

Brighton and Hove City Council

Highway Reactive Safety Maintenance and Inspection Policy

Update January 2025 (awaiting
approval)

Document History

Version No.	Status	Author	Date	Changes from the Previous Version
2.0	Awaiting approval	SH	29/01/25	Detailed review and update to ensure the policy accurately reflects the current risk-based approach. Includes updates to the Risk Matrix, updated Maintenance Hierarchy, feedback from the insurance team concerning historic claims, photo library of defects to provide a visual aid and other general updates to meet the Well-Managed Highways Infrastructure Code of Practice 2016 requirements.

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1. Introduction

The 'Highway Reactive Safety Maintenance and Inspection Policy' defines the Council's approach to routine and reactive highway safety maintenance on the public highway.

Safety repairs are an inevitable part of the lifecycle of carriageways, footways and cycleways. These repairs are typically restricted to defects such as potholes, uneven slabs and uneven asphalt. They do not include the areas surrounding the defect showing signs of general deterioration or risk factors that may give rise to safety defects in the future, although these may be noted and recorded for future works programmes or for future safety inspections.

Safety inspections and defect responses also include anything that might impact the immediate safety of the highway user from any source such as local road/drainage collapses, major settlement, missing gullies, MH covers & frames, defective utility services/apparatus, fallen or severely leaning signs, lighting columns & trees, fences/barriers/VRS damage due to road traffic incident, storm damage, bridges and other highway structures, etc.

This Highway Reactive Safety Maintenance and Inspection Policy sets out how the Council's approach to safety maintenance will, as far as possible, ensure the safety of highway users whilst recognising the unprecedented financial challenges faced by all Council services. It considers how the Council can balance its duty to keep its network as safe as possible for all users of the highway within available resources.

It details more specifically the risk-based approach undertaken to redefine safety maintenance activities. This risk-based approach aligns with the recommendations in the UK Code of Practice for 'Well-managed Highway Infrastructure.'

2. Overview

Brighton and Hove City Council's highway safety inspection regime, in accordance with the principles of risk management, has been developed to provide a practical and reasonable approach to the risks and potential consequences identified on the highway.

The Council has defined safety inspection standards based on this assessment of risk, utilising the best evidence available at the time to support these decisions. The inspection is a snapshot in time of the safety condition of the highway assets on the day of the inspection, reflective of what is reasonably discernible and observable on that day and in those prevailing circumstances reflective of the site settings, environment and weather factors.

At the core of Brighton and Hove City Council's Highway Safety Inspection regime is the principle that key factors, including road hierarchy, use, defect parameters and defect locations, determine the likelihood and consequences of coming in contact with that defect.

3. Safety Defects

Brighton & Hove City Council uses the term 'safety defect' or 'defect' to describe a physical problem in the highway that could potentially be hazardous to highway users. A safety defect is usually an isolated problem that normally requires a small-scale repair. Safety defects cover all highway authority assets as well as those associated with utility company assets and privately owned assets that directly affect the safety of highway users. Highway Safety Inspections are designed to identify those safety defects that impact highway user

safety within the public highway boundary or immediately abutting it and to undertake repairs, take mitigation measures or make them safe as necessary. Refer to **Appendix 5** for photo examples of potential safety defects.

The overall condition of the public highway is considered at a strategic asset management level and addressed through planned maintenance programmes. Given the scale of challenges facing local authorities, it may not be possible to carry out planned maintenance at the optimum treatment point for carriageways, footways and cycleways. Where insufficient budget prohibits the development of future works programmes to rectify the deterioration of a street's condition, the statutory obligations for network safety take precedence, and safety inspections are a vital part of meeting these obligations.

4. Safety Inspections

The Council as a Highway Authority is placed under a duty to maintain its highways by Section 41 of the Highways Act 1980. See **Appendix 1**.

Case law has confirmed that the 'highway' refers to the surface or fabric of the highway (not including signs and road markings) and that 'maintain' means to repair.

A Highway Authority may have a defence against liability claims under Section 58 of the Highways Act if it can prove that it has taken reasonable care to ensure that the highway was not dangerous. This also includes demonstrating that the cyclical safety inspections have been carried out in accordance with the set survey programme and by qualified and competent Highway Safety Inspectors. See **Appendix 1** for further details on legislative requirements.

Safety inspections are the primary means to demonstrate that the authority has taken reasonable care to keep its network as safe as possible for users.

Safety inspections are planned cyclic inspections carried out to specific frequencies dependent upon the network hierarchy of each highway. Safety inspections are specifically conducted to pro-actively identify potential dangers.

Brighton and Hove City Council also undertakes reactive safety investigations in response to reports or complaints regarding potential hazards on the highway.

5. Risk Management Principles for Safety Maintenance and Inspection

The identification and assessment of risk is a central element of the risk management strategy.

For the local highway network this involves:

- Establishing a network hierarchy based on the likelihood of risk occurring – this is predominately linked to user volume and type of users.
- Establishing frequencies for cyclic inspections, setting out investigatory levels for defects and specifying repair times/types in accordance with the network hierarchy.
- Undertaking assessment and action on site according to the agreed hierarchy and investigatory levels and reflective of a risk-based approach for the identification and response to the occurrence of local safety defects.

The stepped process for creating a risk-based approach to Highway Safety Inspections and safety maintenance is denoted in **Appendix 3**.

The Code of Practice for Well Managed Highways 2016 states that:

'There are no prescriptive or minimum standards in this Code but adoption of a risk-based approach, taking account of the advice in the Code, will enable authorities to establish and implement Principles of Risk Management Inspections.' (p.12)

Brighton and Hove City Council's Highway Safety Inspection regime has been developed in accordance with these principles of risk management to ensure an evidence-based proportional approach to maintaining safety for highway users.

The risk-based approach to safety inspections and safety maintenance is driven by the following criteria.

Safety Defect Risk Assessment

Any item or asset (as shown in Table 7) with a defect level that equals or exceeds the stated defect investigatory level adopted by the authority (as shown in **Appendix 2**) is to be assessed for potential risk.

Risk Evaluation

All safety defect risks identified through the risk-based process must be evaluated in terms of their significance, which means assessing the **probability** (likelihood) of it actually happening and the **impact** (consequence) should the risk occur. The risks are based upon the highest identified risk reflective of the defect type, location/position and usage, using the inspector's training, skill and local knowledge to define these entities.

Risk Probability

The probability of a risk occurring should also be assessed on a scale of 1 to 4 as follows:

- (1) very unlikely
- (2) unlikely
- (3) moderate
- (4) likely

The probability of an incident occurring is quantified by assessing the likelihood of highway users, passing by or over the defect, or encountering the defect or hazard. As the probability is likely to rise with increased vehicular or pedestrian flow, the network hierarchy and defect location are important considerations in the risk assessment process.

Risk Impact

The impact of a risk occurring should be assessed on a scale of 1 to 4 as follows:

- (1) insignificant - little or negligible impact
- (2) low - minor impact
- (3) medium - noticeable impact
- (4) high - major or serious impact

The impact is quantified by assessing the extent of the damage likely to arise should the risk materialise into an incident. The impact is likely to increase with the traffic speed and usage and is also reflective of the asset type.

Risk Score

The risk score is the product of the probability and impact and is in the range of 1 to 16. This factor identifies the overall seriousness of the risk and the associated response as shown below in Table 1 - Risk Matrix.

$$\text{Risk Score} = \text{Probability (Likelihood)} \times \text{Impact (Consequence)}$$

Risk Matrix

The risk matrix in Table 1 denotes the risk severity of the defect via a calculated risk defect score of 1 to 16 that demonstrates how Brighton & Hove City Council evaluates risk for its highway network.

Principles of Risk Assessment in Determining the Hierarchical Standing of a Road and Repair Response Times.			
Brighton and Hove City Council's inspection regime has been developed in accordance with the principles of risk assessment and provides a practical and reasonable approach to the risk and potential consequences identified. The identification and assessment of risk is the most important element of a risk management strategy and determines how frequently a road is inspected and the safety defect repair priority response times.			
Assessment of Risk Probability Rating The probability of an incident occurring is quantified by assessing the likelihood of highway users encountering the defect or hazard.			
Assessment of Risk Impact Rating An impact rating is quantified by assessing the extent of injury or damage likely to be caused should the risk become an incident, and as such there is a clear link to the physical characteristics of the defect/hazard.			
The probability or likelihood of coming into contact with a defect has been assessed as follows		The impact or consequence should an incident occur has been assessed as follows:	
Likely	High Traffic Volumes	High	Major/Serious Consequence
Moderate	Medium Traffic Volumes	Medium	Noticeable Consequence
Unlikely	Low Traffic Volumes	Low	Minor Consequence
Very Unlikely	Very Low Traffic Volumes	Insignificant	Insignificant

RISK ASSESSMENT MATRIX					
RISK PROBABILITY	4 Likely	4	8	12	16
	3 Moderate	3	6	9	12
	2 Unlikely	2	4	6	8
	1 Very Unlikely	1	2	3	4
		1 Insignificant	2 Low	3 Medium	4 High
		RISK IMPACT			

Table 1 – Risk Matrix

Defect Risk Score Response Category

The defect risk score/category shown in Table 2 below is a product of risk probability and risk impact and it includes a consideration of the position and locational proximity of the safety defect reflective of user trafficking.

RISK SCORE DEFECT RESPONSE CATEGORY	CAT 4 = (Very Low) Review next cycle or send to engineer for planned works.	CAT 3 = (Low) 28 days	CAT 2 = (Medium) 7 days	CAT 1 = (High) 24 hours	Safety Critical 2 hours
Safety Critical	<p>(16) – within 2 hours</p> <p>Defects requiring immediate emergency attention within 2 hours, e.g., missing manhole or gully covers in a heavily trafficked location, road or footway sinkhole or washout collapse, etc.</p> <p>Such safety-critical defects should, if safe and reasonable to do so, be ‘protected’ and/or continue to be attended to on-site by the safety inspector until the contractor safety repair team arrives within 2 hours to make safe the defect.</p>				
Cat 1 (High)	<p>(12) – 24 hours</p> <p>Defects require urgent attention because they represent a higher risk of potential hazard for highway users.</p> <p>Depending on the situation, interim make-safe action is required such as temporary repair or temporary signing /guarding.</p>				
Cat 2 (Med)	<p>(9) – 7 days</p> <p>Defects exhibiting a moderate level of urgency, denoting a medium level of risk to the highway user that requires temporary make-safe or permanent repair within a reasonably short period of time.</p>				
Cat 3 (Low)	<p>(6-8) – 28 days</p> <p>Defects that require remedial attention, however, do not represent an immediate concern or imminent hazard.</p> <p>These defects have reduced safety implications of lesser risk and significance than Category 1 and Category 2 defects.</p>				
Cat 4 (Very Low)	<p>(1-4) – No immediate action</p> <p>Minor defects meet the safety investigatory criteria but are not currently deemed to be a safety hazard.</p> <p>Often occurring over a large extent of the public highway. These defects require no immediate action, they may be repaired as part of a planned future maintenance scheme, or their condition may be monitored and reviewed at the next scheduled safety inspection.</p>				

Table 2 – Defect Risk Category

Defect Response Times

The following Table 3 denotes the time allowed for the defect safety repair response to be undertaken reflective of the risk score category.

Defect Category	Defect Response	Repair Type
Safety Critical	2 hours from time of contractor notification.	Make Safe Temporary or Permanent
Cat 1 (High)	24 hours	Make Safe Temporary or Permanent
Cat 2 (Medium)	7 days	Temporary or Permanent
Cat 3 (Low)	Within 28 days	Permanent
Cat 4 (Very Low)	No immediate action - Planned works or monitor and review at the next inspection.	Not Applicable

Table 3 – Defect Response Times

6. Safety Inspection Review

6.1 Analysis

Brighton & Hove City Council has reviewed the Safety Maintenance regime for the public highway, using a risk-based approach to define the type, level and frequency of safety inspections and safety repairs.



Activities to incorporate the Code of Practice recommendations for safety inspections included:

- Utilising the framework in the Code based on the considerations listed - establishing the factors that will determine the criteria for categorising every carriageway, cycleway and footway on the city's public highway bearing in mind any locally unique conditions.
- Developing new areas of safety inspection frequencies to match the criteria, using available staffing resources, and making any adjustments required depending on any increased workload.
- Route optimising the safety inspections and areas to reduce excessive travel and vehicle usage.
- Training the Highway Inspectors in risk assessment to make an informed decision on the likelihood of a repair being required and the appropriate response time.
- Undertaking revisions to the supporting systems.

6.2 Research and Evaluation

The following data was collated and analysed to provide a comprehensive understanding and evaluation of risk on Brighton & Hove's highway network, to determine the network hierarchy:

- Annual condition surveys of the carriageway network
- Pedestrian and traffic counts
- Asset management strategy (data includes maintenance history, repairs, claims, complaints, and accident rates)
- Bus routes: frequencies and numbers of buses
- Traffic-sensitive streets
- Resilient network and critical infrastructure (key highway infrastructure supporting the city's socio-economic functioning)
- Demographics: risk considerations relating to those parts of the highway network frequented by the young, elderly, vulnerable and disabled highway users e.g. schools, hospitals, clinics, churches, transport hubs, etc.

The NHT satisfaction survey and corporate customer feedback reports were also considered.

6.3 Considerations

The safety inspection review also considered:

- The depth, surface area, or other extent of the defect
- The location of the defect relative to access to shops, hospitals, and schools
- The location of the defect in relation to users such as in traffic lanes, wheel tracks, or pedestrian desire lines
- The level of use (functional hierarchy)
- The nature and extent of interaction with other defects.

In general, the greater the traffic flow, the higher the likelihood of a user encountering any defect. However, if the defect is positioned so that it is not likely to be trafficked, the likelihood of injury or damage is reduced. For example, the degree of risk from a pothole depends not only on its depth but also its surface area and its proximity and location relative to highway user desire lines and traffic.

7. Network Hierarchy – Safety Inspection Frequency

The Code of Practice contains guidance to assist in determining local criteria for categorising the network into a priority hierarchy, this guidance includes:

- Recommendations for a network hierarchy (priority) based on traffic composition and volume, and social/economic importance
- Considerations regarding users, such as key infrastructure locations and important locations such as access to shops, hospitals, schools, etc

Following this risk analysis and evaluation, a revised network hierarchy that relates to the safety inspection of the public highway was developed (see Tables 5 and 6) and is periodically reviewed as appropriate.

A highway may in some instances have varying frequencies of safety inspections in different locations along its length, in most cases, this is due to the established variance in traffic use.

The network hierarchy is the primary identifier for the likelihood of risk, and as such, determines the safety inspection frequency and defect repair times/types.

Safety Inspection Frequency Tolerances

Circumstances outside our control e.g. adverse weather conditions or network/site/inspector availability, may occasionally result in some highway inspections not being carried out on their due date.

The Council considers the following inspection time tolerances shown in Table 4 below to be reasonable: -

Target Insp Frequency	Tolerance
Monthly	+ 3 working days
3 monthly	+ 2 weeks (10 working days)
6 monthly	+ 3 weeks (15 working days)
Annual	+ 4 weeks (20 working days)

Table 4 – Inspection Frequency Tolerances

7.1 Carriageways

The Carriageway Hierarchy shown in Table 5 reflects the actual use of each road and its associated safety inspection criteria within the network. These are not necessarily reflected by the road's formal classification as an A, B or C road.

Maintenance Hierarchy	Road Type	Description	Inspection Frequency
M101	Strategic & Main Distributor Roads	Roads connecting to the motorway, primary routes to the city centre, dual carriageways, and national diversion routes. AADF Traffic Flow >18,000.	Monthly
M102	Main Distributor Roads	A-class roads connecting directly to M101 roads and primary routes between M101 roads or to neighbouring Authority M101 equivalent roads. AADF Traffic Flow >12,000.	Monthly
M103	Main Distributor & Secondary Distributor Roads	A, B and C class roads connecting directly to higher hierarchy roads or that form part of a predominantly A, B or C class primary route between M101 and M102 roads. Part of the 'Winter Resilient Network'. AADF Traffic Flow >8,000.	3 monthly
M104	Secondary Distributor and Link Roads	Part of the 'Resilient Network'. Part of a major public transport infrastructure or bus route connection to M101/102/103 roads or to isolated communities. Provides direct access to large public amenity facilities such as sports stadia, hypermarkets, etc. HGV route. HGV Traffic Flow >(to be notified)	3 monthly
M105	Link Roads and Local Access Roads	Roads containing recurring known accident hotspots. Roads providing direct access to schools. Feeder or arterial road serving urban residential areas. Road serving more than 40 properties. Designated as 'Traffic Sensitive'. Part of a bus route. Carries HGV's. HGV Traffic Flow >(to be notified)	6 monthly
M106	Local Access Roads	Roads with 3 or more shops or a supermarket. Provides access to medical centre/doctors surgery. Provides access to industrial units. Provides sole access to/from village or isolated community. Is not a feeder or arterial road to urban residential areas. Is not designated as being 'Traffic Sensitive'.	6 monthly

Maintenance Hierarchy	Road Type	Description	Inspection Frequency
M107	Minor Roads	Road width >3m.	12 monthly
M108	Minor Roads	Cul-de-sac with road width >3m.	12 monthly
M109	Minor Roads	Road is denoted by name as a 'Back Road' or 'Service Road'. Road width <3m. Layby (Note:- if the road is 'gated' and does not accommodate vehicular traffic, then the section should be treated as a footway).	12 monthly
M110	Minor Roads	Roads that are not paved or metalled, ie, unpaved gravel roads or tracks that can accommodate limited vehicular traffic.	12 monthly

Table 5 - Carriageway Hierarchy

Note:- refer to the carriageway hierarchy process chart for full details of the hierarchy selection criteria for M101 to M110.

7.2 Footways and Cycleways

The footway and cycleway hierarchies in Table 6 are based on actual usage, and not necessarily by the associated adjacent road classification. Footway hierarchies have been determined independently of the carriageway hierarchy, as vehicular traffic may not use busier footfall areas such as the Lanes.

Maintenance Hierarchy	Footway Type	Description	Inspection Frequency
M201	Prestige Route	Very busy areas. Often areas of high public space and streetscene contribution allowing for and attracting large footfall. 12hr Footfall > 10,000	Monthly
M202	Primary Route	Busy urban shopping and business areas considered main pedestrian routes. 12hr Footfall > 3,000	Monthly
M203	Secondary Route	Medium usage routes and priority strategic active travel routes. Includes regular pedestrian hubs. Part of Priority Strategic Active Travel Network Serves approach or access to Hospital. Serves approach or access to School.	3 monthly
M204	Link Footway	Footways provide a direct link between known busy footways and strategic active travel routes. Includes non-regular pedestrian hubs. Part of the Strategic Active Travel network. Serves approach or access to Place of Worship Serves approach or access to Park or Cemetery. Serves approach or access to Care Home. Link between M201/M202/M203 Footways.	3 monthly
M205	Local Access Footway	Footways associated with low usage with no specific destination routing. Predominantly footways that connect to link footways. Link between M204 Footways.	6 monthly
M206	Minor Footway	Little-used footways serving a limited number of properties. Includes little-used rural footways and urban cul-de-sacs.	6 monthly
M207	Highways Footpath	Rights of way that fall within the urban realm and have a hard surface. These paths are not Public Highway but are identified within the Highway Terrier as 'Highway Footpaths' and are inspected by the Highways Operations Team.	12 monthly

Table 6 - Footway Hierarchy

Cycleways are inspected on the footway frequency where:

- The cycleway is part of shared space on the footway
- The cycleway is protected and separated from the adjacent carriageway and visibility from a vehicle is obstructed e.g. cycleways segregated from the carriageway by a physical boundary such as kerbs, parking bays or build-outs

Cycleways are inspected on the carriageway frequency as part of the safety inspection where:

- The cycleway is an integral part of the carriageway and they are visible from the carriageway e.g. not segregated by a physical boundary other than white lining or intermittent bollards.

8. Assets for Highway Safety Inspection

8.1 Highway Assets and Defect Types

The Highway Safety Inspection regime relates to the public highway and it covers the following core assets on the public highway which are assessed in accordance with the safety defect investigatory levels as indicated in **Appendix 2**.

Note:- this 'Highway Reactive Safety Maintenance and Inspection Policy' document applies to hard surfaced footways and carriageways within the Public Highway as well as urban hard surfaced footpaths and twittens designated as 'Highways Footpaths' on the highway terrier. Generally however, any ancillary assets that come under the ownership and responsibility of other Council service areas such as Housing roads and footways, Parks and Cemeteries, are not covered by this policy and they are inspected and maintained through their respective service maintenance management policies and processes.

Table 7 below lists the main highway asset types and the likely types of defects encountered, however this list is not exhaustive:

Asset	Likely defect types for investigation
Carriageways and Integral Cycleways	
Bituminous roads	Significant difference in level, potholes, significant subsidence
Concrete roads	Significant difference in level (cracking, missing)
Concrete pavements	Significant difference in level (cracking, missing)
Composite roads (overlaid concrete)	Significant difference in level (concrete failure underneath)
Modular blockwork	Missing, damaged, uneven, rocking
Footways and Cycleways	
Modular paving such as brickwork	Missing, damaged, uneven, rocking
Paving slabs	Missing, damaged, uneven, rocking
Bituminous pavements	Significant difference in level, potholes, significant subsidence
Concrete pavements	Significant difference in level (cracking, missing)
Kerbs	Displaced, missing, significant difference in level
Steps	Missing or damaged steps; damaged riser
Street Furniture	
Bollards	Missing, rocking/insecure
Guardrails and handrails	Missing, rocking/insecure, sharp edges protruding
Street tree gratings/covers and edging	Significant difference in level
Street tree root network	Significant difference in level (see 'Special considerations')
Gullies, covers and other ironwork	Missing, damaged (maybe utility or privately owned)
Ironwork in verges	Displaced, damaged
Highway retaining walls 1.36 metres or less	Missing components, leaning/insecure

Table 7 - Asset and Defect Types

Note:- Carriageway surface safety defects located in the proximity of dedicated road junction crossing points, pedestrian crossings and at other designated crossing locations such as those denoted by the provision of

'tactile paving' and pedestrian dropped kerb locations shall be risk assessed and made safe as necessary, reflective of footway safety defect investigation and risk score intervention criteria. The zone of the carriageway safety defect repair will be aligned to the footway safety criteria and shall be restricted to the width of the tactile paving or to the width of the dropped kerb units (taper kerbs not included) denoting the extent of the safe crossing point, (this criteria does not apply to standard vehicular dropped crossing locations).

See **Appendix 4** for examples of this criteria.

8.2 Defect Categories

Safety Inspections identify those defects likely to create a danger or serious inconvenience to users of the network or the wider community.

Safety defects will include those that will require emergency/urgent attention (within 2hrs/24hrs) as well as those where the locations and sizes are such that longer periods of response would be acceptable.

Defects are categorised as either Safety Critical, Category 1, Category 2, Category 3 or Category 4 in terms of an appropriate priority response.

Safety Critical:- Defects that require immediate emergency attention within 2 hours, e.g., missing manhole or gully covers in a heavily trafficked location, road or footway sinkhole or washout collapse, exposed live electrical wiring, etc. Such safety-critical defects should, if safe and reasonable to do so, be attended to on-site by the safety inspector until the contractor safety repair team arrives within 2 hours to make-safe the defect.

Category 1:- Defects that require urgent attention within 24 hours because they represent a higher risk of potential hazard for users. Depending on the situation, interim make-safe action may be required such as temporary repair or temporary signing /guarding.

Category 2:- Defects exhibiting a moderate level of urgency, denoting a medium level of risk to the highway user necessitating temporary make-safe or permanent repair within a reasonably short period of time.

Category 3:- Defects that require safety attention however they do not represent an immediate concern or imminent hazard. These defects have reduced safety implications of lesser significance than Category 1 and Category 2 defects.

Category 4:- Minor defects that meet the investigatory criteria but are not currently deemed to be a safety hazard. They may occur over a large extent of the public highway. These defects require no immediate action, they may be repaired as part of a planned future maintenance scheme or their condition may be monitored and reviewed at the next scheduled safety inspection.

8.3 Repair or Replacement

Repair or replacement will be like-for-like unless circumstances require a more durable or flexible material, or if there is insufficient budget in which case safety considerations will override aesthetic considerations, e.g., the local repair of a flag/modular paved footway with temporary bituminous material. Consideration will also

be given to the need to declutter the Highway to improve accessibility and reduce carbon. In all cases, a risk-based approach will be applied, and only safety-critical street furniture will be replaced as standard.

8.4 Special Considerations

a) Footway Vehicle over-run and Repeated Damage

Where footway damage is consequential of vehicle over-run, giving rise to a defined risk-based safety defect, a suitable localised safety repair will be implemented to mitigate the local risk. Where persistent and widespread damage is occurring on paved footways due to vehicles parking or overrunning, the flags will be removed and replaced with bituminous material in conjunction with a planned scheme of works once defect investigatory levels have been exceeded.

b) Utilities

Broken footway paving may be replaced with a full-width asphalt reinstatement if deemed suitable, this is subject to approval from the Service Manager.

c) Street Trees

These are the trees planted in pavements, highways or roadside verges along the city's streets. They help to filter traffic pollution, provide habitats for bird and insect wildlife, help with drainage of surface water, provide shade and improve the visual amenity of the street scene.

Brighton & Hove has a unique population of Elm trees. These were originally planted in large numbers by the Victorians and Edwardians due to their suitability to maritime conditions, their resistance to salt winds and tolerance of the thin alkaline chalk soil typical of much of this area. Brighton & Hove's Elms were granted full 'National Collection' status in 1998 by the National Council for the Conservation of Parks & Gardens.

However, due to the thin topsoil and chalk base, a street tree's root network will often grow close to the surface to obtain as much moisture as possible. This means that areas around street trees may have uneven surfaces.

Brighton & Hove City Council seeks to preserve street trees wherever possible and therefore take a pragmatic approach to maintenance around street trees. *(See also Tree Management Operational Policy)*

A reduced defect investigatory and defect repair level may be applied around a highway network affected by street tree root damage to provide a safe walking surface.

This approach is supported by the **Highways Code of Practice: (p.83 and p.95)**

B.4.4.4 "Although ensuring the safety of footways for users will be a priority, in some cases the presence of roadside trees may complicate the provision of footway surface regularity. The radical treatment or complete tree removal necessary to ensure surface regularity may not be possible or desirable and reduced levels of surface regularity may be a more acceptable outcome."

B.5.4.6 "Extensive root growth from larger trees can cause significant damage to the surface of footways, particularly in urban areas. A risk assessment should therefore be undertaken with specialist arboricultural advice on the most appropriate course of action, if possible to avoid harm to the tree. In these circumstances,

it may be difficult for authorities to reconcile their responsibilities for surface regularity, with wider environmental considerations and a reduced level of regularity may be acceptable”.

Where flagged paving, blocks or flexible footway surfaces are pushed up due to tree roots, thereby creating an abrupt level difference that meets or exceeds the investigatory level of 50mm, they will be identified for repair to remove or reduce the severity of the abrupt-level difference. In the case of flagged paving and blocks, the raised surface may be replaced locally with a flexible surface material to create a ramp and to minimise the abrupt-level difference. The footway surface material and any associated displaced kerbing units will be laid or repaired to minimise the hazard to highway users, however, this is unlikely to present an even surface. This practice helps to reduce the occurrence of the tree being damaged by frequent root trimming.

d) Verges

Verges are not provided as areas for walking, driving or cycling. The function of a verge in urban areas is to assist with surface water drainage, to provide segregation between vehicular and pedestrian traffic, and to enhance the visual amenity of an area. There is no requirement to maintain a verge to the same safety standard as that of a footway, carriageway or cycleway.

Verges damaged by parking or vehicle overrun will be identified for safety repair and/or protection only if vehicle overrun causes a significant portion of the adjacent carriageway or footway to be continuously slippery from debris or undermines the structure of the adjacent carriageway or footway (see also Operational Policy - Grass Verge Parking and Vehicle Overrun).

e) Kerbing

The function of a kerb is to provide a retaining structure for the carriageway and footway/verge and to channel surface water into highway drainage. Kerbs are therefore designed to give structural support to the trafficked surfaces of the highway rather than for walking or driving upon.

Kerbing that is raised, sunken or dislodged such as to constitute a major abrupt-level difference will be repaired or replaced. However, investigatory and defect repair levels may not be applied to the same degree around street tree root locations.

Kerbing that has minimal upstand from the carriageway or has small cracks, chips or flaws will not be repaired or replaced.

Defective kerbs at road junction crossing points and pedestrian crossings and at other designated crossing locations such as tactile paving shall be risk assessed and made safe by repair or replacement as necessary, reflective of footway defect investigation and intervention criteria.

f) Builders' Damage

Any safety defects on the highway arising as a consequence of third-party building operations will be recorded and immediately notified to the builder for urgent safety repair within the specified timescales for defect categories. Should an appropriate and timely safety repair not be undertaken/completed by the builder within

the designated defect repair time, the Council may undertake the repair themselves and recharge the repair cost to the builder. The ongoing building works will be monitored jointly by the Highway Enforcement Team and Permit Admin Team, and where appropriate, costs will be recovered for damage repairs caused by third parties.

9. Investigatory Levels

Any item with a defect level that corresponds to or exceeds the investigatory levels set by Brighton & Hove City Council as shown in **Appendix 2**, is to be risk assessed and the appropriate safety defect repair undertaken within the designated defect response times.

An investigatory level is a measure that determines when a highway defect should be classified as a safety defect and therefore subject to a further dynamic risk assessment reflective of locational user risk to determine its repair criteria and timings.

For example, it is not the case that any defect that is greater than 20mm in a footway/cycleway or 40mm in a carriageway is an imminent safety hazard to highway users. Other factors need to be considered such as the location of the defect and the likelihood of adverse impact. The purpose of investigatory levels is to trigger a dynamic risk assessment which may or may not result in a safety repair depending on the level of risk determined reflective of defect/site characteristics.

BHCC's investigatory levels are therefore based on the size and nature of the defect, and on its positional location within the highway reflective of the extent and nature of highway user trafficking, e.g. traffic lanes, wheel tracks, pedestrian crossings (see Table 1 – Risk Matrix and **Appendix 2**).

10. Other Council Assets

There is a duty of user safety and care for all assets, land or premises owned and managed by the Council. The level of user care is determined and actioned by the relevant responsible service area within Brighton & Hove City Council in order to promote user safety and to ensure the implementation of timely and appropriate defect response actions.

Ancillary assets owned and managed by other Council service areas such as street lighting, highway structures, vehicle restraint systems and skid resistance levels have separate specialist inspection and response regimes governed by the responsible service area that are not covered under this 'Highway Reactive Safety Maintenance and Inspection Policy'. Likewise, street trees are pruned and maintained by the Council's City Parks section and the Parking and Traffic Management Teams maintain road studs, signs, lines and street name plates.

However, during the course of the highway safety inspections, should a Council 'non-highways' safety defect be observed by the inspector, this shall be recorded and passed on to the relevant Council service area for appropriate and timely action. In addition, should a 'Safety Critical' defect be identified, such as the collapse of a highway structure, severely leaning or fallen lamp column, fallen tree, etc, this will demand immediate defect mitigation measures to be instigated by the inspector until the relevant service contractor safety

maintenance team attend site within 2 hours to conduct further make safe protection measures or emergency safety repair works.

11. Defects not under the ownership of the Council

During an inspection, asset defects may be identified that are not under the ownership or responsibility of the Council to repair but they may impact highway user safety. The highway safety inspector shall therefore ensure that the party responsible for asset ownership and its repair is immediately contacted and advised of the defect and are provided with maintenance criteria and timescales regarding the repair. If the defect is causing an immediate and urgent safety hazard to the public highway, the Council may take interim action to temporarily make-safe the defect and/or protect the highway, and the Council will seek to recharge the cost of this action to the third-party asset owner.

a) Private Forecourts

These may include forecourts that are not physically separated from the public highway, such as shop frontages. The Council would not usually take corrective maintenance action on defects located in these private areas as this is a matter for the landowners who may either define the forecourt as private space or invite the public to use the forecourt with an accompanying duty of care residing with the landowner. However, if the defect is deemed to be a significant safety hazard that could impact highway user safety, Brighton and Hove City Council as a responsible local authority, may contact the landowner and advise them of the need to make-safe the defect on the grounds of public safety and in mitigation of potential legal claims and challenge they may receive in the event of damage or injury incident.

b) Statutory Undertakers

Some defects may be due to the activities of the utility service providers or by a failure of their apparatus which are governed by the requirements of the New Roads and Street Works Act 1991.

Where an inspector identifies a defective reinstatement belonging to a Statutory Undertaker, this is reported to BHCC's Permit team who will pass this information to the relevant utility with a recommended response time in order that the appropriate repair is carried out.

If the defect results in a major settlement or a collapse of the highway, then this shall be treated as a 'Safety Critical' defect and it shall be coned-off or otherwise protected until either the Utility Company or the Council's safety repair team arrive to make it safe or conduct a safety repair. The Council will seek to recharge the cost of any such works to the utility service provider.

c) Unknown Parties

Any defect identified and located within the highway where the owner is unknown shall be recorded and investigations shall then be undertaken to try and locate the responsible party.

If the defect is identified as 'Safety Critical' impacting the immediate safety of the highway user, it shall be coned off or otherwise protected until the Council's safety repair team arrives to make it safe or conduct a safety repair. Likewise, in the absence of the known asset owner, a Category 1 or 2 defect impacting the safety

of the highway user shall be safety repaired by the Council within the designated defect response time and steps shall then be taken to try and identify and contact the asset owner to recharge them the cost of the repair.

d) Unadopted Streets

Unadopted private streets are not maintainable at the public expense and are therefore not inspected or repaired as part of the highway safety inspection and maintenance regime under this policy.

Also, refer to section 10 above 'Other Council Assets'.

12. Asset Management

Brighton & Hove City Council's safety maintenance regime is part of the wider highway asset management approach for the maintenance of the highway network.

The 'Code of Practice for Well-Managed Highway Infrastructure 2016' emphasises that Highway Authorities should adopt a formal process for assessing and responding to risk through both planned and reactive maintenance for all highway assets.

Brighton & Hove City Council's Highway Asset Management Policy and Strategy sets out how planned maintenance is determined for the city's highway network. When determining the balance between structural, preventative and reactive maintenance, the principle that "prevention is better than cure" is adopted. However, this is subject to available funding and in the current financial climate for local authorities, it is not possible to prevent deterioration in the condition of all streets on the highway network.

The safety inspection regime forms a key aspect of the Authority's approach to managing liabilities and risks, and well-managed safety maintenance has become increasingly important where timely resurfacing and reconstruction of the public highway is not possible reflective of financial and resource constraints.

13. Inspector Qualifications and Training

All permanent and temporary highway inspectors will be provided with and shall undertake training as necessary.

Qualifications

All permanent highway inspectors are expected to become qualified to the recommended standards as per the prevailing national Highway Maintenance guidance documents, this qualification shall, where possible, be undertaken within 12 months of appointment.

Prior to qualification, temporary highway inspectors or trainee inspectors shall work under the guidance of qualified inspector(s) to gain the knowledge, skills and on the job experience to prepare then to seek formal inspection qualifications.

When required, further training will be undertaken to ensure that the recognised highway inspectors qualification is correctly maintained and renewed as required.

14. Conclusion

Brighton & Hove City Council's 'Highway Reactive Safety Maintenance and Inspection Policy' has been developed in accordance with the Code of Practice for Well-Managed Highway Infrastructure and is based on analysis and evaluation of all the available information in order to define a risk-based approach to potential safety issues.

To maintain a safe and serviceable highway network operating within maintenance budgets, the 'Highway Safety Inspection & Maintenance Policy' provides a cost-effective means of addressing immediate safety risks on the highway network by prioritising higher-risk sites until such a time that deterioration in the condition of the road network can be addressed.

This 'Highway Reactive Safety Maintenance and Inspection Policy' shall be reviewed every 2 years.

Appendix 1 – Legislative Requirements

Statutory Duty – Highways Act 1980

Section 41:

The Council as a Highway Authority is placed under a duty to maintain its highways by Section 41 of the Highways Act 1980: “...the highway authority for a highway maintainable at the public expense is under a duty... to maintain the highway.”

The Section 41 duty cannot be delegated whether by outsourcing or otherwise. The duty refers to the repair of the fabric or structure of the highway including existing drainage.

Section 58:

Section 58 of the Highways Act 1980 grants a ‘special defence against a highway authority for damages for non-repair of the highway’ if it can demonstrate that it has taken reasonable care to ensure that the highway was not dangerous to traffic and having regard to:

- The character of the highway and the traffic that was reasonably expected to use it;
- The standard of maintenance appropriate for a highway of that character and used by such traffic;
- The state of repair in which a reasonable person would have expected to find the highway;
- Whether the Authority knew or could reasonably have been expected to know that the condition of the highway was likely to cause danger to users;
- Whether warning notices were displayed when immediate repair could not reasonably be expected

In addition, the highway authority should demonstrate it has correctly followed its safety inspection criteria and inspection frequencies.

Relevant Case Law

There is extensive case law relating to highway claims, regarding the standard or condition (state of repair) and what constitutes a breach of Section 41. Much of the case law has been concerned with tripping claims on the footway.

Although guidance can be taken from previously decided cases, the courts have repeatedly stated that highway claims are fact-sensitive, and each case will be decided on its own facts. It is for the Court to make its own independent assessment of dangerousness, based on all the available information, however, judges are frequently referred to guidance from cited highway claims cases and the Code of Practice is a reference document for courts and coroners’ investigations.

Appendix 2 – Safety Defect Risk Investigation Levels

Carriageway Safety Defect Investigatory Levels			Defect Risk Score Defect Category Defect Response Times
Surface Defects	Abrupt difference in level	40mm to 75mm deep (≥300mm x 300mm wide)	Via safety inspector dynamic risk assessment. See Table 1 - ‘Risk Matrix’.
		>75mm+ deep	
Carriageway Ironwork	Pitching/rocking difference in level	50mm to 75mm deep	
		>75mm+ deep	
	Missing Ironwork	Standard size gully	
		Super gully	
	Manhole		
Utility apparatus safety defects meeting the investigatory level:- Take appropriate interim safety action and raise a Section 81 Defect Report			
Carriageway investigation levels will apply to cycleways that are an integral part of the carriageway and where they are visible from the carriageway e.g. not segregated by a physical boundary other than white lining or intermittent bollards.			
Footway investigation levels will apply to the carriageway at pedestrian crossing points/refuges as defined in Section 8 and Appendix 4.			

Footway Safety Defect Investigatory Levels			Defect Risk Score Defect Category Defect Response Times
Surface Defects	Abrupt difference in level	20mm to 40mm deep (≥100mm x 100mm wide)	Via safety inspector dynamic risk assessment. See Table 1 - 'Risk Matrix'.
		>40mm deep	
	Tree Roots - abrupt difference in level	≥50mm	
Guard rails & safety bollards	Missing/Damaged	Stable/not obstructing the footway	
		Significantly obstructing the footway	
		Unstable	
Kerb Defects	Vertical Step	20mm to 75mm	
		>75mm	
	Displaced	>100mm	
Footway Ironwork (including drainage channels and grids)	Pitching/rocking difference in level	30mm to 50mm deep	
		>50mm deep	
	Missing Ironwork	Standard size gully	
		Super gully	
		Manhole	
Utility apparatus safety defects meeting the investigatory level:- Take appropriate interim safety action and raise a Section 81 Defect Report			
Footway investigation levels will apply to cycleways that are part of a shared space on the footway or where they are physically separated from the carriageway by continuous kerbs, parking bays or buildouts.			
Footway investigation levels will apply to the carriageway at pedestrian crossing points/refuges as defined in Section 8 and Appendix 4.			

Appendix 3 – Process for developing a risk-based approach to safety inspections and maintenance.

1. Determine the carriageway, footway and cycleway maintenance hierarchies for each highway part.
2. Set the safety inspection frequencies for each hierarchy reflective of a risk-based approach to service delivery and public safety.
3. Set the safety inspection tolerances, e.g.
Monthly (+3 days), 3 Monthly (+2 weeks), 6 Monthly (+3 weeks), 12 Monthly (+4 weeks)
4. Set the safety defect investigatory levels for the carriageway, footway and cycle track.
5. Define the 4x4 'Risk Matrix' for risk probability and risk impact that form the dynamic risk assessment, generating risk scores in the range 1 to 16.
6. From the risk matrix, define the 'risk score' safety defect category, e.g.,
Safety Critical (risk score 16), Cat 1 (High - risk score 12), Cat 2 (Med - risk score 9), Cat 3 (Low - risk score 6+8), Cat 4 (Very Low - risk score 1 to 4)
7. Set the safety defect category repair response times, e.g.
Safety Critical (Emergency/Immediate-2 hrs), Cat 1 (Urgent-24 hrs), Cat 2 (7 days), Cat 3 (28 days),
Cat 4 (No immediate action - planned works or monitor and review at the next safety inspection).

Note:- The annual highway safety inspection programme and staff resource needs have been calculated based on network length, annual inspection frequencies (ref hierarchy), estimated outputs (walked/driven) and estimated non-productive/downtime reflective of staff absences, leave, public holidays, inclement weather delays, etc. This provides a measure of the staff inspection resources required to support and conduct the annual safety inspections for Brighton and Hove City Council reflective of network hierarchy and inspection frequency.

Appendix 4 - Photo examples of designated pedestrian crossing locations/tactile paving.



Dropped kerb at junction crossing point



Dropped kerb at junction crossing point with tactile paving



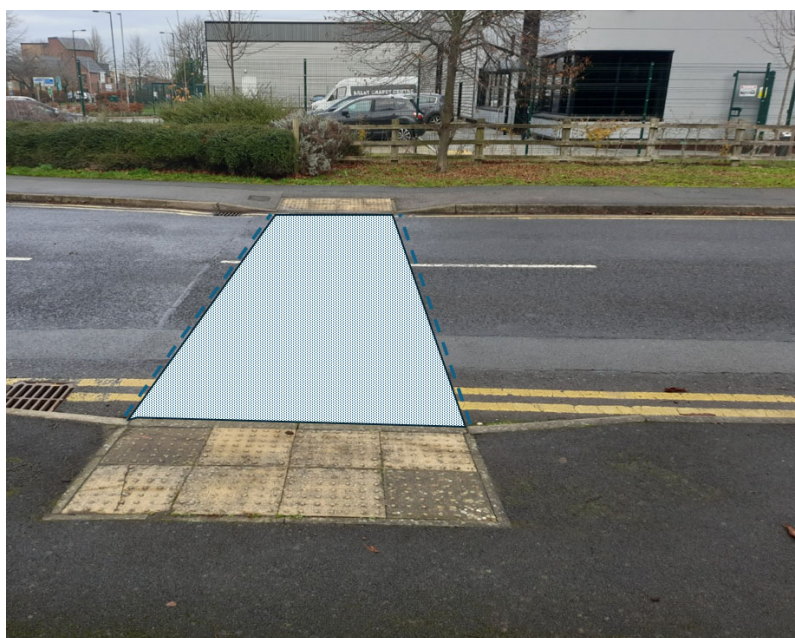
Beacon crossing with tactile paving



Signal crossing with tactile paving







Designated tactile crossing point – adjacent to road junction



Designated tactile crossing point – remote from road junction

The shaded locations shown in the above photo sketches denote typical designated road crossing points with carriageway areas that shall be risk assessed and made safe reflective of footway safety defect investigation and risk score intervention criteria.

Appendix 5 - Photo examples of highway safety defects.

 <p>Carriageway Pothole</p>	 <p>Pothole/Erosion around Utility Cover</p>
 <p>Carriageway Edge Erosion</p>	 <p>Footway Edge Erosion</p>
 <p>Vehicle Over-ride Damage - Footway</p>	 <p>Blocked Gully (potential for standing water/flooding)</p>
 <p>Local Road Collapse</p>	 <p>Road Edge Void</p>



Displaced Kerbs



Displaced Kerbs



Missing Utility Cover



Missing Utility Cover



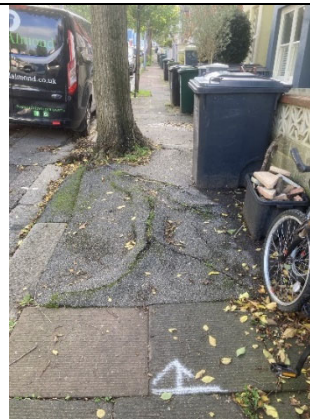
Broken Cover



Cracked Cover



Tree Root Damage



Tree Root Damage

 <p>Leaning Tree</p>	 <p>Fallen Tree Branch</p>
 <p>Uneven/Unstable Flags/abrupt-level difference</p>	 <p>Uneven Flags/abrupt-level difference</p>
 <p>Missing Paving Block</p>	 <p>Paving Block Abrupt-level Difference</p>
 <p>Footway Gap side of Drainage Channel</p>	 <p>Mud on the road</p>



Damaged Bollard and
Displaced Block Paving



Damaged Bollard
(overhanging Tactile Paved Crossing)



Damaged Pedestrian Barrier
(at ped crossing location)



Damaged Fence
(pole projecting into the highway)



Exposed Wiring





Exposed Wiring



Corroded Column



Leaning Signal Pole

 <p>Damages Fence and Steps</p>	 <p>Collapsed Stone Retaining Wall</p>
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The photographs above are intended to show typical examples of highway related safety defects, these are not considered to be an exhaustive list of safety defects. They will be subjected to a risk-based assessment via the safety inspection 'Risk Matrix' process to determine their risk probability/impact score and action status, reflective of size, location, usage, trafficking, environment, etc.