, which is obtained from surveys of benchmark sites at three times during the testing season."

2.3.2 Routine monitoring of Sensor Measured Texture Depth is undertaken annually as part of the data collection for the SCANNER survey to determine Best Value Performance Indicators.

2.4 **Data Storage**

The Council's Pavement Management System (PMS) (Mayrise/Horizon Systems) is used to store and process the survey data.

2.5 **Investigatory Levels**

Investigatory Levels are defined and reviewed as described in section 4.

2.6 **Site Investigation**

Site Investigations are carried out in accordance with section 5. They may also be instigated as part of accident investigation procedures.

2.7 **Complaints about Skid Resistance**

If complaints are received or other concerns are raised about skid resistance at any point on this network, then, if the location of the site lies within the SCRIM survey parameters, the data obtained from routine testing can be used to respond initially. Initially a Coarse Visual Inspection (CVI) will be undertaken and if appropriate a surface condition report relevant to the site will be prepared by Blaenau Gwent County Borough Council, in consultation with appropriate specialised Consultants or Contractors. Site specific testing will not normally take place unless agreed by Blaenau Gwent County Borough Council.

3 Road Network NOT Identified for Routine Monitoring

3.1 **Network**

3.1,1 These are all other adopted, surfaced roads that are not included in the Skid Resistance Policy. These roads are deemed not appropriate for routine monitoring and include a small number of roads including the majority of unclassified roads.

3.1.2 No routine survey of these roads is to be undertaken although testing may be deemed to be necessary on a site-specific basis following complaints, repeated incidents of damage involving vehicles in wet conditions, regular damage to street furniture or as part of accident investigation procedures. Testing will only be undertaken after an initial assessment of the data required for a site investigation (except test results) and consultation with an appropriate Consultants or Contractors and following approval by Blaenau Gwent County Borough Council.

3.1.3 Site specific testing will be undertaken either as part of the routine SCRIM survey or as a separate exercise using the Griptester.

3.1.4 The CSC will be derived in the normal manner for results from SCRIM surveys. The results from Griptester surveys will be converted to equivalent CSC values using correlations developed by the County Surveyors' Society Griptester User Group.

3.2 Investigatory Levels

3.2.1 Investigatory Levels (ILs) are defined as described in section 4 below and should be recorded on the PMS.

3.3 Site Investigation

3.3.1 Site Investigations are carried out in accordance with Section 5 below.

4 Assignment

4.1.1 Where adjustments are made to the use of the network which would mean a redefinition of site category is required (e.g. the installation of a pedestrian crossing or a new section of road is opened), then the lowest of IL for the appropriate site category will be adopted, unless a site-specific risk assessment undertaken by a qualified Safety Engineer, indicates that a higher value is appropriate. This risk assessment should address the factors detailed in paragraph 4.12 of HD28.

4.1.2 For sites not on the road network identified in Appendix A, the Site Categories and ILs will be determined initially by pavement engineering staff as part of the site investigation process and will generally be within the bands in Table 4.1 of HD28. These will be reviewed as part of the investigation process and the values assigned will be recorded on the PMS.

4.2 Review

4.2.1 Reviews of ILs will be undertaken in the following circumstances: -

- When SCRIM results indicate that a section lies below the current IL and the site investigation procedure is invoked.
- When site-specific accident investigations are being undertaken.
- When changes are made to the network.

Any review of IL's will be instigated by Blaenau Gwent County Borough Council using appropriate consultants or contractors and the following information should be obtained as a minimum: -

- The latest CSC and Investigatory Level data from the Pavement Management System.
- Site details: -
  - changes that have taken place in the site use or road layout e.g. the installation of traffic signals, pedestrian crossings or roundabouts.
  - relevant local factors such as non-injury accidents, complaints, or repeated reports of damage.
- Details of accidents extracted from the Police Authority's Road accident system (currently Macdonald Douglas database) and validated by Capita Symonds Road Safety Engineering Department, and data input into the Capita Symonds AccsMap system. Only accidents occurring in the previous 36 months should be considered and only wet road accidents will be used against SCRIM survey results. Blaenau County Borough Council, using appropriate consultants or contractors, will review this data to establish, if possible, the extent to which the road surface is a factor in the recorded accidents.

The principles outlined in HD28 should be followed in the review process and any adjustments deemed necessary to Investigatory Levels should be made in steps of 0.05 units of CSC.

There are two sets of circumstances where the inter-relationship between wet road accidents and SCRIM results will have the potential to affect the SCRIM Investigatory Level. These are:

- Where CSC is below Investigatory Level and there are no recorded wet road accidents within the last 36 months, there is potential to reduce the Investigatory Level.
- Where analysis of accident records show there are wet road accidents, but the CSC is above Investigatory Level, there is scope to raise the Investigatory Level.

Recommendations to adjust the Investigatory Levels shall be agreed by Blaenau Gwent County Borough Council for approval prior to implementation.

The basis of decisions to amend Investigatory Levels should be recorded together with confirmation that the Pavement Management System has been updated accordingly.

4.3 Texture Depth

The Investigatory Level for texture depth (Sensor Measured Texture Depth) on all sites will be 0.7mm.

5 Site Investigation

5.1 Purpose

Sites where the analysis of Accident details suggests a concentration of wet surface accidents or sites where the CSC is at or below the IL require a site investigation. The objective is to:

- Determine whether a surface treatment is justified to reduce the risk of accidents, particularly accidents in wet conditions.
- Determine whether some other form of action may be required.
- Determine whether the current IL is appropriate.
- Determine whether to keep the site under review and not carry out any works.

5.2 Procedure

Blaenau County Borough Council will instigate a site investigation and will follow the Site Investigation and associated procedures detailed in Chapter 5 and Annexes 4 & 5 of HD28 shall be followed (with the exception of 5.3 & 5.4).

Sites requiring investigation shall be identified and prioritised as soon as practicable after the CSC values have been received from the routine SCRIM survey.

Site prioritisation will be on the basis of the amount by which the skid resistance is below the IL. If a substantial number of sites are identified by this procedure, then further prioritisation on the basis of other factors such as traffic type and volume will be necessary.

A programme of remedial treatments will be developed from the conclusions of the site investigations and priority should be given to treating the following sites:

- Where the accident history shows there to be a clearly increased risk of wet or skidding accidents.
- Where the skid resistance is at least 0.05 CSC units below the Investigatory Level.
- Where low skid resistance is combined with low texture depth (less than 0.7mm).

At all sites where surface treatment is recommended, slippery road warning signs shall be erected and maintained until the treatment is carried out. This shall be done as soon as practicable after the identification of such sites.

5.3 Records

A copy of the site investigation report should be held on the Management System.

6 Properties of Surfacing Materials

Specifications for all surfacing laid in maintenance works (including patching) and new construction will include requirements for Polished Stone Value (PSV) and Aggregate Abrasion Value (AAV) of the aggregate and texture depth of the surface.

The PSV and AAV shall be selected from the tables in the current edition of HD36. The designer should record the commercial vehicle flow used and the source of that data.

For sites on the road network identified in Appendix A and other locations where Investigatory Levels have been assigned, then the PSV specified should be derived from the IL held on the pavement management system for that location and the commercial vehicle flow.

For all other sites, the site definition and the commercial vehicle flow should be used to determine the PSV required. (This is because a non-standard value of IL may apply on sites subject to IL reviews or accident investigations).

Texture Depth values for new surfacing, other than Thin Surface Course Systems, measured by the volumetric patch method (BS EN 13036-1), shall be determined from the table below:-

Site Description	Texture Depth
Roads subject to a speed limit of 40mph or above	1.5mm
All other roads	1.0mm

For Thin Surface Course Systems, texture depths measured by the volumetric patch method (BS EN 13036-1) shall be as shown below: -

	Untrafficked	After 2 years
Roads subject to a speed limit of 40mph or above	1.5mm	1.0mm
All other roads	1.2mm	0.08mm

7 Early Life Skid Resistance of Surfacing's

IAN49/03 provided advice for Slippery Road signs to be erected, for up to six months, after a road had been newly resurfaced. This advice has been superseded by IAN49/13 which has been produced after more research; the conclusion of IAN49/13 is that there is an increase in road traffic collisions on all newly resurfaced roads and not just Thin Surfacing's.

IAN49/13 also states that even though there is a high chance of road traffic incidents occurring on newly resurfaced roads, the probability of a fatal injury occurring is significantly lower and the probability of incidents occurring on high-risk sites is reduced, however more incidents were recorded on lower risk sites.

IAN49/13 recommends that Highway Authorities no longer need to erect slippery road signs along the length of newly resurfaced road.

8 References

- Design Manual for Roads and Bridges, TSO, London
- HD28/04, Skid Resistance (Volume 7, Section 3, Part 1)
- HD36/99, Surfacing Materials for New and Maintenance Construction (Volume 7, Section 5, Part 1)

Appendix A: Asset Hierarchy Categories

Carriageways	
New Category	**Description (approximate daily traffic volume)**
CHSR	Route enabling travel between locations of regional significance (NA, Strategic routes are identified based on their importance regionally rather than their traffic volume)
CH1	Travel between locations (traffic volume 10,000 - 20,000)
CH2	Travel between locations (5,000 - 10,000)
CH3	Travel between locations (1,000 - 5,000)
CH4	Access to housing (200 – 1,000)
CH5	Access to properties (housing and farms) (< 200)

Footways	
Category	**Description (approximate daily footfall)**
FH1	High use pedestrianised zones and footways in town centres (5,000 – 10,000)
FH2	Footways outside busy public building such as train/bus stations, hospitals, schools and colleges or small parade of shops etc. that generate significantly higher levels of use than the adjacent footways (1,000 – 5,000)
FH3	Footways that link housing estates and industrial estates to other centres /routes (500 – 1,000)
FH4	Footways in housing areas (<500)
FH5	Rural footways used very infrequently (<100)

Structures	
Category	**Description**
Vital Structure	A structure that is vital to the network i.e. if restricted or out of service it would cause a very significant adverse effect such as major traffic delays and a lengthy diversion route with the potential to affect other important services or community severance
Important Structure	A structure that is important to the functioning of the network, i.e. if restricted out of service would have an adverse effect on the operation of the network
Standard Structure	All other structures

Street Lighting Hierarchy

There is no hierarchy for street lighting assets managed by Blaenau Gwent County Borough Council. All assets are inspected at the same frequency and repaired within the same response time

Traffic Signals Hierarchy	
Category	**Description**
Vital Junction	A junction the operation of which is vital to the operation of the network i.e. its failure would cause major traffic disruption
Important Junction	A junction that is important to the operation of the network, the failure of which would cause traffic disruption
Standard Junction	A signalised junction on the network
Pedestrian Crossing	Pedestrian crossing

Details of the hierarchy allocated to each individual asset are held in the asset management systems (Mayrise, GIS and AMX systems).

Hierarchy differences between authorities (TBC)

Asset	BGCBC Hierarchy	Neighbouring Authority	Neighbouring Authority Hierarchy	Reason for differing Hierachy

Appendix B: Frequency of Inspections

The frequency of routine inspections is shown in the following tables along with the CSSW minimum recommended standards:

Carriageway: Routine Inspection Frequencies				
Carriageway Hierarchy	**Inspection Interval (Rural)**	**Inspection Method**	**Inspection Frequency Tolerance**	**CSSW Recommended Minimum**
CHSR	Monthly	Driven and walked	2 weeks	Monthly
CH1	Monthly	Driven and walked	2 weeks	Monthly
CH2	Monthly	Walked	2 weeks	Every 3 Months
CH3	Every 3 Months	Walked	6 weeks	Every 6 Months
CH4	Every 6 Months	Walked	3 months	Annually or 2 yearly Dependant on condition
CH5	Every 6 Months	Walked	3 months	Reactive Only

#BGCBC has chosen to exceed the minimum standard for CH3, CH5, CH5 and CH6

Footway Routine Inspection Frequencies				
Footway Hierarchy	**Inspection Frequency**	**Inspection Method**	**Inspection Frequency Tolerance**	**CSSW Recommended Minimum**
FH1	Monthly	Walked	2 weeks	Monthly
FH2	Every 3 Months	Walked	6 weeks	Every 3 Months
FH3	Every 6 Months	Walked	3 months	Every 6 Months
FH4	Every 6 Months	Walked	3 months	Annually or 2 yearly Dependant on condition
FH5	Every 6 Months	Walked	3 months	Reactive Only

#BGCBC has chosen to exceed the minimum standard for FH4 and FH5

Where adjacent carriageways and footways are inspected during the same inspection the higher frequency level is applied.

Inspection Tolerances

A tolerance as shown, is included to allow for unavoidable incidences such as bad weather or inspector sickness.

Condition Assessments

Carriageway

The SCANNER and SCRIM assessments are undertaken at the following frequencies:

Carriageway Annual Inspection Coverage		
Road Class	**SCANNER**	**SCRIM**
A Roads	100% (one direction) *	100% (both direction) *
B Roads	100% (one direction) *	100% (one direction) *
C Roads	25% (one direction)	

Visual condition assessments are undertaken at the following frequencies:

Category	Survey Coverage
CHSR	100% Annually
CH1	100% Annually
CH2	100% Annually
CH3	100% Annually
CH4	100% Annually
CH5	100% Annually

Footway

Visual condition assessments are undertaken at the following frequencies.

Category	Survey Coverage
FH1	100% Annually
FH2	100% Annually
FH3	100% Annually
FH4	100% Annually
FH5	100% Annually

Structures

Structures include bridges, subways and retaining walls. Condition assessments are undertaken at the following frequencies:

Inspection Type	Survey Coverage
General Inspection	100 % Every 2 Years
Principal Inspection	Every 6 Years (where required*)

* Restricted bridges that span over Network Rail Land.

Street Lighting

Condition assessments are undertaken at the following frequencies.

Inspection Type	Survey Coverage
Electrical	100 % Every 6 Years
Column Structural Test	As per result of previous test (3 or 6 years)
Visual	Ad hoc (during each maintenance visit)

Appendix C: Defect Types and Intervention Levels

The following is a list of defect types and intervention levels used within the authority.

Critical Defects

Asset Type	Defect	Magnitude	Hierarchy	Road Character	Response Time
All	A situation where the inspecting officer considers the risk to safety high enough to require immediate action, typically include items such as; Carriageway / footway / cycleway collapse with high risk of accidents / loss of control; Critically unstable overhead wires, trees or structures; Exposed live wiring; Isolated standing water with high risk of loss of control; Missing or seriously defective ironwork with high probability of injury to highway users.	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size	All	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size	2 hours

the response time for a critical defect is the time until the site is made safe, this may be achieved by closing all or part of the road or coning off the hazard. In some instance a repair may be immediately possible but in many instances the repair will occur later

Safety Defects

Safety Defects Criteria						
Asset Type	**Defect Type**	**Hierarchy**	**Dimensional Criteria BGCBC**		**CSSW National Minimum Standard**	
			Depth/Height	**Extent**	**Depth/Hieght**	**Extent**
Carriageways	Pothole	CHSR, CH1 and CH2	> 50mm	Maximum horizontal dimension greater than 150mm	> 50mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5**	>50mm	Maximum horizontal dimension greater than 150mm	>75mm	Maximum horizontal dimension greater than 150mm
Footways	Pothole	All	> 25mm	Maximum horizontal dimension greater than 75mm	> 40mm	Maximum horizontal dimension greater than 75mm
	Crack or Gap	All	> 25mm	Any Size	> 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All	> 25mm	Any Size	> 40mm	Maximum horizontal dimension greater than 75mm
	Rocking Slabs	All	> 30mm	N/A	> 40mm	N/A
Kerbing	Dislodged, Loose, Missing, Damaged - Causing a trip hazard	All	> 25mm	N/A	> 40mm	N/A

Maintenance Defects Criteria						
Asset Type	**Defect Type**	**Hierarchy**	**Dimensional Criteria BGCBC**		**CSSW National Minimum Standard**	
			Depth/Height	**Extent**	**Depth/Hieght**	**Extent**
Carriageways	Pothole	CHSR, CH1 and CH2	> 40mm	Maximum horizontal dimension greater than 150mm	> 40mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5**	> 40 mm	Maximum horizontal dimension greater than 150mm	> 50 mm	Maximum horizontal dimension greater than 150mm
	Crowning / Depression	All	> 100mm	< 2M Length	> 100mm	< 2M Length
Footways	Pothole	All	>20mm	N/A	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Crack or Gap	All	>20mm	N/A	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Trip	All	>20mm	N/A	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Rocking Slabs	All	>20mm	N/A	25mm - 40mm	N/A
	Badly cracked or damaged ironwork	All	N/A	N/A	N/A	N/A
Kerbing	Dislodged, Loose, Missing, Damaged - Causing a trip hazard	All	>20mm	N/A	25mm - 40mm	N/A

**Defect triggers on CH5 roads are to be considered an investigatory level.

#BGCBC has chosen to exceed the CSSW national minimum standards for safety and maintenance defects.

The standards in the preceding tables are a guide only. Reference should be made to the CSSW Highway Inspection Defect Recording Manual. It is an essential part of the authorities' inspection regimes that inspectors are appropriately trained. In doing so inspectors are able to complement application of the standard with their own assessment of individual defects, which may result in a different response time.

Street Lighting

The defect types and response times for street lighting faults are:

Category of Fault	Response Time
Routine	5 Working Days - subject to fault being reported and resources being available
Illuminated Regulatory Sign	
Three or more Lighting Units	
Other Routine Jobs	
Non-Routine	Not specified, works are undertaken as time and resources allow
Illuminated Regulatory Sign	
Other Routine Jobs	
Emergency	
To make safe potential electrical danger	2 hours
Temporary repair of traffic bollards	4 hours

Appendix D: Competency Requirements

Highways Inspectors undertake Highway Asset Competency accredited training for inspections every two years.

The Highway "Asset Management Competency Scheme for Wales: Highway Inspection" qualification is delivered by the County Surveyors Society Wales (CSSW) and is undertaken in two phases:

Phase 1 A online test (where inspectors need to exceed the pass mark)

Phase 2 A practical on-site assessment.

Highway's maintenance teams are all Chapter 8 qualified and undertake a range of Health and Safety qualifications.

Appendix E: Extract from highways Act 1980

As the highway authority the council is subject to legal requirements that include:
The 1980 Highways Act,

- Section 41; to maintain those roads, footways and cycle tracks that are '*Highways maintainable at public expense'*.
- Section 58; states that a statutory defense against third party claims is provided where the Highway Authority can establish that reasonable care has been taken to 'secure that the part of the highway to which the action relates' to a level commensurate with the volume of ordinary traffic such that it 'was not dangerous to traffic'.

Section 58: Special defence in action against a highway authority for damages for non-repair of highway.

(1) In an action against a highway authority in respect of damage resulting from their failure to maintain a highway maintainable at the public expense it is a defence (without prejudice to any other defence or the application of the law relating to contributory negligence) to prove that the authority had taken such care as in all the circumstances was reasonably required to secure that the part of the highway to which the action relates was not dangerous for traffic.

(2) For the purposes of a defence under subsection (1) above, the court shall in particular have regard to the following matters: —

a) the character of the highway, and the traffic which was reasonably to be expected to use it.

b) the standard of maintenance appropriate for a highway of that character and used by such traffic.

c) the state of repair in which a reasonable person would have expected to find the highway.

d) whether the highway authority knew, or could reasonably have been expected to know, that the condition of the part of the highway to which the action relates was likely to cause danger to users of the highway.

e) where the highway authority could not reasonably have been expected to repair that part of the highway before the cause of action arose, what warning notices of its condition had been displayed.

but for the purposes of such a defence it is not relevant to prove that the highway authority had arranged for a competent person to carry out or supervise the maintenance of the part of the highway to which the action relates unless it is also proved that the authority had given him proper instructions with regard to the maintenance of the highway and that he had carried out the instructions.

The New Roads & Street Works Act 1991 imparts a duty on Statutory Undertakers to maintain their apparatus in the Highway, but it has been established in Case Law that they can rely on the Highway Authority's Safety Inspection regime to some extent when defending Claims.

The Council can avoid being held jointly liable for defective apparatus by issuing a Section 81 Notice - New Roads & Street Works Act 1991 to the Utility Company whenever a defect is identified by the Authority within the Highway.

Appendix F: Identified Highest Priority Classified Roads (ranked in order of priority) 2023/24 and Assessment Matrix Example

1. A467 Warm Turn Carriageway Resurfacing
2. Tafarnaubach Ind Est (Top Road) Resurfacing
3. Blaenant Ind Est Roundabout Resurfacing
4. Big Arch / Steelworks Road / GO Resurfacing
5. A4046 - Waun-Y-Pound Road, Ebbw Vale
6. College Road, Ebbw Vale
7. Pond Road, Nantyglo

Identified Highway Safety Works

Highway Safety Traffic Management Works 2023/24: -

1. Crash Barriers
2. Road Markings
3. Road Safety Signs and Bollards
4. Speed Humps
5. Traffic Order Reviews

All the above works are subject to financial resources being made available

Highways Capital Works Assessment Matrix

Highway Assessment Matrix – Residential Roads (example)

1A Highway Condition (50%) - FRONT / MAIN LANES			
Category / Score	Square Area / Score		Total Score / %
4 (5)	Plus 2000	(5)	10 (50%)
4 (5)	1000 - 2000	(4)	9 (45%)
4 (5)	1000 - 500	(3)	8 (40%)
4 (5)	less than 500	(2)	7 (35%)
3 (4)	Plus 2000	(5)	9 (45%)
3 (4)	1000 - 2000	(4)	8 (40%)
3 (4)	1000 - 500	(3)	7 (35%)
3 (4)	less than 500	(2)	6 (30%)

1B Highway Condition (50%) - REAR LANES x 0.5 = (25%)			
4 (5)	Plus 2000	(5)	10 (25%)
4 (5)	1000 - 2000	(4)	9 (22.5%)
4 (5)	1000 - 500	(3)	8 (20%)
4 (5)	less than 500	(2)	7 (17.5%)
3 (4)	Plus 2000	(5)	9 (22.5%)
3 (4)	1000 - 2000	(4)	8 (20%)
3 (4)	1000 - 500	(3)	7 (17.5%)
3 (4)	less than 500	(2)	6 (15%)

Example: Location A Street	
1A - very poor condition	45%
2 - High Maintenance cost	24%
3 - 3 insurance claims in last 10 years	3%
4 - serves 50 - 99 properties	10%
TOTAL	82%

2 Maintenance Costs (30%)	
Costs over 5 years	Score / %
Plus £10,000	10 (30%)
£9,999 - £5,000	8 (24%)
£4,999 - £3,000	5 (15%)
£2,999 - £1,000	3 (9%)
Less than £1,000	1 (3%)
£0.00	0 (0%)

3 Insurance Claims (10%)	
No. in last 10 years	Score / %
plus 5	10 (10%)
4	8 (8%)
3	5 (5%)
2	3 (3%)
1	1 (1%)
0	0 (0%)

4 Property Location (10%)	
No. of Houses	Score / %
*150 +	10 (10%)
* 100 - 150	8 (8%)
50 TO 99	5 (5%)
20 TO 49	3 (3%)
1 TO 19	1 (1%)
0 / rear access	0 (0%)

*** Also linked with other highways and can be combined in to one scheme**

Highway Assessment Matrix – Residential Roads: Worked Example

PRUDENTIAL BORROWING SCHEME

	(1A) HIGHWAY CONDITION FRONT LANE (50%)					(1B) HIGHWAY CONDITION REAR LANE (25%)					(2) MAINTENANCE COSTS (30%)						(3) No. INSURANCE CLAIMS (10%)						(4) PROPERTY LOCATION (10%)							
SCORES	10	9	8	7	6	9	8	7	6	5	10	8	5	3	1	0	10	8	5	3	1	0	10	8	5	3	1	0		
PERCENTAGE %	50%	45%	40%	35%	30%	25%	23%	20%	18%	15%	30%	24%	15%	9%	3%	0%	10%	8%	5%	3%	1%	0%	10%	8%	5%	3%	1%	0%	TOTAL	F %
STREET / ROUTE																														
EXAMPLE STREET		X										X								X			X						30	82%

Appendix G: Traffic Sensitive Streets

A full list of the Traffic Sensitive Streets is held on the Council's Mayrise System.

There are streets in Blaenau Gwent that are designated as Traffic Sensitive under Section 64 of the New Road Street Works Act 1991 and play a vital role in street works coordination.

Traffic sensitive streets are streets where roadworks will cause delays and disruption to road users, and include streets:

- Which are used by more than 500 vehicles per hour per lane
- that link to major routes
- that are major public transport routes

Road works are coordinated so that traffic can move freely as possible, the Highways Authority can restrict working times and add specific conditions for roadworks on traffic sensitive streets i.e. times of day / days of the week / days of the year.

Designation of streets as traffic-sensitive

(1) Subject to paragraphs (3) and (5), a street authority may only designate a street as traffic-sensitive under section 64 if one or more of the criteria set out in paragraph (2) are met.

(2) The criteria referred to in paragraph (1) are that the street —

(a)is one on which at any time the street authority estimates the traffic flow to be greater than 500 vehicles per hour per lane of carriageway, disregarding bus or cycle lanes.

(b)is a single carriageway two-way road, the carriageway of which is less than 6.5 metres wide, having a traffic flow in both directions of not less than 600 vehicles per hour.

(c)falls within an area covered by an Order in respect of congestion charges made under section 169 of the Transport Act 2000.

(d)is one on which more than 25% of the traffic flow in both directions consists of heavy commercial vehicles.

(e)is one on which the traffic flow in both directions includes more than eight buses per hour.

(f)is designated by the local highway authority, as part of its winter maintenance programme, as one requiring the treatment of any part of it with salt or other chemicals, when low temperatures are expected, to prevent the formation of ice.

(g)is within 100 metres of a critical signalised junction or a critical gyratory or roundabout system.

(h)has a pedestrian traffic flow of at least 1300 people per hour, per metre width of footway; or

(i)is on a tourist route or within an area where international, national, or significant major local events take place.

(3) A street authority may only designate a street as traffic-sensitive in accordance with paragraph (1) for the times and on the dates when one or more of the criteria set out in paragraph (2) apply.

(4) The procedure for making or withdrawing a designation under paragraph (1) is set out in the Schedule.

(5) A street authority may, notwithstanding paragraphs (1) to (3), designate a street as traffic-sensitive with the agreement of the majority of statutory undertakers whom they know to have apparatus in the street.

(6) The information to be made available by the street authority in respect of each street for the time being designated by them as traffic-sensitive must include —

(a)the date of designation.

(b)particulars of the street in sufficient detail to enable it to be identified; and

(c)in the case of a limited designation, the times of day, days, periods, or occasions when the designation applies

Appendix H: Key Performance Indicators (KPI's)

Highways and Structures KPI's		
Indicator Ref.	Indicator Category	Measurement
PAM/020	% Of principle "A" roads that are in poor condition (red Scanner)	Kilometres of principle "A" roads in overall poor condition
		Kilometres of principle "B" roads surveyed
PAM/021	% Of principle "B" roads that are in poor condition (red Scanner)	Kilometres of principle "B" roads in overall poor condition
		Kilometres of principle "A" roads surveyed
PAM/022	% Of principle "C" roads that are in poor condition (red Scanner)	Kilometres of principle "C" roads in overall poor condition
		Kilometres of principle "C" roads surveyed
Local	The percentage of Drainage Complaints / Incidents / Advice requests where the initial investigation was carried out within 3 working days.	% Target to be set
Local	Percentage of Bridges compliant with statutory inspections.	% Target to be set
Local	Number of Road traffic accidents (RTA's) followed up and insurance damage funding secured.	% Target to be set
Local	Number of Insurance claims received.	Total claims against target to be set
Local	Number of insurance claims lost due to not adhering to inspection regimes.	% Against total claims
Local	Number of insurance claims lost for other reasons.	% Against total claims