

Highway Policy Plan (HPP)

a component document of the Highway
Infrastructure Asset Management Plan (HIAMP)

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01 – EXECUTIVE SUMMARY



The HIAMP Highway Policy Plan (HPP) describes the risk based approach that Southwark Council will adopt with regard to safety inspections and programming remedial works on its highway assets.

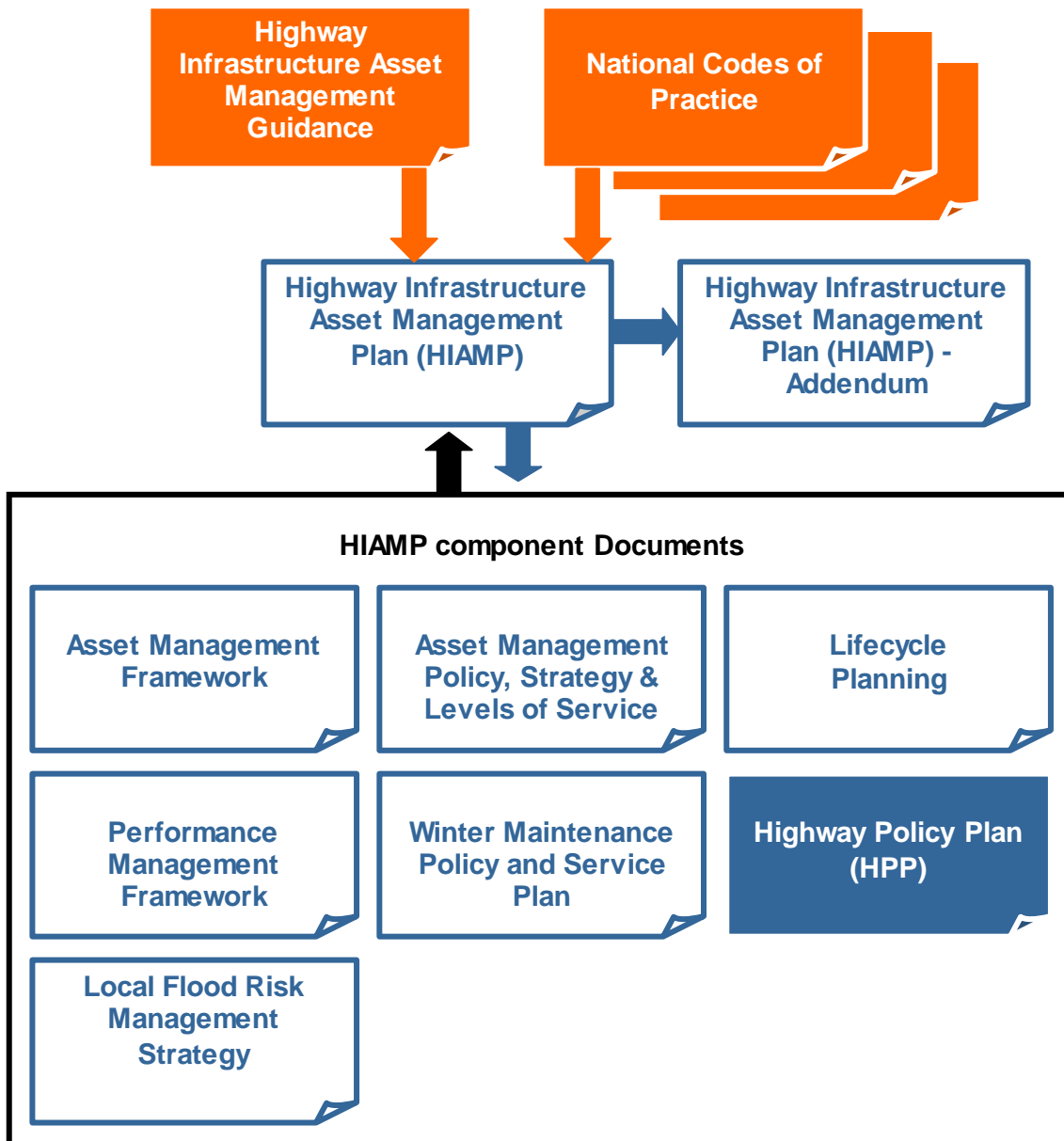
Southwark Council is responsible for the maintenance of 332km of carriageway and 734km of footway, including 18,027 street lights, 16,536 gullies, 15,000 highway trees, as well as numerous highway structures (2 tunnels, 13 highway bridges, 46 memorials, 18 bridges over waterways, 11 river walls, 140 lifebuoys and 180 grit bins).

The road hierarchy, inspection regimes and investigatory levels have been developed with regards to the recommendations of the “Well Managed Highway Infrastructure: A Code of Practice”, as well as in consultation with adjacent London Boroughs and adopting the guidance of the London Technical Advisers Group (LoTAG) on developing a highway management hierarchy and highway safety inspection. This provides a consistent level of service for the travelling public across highway boundaries as well as strengthening Southwark’s Statutory Section 58 Special Defence to accident claims.

Highway Infrastructure Asset Management Plan (HIAMP) Documentation Relationship

The HIAMP is intended to provide a framework to support the implementation of effective asset management in Southwark, while ensuring that a number of important supporting and component documents can be successfully developed. This Highway Policy Plan (HPP) is a component document which sets down policies and procedures to ensure that the borough meets its overall objective of ensuring that all of Southwark Council's highway network incorporating carriageway, footways, cycleways and public plazas and footpaths are kept in a safe condition for all types of users at all times.

Figure 1 - Relationship of HIAMP Documentation



INTRODUCTION AND LEGAL POSITION

Introduction

This HPP has been prepared using adopted policies and practices and also with reference to current best practice contained in the Code of Practice¹ published by the UK Roads Liaison Group and the guidance published by the London Technical Advisers Group.

Public Maintainable Highways - Legal Position

The London Borough of Southwark is a Highway Authority, and can make use of section 58 of the Highways Act 1980 to provide a special defence against a legal action for damages for non-repair of the publicly maintainable Highway should certain criteria have been met, these are:-

- (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.

Public Squares and Plazas - Duty of Care

Where the Borough of Southwark maintains public spaces, then in tort law, there is a duty of care to the users of these public spaces to ensure that they are maintained in a safe condition for all types of users at all times. However, this HPP relates only to the adopted highway.

Review of HPP

The HPP shall be subject to a review after five years or sooner should there be any significant revisions issued to the set of Codes of Practice¹ published by the UK Roads Liaison.

¹ 'Well-managed Highway Infrastructure: A Code of Practice' published by the UK Roads Liaison Group October 2016

'Asset Management Guidance for Footways and Cycle Routes: An Approach to Risk Based Maintenance Management' published by the UK Roads Liaison Group 2018

'Guidance on Developing a Highway Management Hierarchy' published by the London Technical Advisers Group (LoTAG) December 2017

'Guidance on Highway Safety Inspections' published by the London Technical Advisers Group (LoTAG) December 2017

03 – NETWORK HIERARCHIES AND PUBLIC SQUARES AND PLAZAS

Scope

Network Hierarchies are defined for roads, footways and cycleways which take into account the character of the highway, and the traffic which would reasonably to be expected to use them.

Road Hierarchy

The hierarchy for the road network was originally developed with reference to the “Well Maintained Highways Code of Practice for Highway Maintenance Management” and was divided into four categories. However, to comply with the new Code of Practice: Well Managed Highway Infrastructure, the Authority has re-examined its network hierarchy (see Appendix 1 for all thirty-six recommendations of the new code of practice) to take account of current and expected use, resilience, local and economic factors, such as schools, industry, hospitals, walking and cycling routes. A risk based approach was adopted in the definition of the road hierarchy, by considering the volumes/types of likely traffic to use the road.

To ensure consistency with other adjacent authorities, Southwark Council followed the guidance on developing a management hierarchy as published by the London Technical Advisors Group (LOTAG) <https://www.lotag.co.uk>. This guidance, developed in association with the thirty-two London boroughs, the City of London and Transport for London, sets a “London Interpretation” on the previous road hierarchy definitions.

Roads are classed together with the network service they perform and assigned to a particular network hierarchy (see table 1). There are no motorways in the borough. Strategic routes within the borough comprise the majority of the borough’s resilient road network which are managed by Transport for London (TfL). Main distributor roads form the rest of the borough’s principal road network, and secondary distributor roads generally describe the B and C roads in the borough, link roads, local access roads and minor roads within the hierarchy make up the greater part of the borough’s road network and these are comprised of most of the residential and urban routes.

The network hierarchy relates to the adopted highway. Private streets, parks, rights of way and housing land are not incorporated into the network hierarchy, although as asset management matures in Southwark, it may be possible to review this position in subsequent reviews.

Research by S Bird, published by TRL in 2006, (Development of a Risk Analysis Model for Footways and Cycle Tracks) indicates that on average, if a billion people pass over a 20mm defect, ten will trip and two will claim. Fifty-five percent of claims are made by over sixty year olds. There are approximately seventy-five accidents for every million kilometres cycled.

In Britain, A&E admissions for trips in the footway range from 20,000 to 190,000 every year, and five percent result in admission to hospital. In London, one sixth of these will result in a claim. The cost of a fall (based on 2005 prices) is £5,606. Slabbed footways account for half of all claims made for falls in the footway (compared against asphalt concrete and brick paved footways). During 2017, one highway authority outside London payed an average of £1,734 for highway claims (£459,552 for 265 successful claims, the highest pay out being £27,500).

Footways and cycleways tend not to deteriorate in a linear fashion with use, so information concerning the defect history, claims, presence of trees (root damage), likely presence of vulnerable users and the construction of the footway (slabbed, asphalt, brick pavements or concrete) will all help determine the risk of a defect developing and thus the risk of an accident and the potential that a claim may be made.

While the main categorisation will be on likely traffic/pedestrian volumes, the factors above can be assessed and the risks to the safety, serviceability and sustainability of the network can be evaluated and weighted to further refine the network hierarchy.

A “pair wise comparison” structured approach was adopted to provide a robust and objective evaluation of identified risks. Footways could be either moved up or down the network hierarchy categories to reflect the appropriate risk they presented.

The full management hierarchies as recommended by the London Technical Advisers Group (LoTAG) in its ‘Guidance on Developing a Highway Management Hierarchy’ published December 2017 is described below:

Carriageways

Category	Type of Road General Description	Description	London Interpretation	Functionality Factor	Functionality Definition
Motorway	Limited access – motorway regulations apply.	Routes for fast moving long distance traffic. Fully grade separated and restrictions on use.	Strategic Roads	Motorway	
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 40mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.		TfL Road Network	
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 40mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.		Borough Principal Road Network	
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 30mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons. In rural areas these roads link the larger villages, bus routes and HGV generators to the strategic and Main Distributor Network.	Local Roads	A	Prestige e.g. High Profile
				B	Very High Traffic Volume e.g. AADF>10k, local knowledge
					Essential services e.g. Hospital, fire station, police station
					Major traffic generators e.g. town centre, shopping centre, large school or university
				Very high cyclist volume e.g. AADF>1000, defined cycle route	

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 30mph speed limits, random pedestrian movements and uncontrolled parking. In rural areas these roads link the smaller villages to the distributor roads. They are varying width and not always capable of carrying two-way traffic.	Local Roads		Major bus route	e.g. large number of buses
				C	High traffic volume	e.g. 10k>AADF>5k, local knowledge
					Medium traffic generators	e.g. medium schools, shopping parades
					High cyclist volume	e.g. AADF>500, local knowledge
					Resilient network	e.g. on resilient network (gritting routes)
					Minor bus route	e.g. medium number of buses
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.	D	Medium traffic volume	e.g. 5k>AADF>1k, local knowledge	
				Medium cyclist volume	e.g. 500>AADF>1000, local knowledge	
				HGV usage	e.g. route to industrial estate, local knowledge	
				Minor traffic generators	e.g. small schools, local shops, ceremonial routes	
				Infrequent bus route	e.g. small number of buses	
Minor Road	Little used roads serving very limited numbers of properties.	Locally defined roads.	E	Low traffic volume	e.g. AADF<1k, local knowledge	
				Low cyclist volume	e.g. AADF<100, local knowledge	
				No traffic generator	No traffic generator	

Table 1. Carriageway Network Management Hierarchy

Footways

Category	Description	London Interpretation	Functionality Factor	Functionality Definition	
Prestige Walking Zones	Very busy areas of towns and cities with high public space and street scene contribution.	Local Footways & TfL Red Routes	A	Prestige	e.g. High Profile
Primary Walking Zones	Busy urban shopping and business areas and main pedestrian routes.		B	Very high pedestrian volume	e.g. Footfall count, local knowledge
				Essential services	e.g. Hospital, care home, police station
				Major traffic generators	e.g. Town centre, shopping centre, market, large school or university, train station
Secondary Walking Zones	Medium usage routes through local areas feeding into primary routes, local shopping centres, etc. or routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.		C	Major bus route	e.g. large number of buses
				High pedestrian volume	e.g. footfall count, local knowledge
				Medium traffic generators	e.g. medium school, shopping parade
				Vulnerable users	e.g. GP surgery, senior citizens home
Link Footways	Linking local access footways through urban areas and busy rural footways.		D	Shared use	e.g. shared cycle/footway
				Minor bus route	e.g. medium number of houses
				Medium pedestrian volume	e.g. footfall count, local knowledge
			E	Minor traffic generators	e.g. small school, local shops, ceremonial routes
				Infrequent bus route	e.g. small number of buses
			Low pedestrian volume	e.g. footfall count, local knowledge	
			No traffic generator	No traffic generator	

Table 2. Footway Network Management Hierarchy

Cycleway Hierarchy

The cycleway hierarchy has been divided into three categories with reference to the “Well Maintained Highways Code of Practice for Highway Maintenance Management”;

Functionality Factor	Functionality Definition
A	Cycle lane forming part of the carriageway.
B	Shared cycle/pedestrian paths, either segregated by a white line or other physical segregation, or un-segregated.
C	Cycle route through open space

Table 3. Cycleway Network Management Hierarchy

Public Squares and Plazas

The London Borough of Southwark maintains the following public squares and plazas which shall be treated as primary or secondary walking zones.

Deal Porter Square
Flat Iron Square
Peckham Square
St Georges Wharf
Rope Street / Finland Street
Barnards Wharf
Durands Wharf
Octagon Court
Cumberland Wharf
King Stairs Close
Greenland Dock
Outside Ship York Pub
Canada Water
Helsinki Square
Albion Channel (primary walking zone)
Surrey Water (primary walking zone)
Thames Path (primary walking zone)

Table 4. Public squares and plazas

04 – INSPECTION REGIMES

Scope

Risks are managed and mitigated through a range of inspections and surveys to assess safety, serviceability and condition. Appropriate maintenance responses from immediate response through programmed repair to planned maintenance schemes may be carried out separately or in combination. The Authority undertakes inspections designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community.

These safety inspection frequencies had been developed with reference to the ‘London Technical Advisors Group (LOTAG) Guidance on Highway Safety Inspections’ to implement a risk based approach as recommended by the new code of practice while also taking into consideration local circumstances and consistency with other authorities.

Road Safety Inspections

The following safety inspection frequencies are undertaken on the road (carriageway) network.

London Interpretation	Functionality Factor		Functionality Definition	Inspection Frequency
Strategic Roads	Motorway			N/A
	TfL Road Network			Monthly
	Borough Principal Road Network			
Local Roads	A	Prestige	e.g. High Profile	Monthly
	B	Very High Traffic Volume	e.g. AADF>10k, local knowledge	3 - monthly
		Essential services	e.g. Hospital, fire station, police station	
		Major traffic generators	e.g. town centre, shopping centre, large school or university	
		Very high cyclist volume	e.g. AADF>1000, defined cycle route	
		Major bus route	e.g. large number of buses	
	C	High traffic volume	e.g. 10k>AADF>5k, local knowledge	6 - monthly
		Medium traffic generators	e.g. medium schools, shopping parades	
		High cyclist volume	e.g. AADF>500, local knowledge	
		Resilient network	e.g. on resilient network (gritting routes)	
		Minor bus route	e.g. medium number of buses	
	D	Medium traffic volume	e.g. 5k>AADF>1k, local knowledge	Annual
		Medium cyclist volume	e.g. 500>AADF>1000, local knowledge	
		HGV usage	e.g. route to industrial estate, local knowledge	
		Minor traffic generators	e.g. small schools, local shops, ceremonial routes	
Infrequent bus route		e.g. small number of buses		
E	Low traffic volume	e.g. AADF<1k, local knowledge	Annual	
	Low cyclist volume	e.g. AADF<100, local knowledge		
	No traffic generator	No traffic generator		

Table 5. Carriageway Inspection frequency

AADF = Average Annual Daily Flow of traffic.

Footway Safety Inspections

The following safety inspection frequencies are undertaken on the footway network.

London Interpretation	Functionality Factor		Functionality Definition	Inspection Frequency
Local Footways & TfL Red Routes	A	Prestige	e.g. High Profile	Monthly
	B	Very high pedestrian volume	e.g. Footfall count, local knowledge	3 - monthly
		Essential services	e.g. Hospital, care home, police station	
		Major traffic generators	e.g. Town centre, shopping centre, market, large school or university, train station	
		Major bus route	e.g. large number of buses	
	C	High pedestrian volume	e.g. footfall count, local knowledge	6 - monthly
		Medium traffic generators	e.g. medium school, shopping parade	
		Vulnerable users	e.g. GP surgery, senior citizens home	
		Shared use	e.g. shared cycle/footway	
		Minor bus route	e.g. medium number of houses	
	D	Medium pedestrian volume	e.g. footfall count, local knowledge	Annual
		Minor traffic generators	e.g. small school, local shops, ceremonial routes	
		Infrequent bus route	e.g. small number of buses	
	E	Low pedestrian volume	e.g. footfall count, local knowledge	Annual
		No traffic generator	No traffic generator	

Table 6. Footway Inspection frequency

Cycleway Safety Inspections

The following safety inspection frequencies are undertaken on the cycleway network.

Functionality Factor	Functionality Definition	Inspection Frequency
A	Cycle lane forming part of the carriageway.	As adjacent carriageway
B	Shared cycle/pedestrian paths, either segregated by a white line or other physical segregation, or un-segregated.	6 - monthly
C	Cycle route through open space maintained as part of the public highway.	6-monthly

Table 7. Cycleway Inspection frequency

Public Squares and Plazas Safety Inspections

All listed public squares and plazas the London Borough of Southwark maintains are inspected on a **monthly** frequency, unless the revised risk based network hierarchy suggests a less frequent inspection is acceptable (see page 9).

Safety Inspection Frequency Variance

Where carriageway and footway hierarchies intersect, for example at pelican or zebra crossings, bollards, or other defined crossing points at junctions, the carriageway hierarchy should always take precedence in determining of inspection frequencies, defect definition and responses. This principle shall also apply to intersections between carriageways and cycle routes. At intersections between cycleways and footways, the cycleway hierarchy should always take precedence.

The period between safety inspections may be varied by the following leniencies where circumstances dictate that this may be necessary (such as snowfall preventing inspection, industrial action, etc.). However, where a frequency has been varied then the safety inspection period shall revert to its original programmed inspection date at the earliest opportunity.

Safety Inspection Frequency	Leniency
Monthly	1 working week
3 - monthly	2 working weeks
6 - monthly	4 working weeks
Annually	4 working weeks

Table 8. Inspection leniency

Structures Inspections

Inspections on structures are undertaken at the criteria set down in Part C of 'Well-managed Highway Infrastructure: A Code of Practice' with two types of inspection (General and Principal).

General Inspection

These comprise a visual inspection of all parts of the structure and, where relevant to the behaviour or stability of the structure, adjacent earthworks or waterways that can be inspected without the need for special access or traffic management arrangements. Riverbanks, for example, in the vicinity of a bridge would be examined for evidence of scour or flooding conditions, such as the deposition of debris or blockages to the waterway, which could lead to

scour of bridge supports or flooding. All highway structures are subject to a regular General Inspection (GI) not more than **two years** following the previous General or Principal Inspection. Except for tunnels where the mechanical and electrical equipment shall have a general inspection annually.

Principal Inspection

Principal Inspections comprise a close examination, within touching distance, of all accessible parts of a structure, including, where relevant, underwater parts and adjacent earthworks and waterways, this shall be of sufficient scope and quality to determine:

1. The condition of all parts of the structure.
2. The extent of any significant change or deterioration since the last Principal Inspection.
3. Any information relevant to the stability of the structure.

All highway structures shall be subject to a regular Principal Inspection (PI) **not more than six years** depending upon complexity of the structure, following the previous Principal Inspection. Except for tunnels where the mechanical and electrical equipment shall have a principal inspection every three years.

Special Inspection

Where a severe event may have impacted the structure (flooding, fire, vehicle impact, etc.) a special inspection shall take place.

GIs and PIs may be undertaken more frequently on sub-standard structures to accommodate and manage the risk appropriately. Similarly, structures that are deteriorating rapidly may also benefit from more regular inspections or special inspections.

Highway lighting and Illuminated Signs Inspections

Inspections on Highway lighting and Illuminated Signs Inspections are undertaken as per the criteria set down in Part D of 'Well-managed Highway Infrastructure: A Code of Practice' published by the UK Roads Liaison Group in October 2016.

Electrical Inspection and Testing

The Electricity at Work Regulations state that "As may be necessary to prevent danger, all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger".

Section D.5.3.2 of Well-managed Highway Infrastructure: A Code of Practice refers to BS 7671, stating that while they do not themselves impose statutory requirements, "installations which conform to the standards laid down in BS7671:2008 are regarded by the Health and Safety Executive as likely to achieve conformity with the relevant parts of Electricity at Work Regulations."

The IET Guidance Note 3 (Inspection and Testing) supports a risk based approach for the inspection and testing of electrical installations, stating: "The person carrying out subsequent inspections may recommend that the interval between future inspections be increased or decreased as a result of the findings of their inspection." The frequency of the electrical inspection and testing has been determined by taking account of the following:

- The type of installation.
- The use and operation it is subject to.
- The frequency of maintenance.
- Any external influences which exist.
- Past history of inspection and repair.

Consequently, Southwark will inspect streetlights every 6 years, whereas items such as market electrical posts (which are more frequently used), will have an annual inspection.

Visual Inspection of Electrical Equipment

The nature and location of public lighting installations is such that visual inspection of the electrical equipment and wiring is of paramount importance. The condition of the electrical equipment and wiring is visually checked at each cyclic maintenance or repair visit and its condition reported.

05 – HIGHWAY INSPECTION CRITERIA

Scope

This chapter defines the criteria for undertaking safety inspections and prioritisation of defects identified. Condition surveys such as Detailed Visual Inspections (DVIs) are not discussed here.

Carriageway and Footway Safety Inspection

Methodology

Safety inspections shall be undertaken on foot at the frequencies stated in section 04 Inspections Regime to reflect the characteristics of the particular element of the network and its use, and at times of day which enable the inspection to be carried out thoroughly and safely.

When a routine safety inspection is unable access an area fully due to obstructions such as third party works (hoardings or scaffolding), parked vehicles, or seasonal obstructions (snow or dead leaves), the inspector will make a note of the obstruction and inspect the unobstructed area of the asset. They will not be expected to return to the site to undertake a second inspection of the areas due to the unpredictable nature of the obstructions they are likely to encounter.

Prioritisation of defects

During safety inspections, all observed defects that create a risk to users shall be recorded and the level of response determined on the basis of risk assessment. The degree of deficiency in highway elements will be crucial in determining the nature and speed of response. The inspector shall make an on-site judgement taking into account the particular circumstances.

For example, the degree of risk from a pothole depends upon not merely its depth but also its surface area and location in the carriageway or footway (e.g. whether it is wide enough for a wheel to fit in and is it on the wheel line).

All defects identified shall be assessed for likely risk. All risks identified through this process shall be evaluated in terms of their significance, by assessing the likely impact should the risk occur, and the probability of it actually happening.

The impact shall be quantified by assessing the extent of damage or injury likely to be caused should the risk become an incident. As the impact is likely to increase with increasing speed, the amount of traffic and type of road are clearly important considerations in the assessment, as is the vulnerability of the road user, e.g. cyclists.

The probability shall be quantified by assessing the likelihood of users, passing by or over the defect, encountering the risk. As the probability is likely to increase with increasing vehicular, cyclist or pedestrian flow, the network hierarchy and defect location are, consequently, important considerations in the assessment.

The impact shall be assessed on a scale of 1 to 4 and the probability on a scale of 1 to 5. The product of the risk impact and the risk probability is the risk factor, detailed in the following table.

Risk Matrix						
Risk Factor			Risk Impact			
			1	2	3	4
			Little or negligible	Minor or Low	Moderate	Major, High or Serious
Risk Probability	1	Very Low	1	2	3	4
	2	Low	2	4	6	8
	3	Medium	3	6	9	12
	4	High	4	8	12	16
	5	Very High	5	10	15	20

Table 9. Risk matrix

This risk matrix has been developed from the guidance in Well Maintained Highways – Code of Practice for Highway Maintenance, published by UK Roads Liaison Group in July 2005.

Response Times for Prioritised Defects

The Risk Factor shall determine the overall seriousness of the risk and consequently the speed of response of the appropriate remedial action as follows:

Risk Factor	Defect Category	Action
16 or 20	Cat 1(ECO)	(Emergency call out) Attend and take appropriate action within 2 hours
8 to 15	Cat 1	Make safe or complete temporary or permanent repair within 24 hours
6	Cat 2H	Complete permanent repair within 7 calendar days
3 to 5	Cat 2M	Complete permanent repair within 28 calendar days
1 or 2	Cat 2L	No response required

Table 10. Defect response times

The Cat 1 response requires the remedial action to be one of the following:

- a) temporarily repaired within 24 hours;
- b) permanently repaired within 24 hours;
- c) made safe within 24 hours.

The choice will depend on two factors:

- a) the nature of the defect and whether the Contractor can source the plant and materials required for completion of a temporary or permanent repair within 24 hours;
- b) an assessment of the overall disruption caused to road users of each of the three options.

Making safe may include, but not be limited to, displaying warning notices, coning off, fencing off, or using temporary barriers to effectively protect road users from the defect. In deciding the most appropriate measures for making a defect safe, the disruption to road users shall be taken into account.

Where a permanent repair cannot be carried out initially as part of the Cat 1(ECO) or Cat 1 response, a permanent repair shall be carried out within 7 calendar days, unless this is not feasible. Where this occurs then a special inspection regime will be implemented to ensure that temporary repairs or measures taken to make the defect safe remain effective until a permanent repair is made.

Recording of Safety Inspection Defects

A record of all actionable defects shall be produced during the safety inspection and recorded in the Authority's data management system for that purpose. The record of the defect shall include:

- 'before' photographs automatically date recorded. The photographs shall include a scale bar which shall be clearly shown in the photographs
- defect and category of defect
- the proposed action

In addition, a record on the data management system of the after works shall include:

- 'after' photographs automatically date recorded
- brief description of works undertaken

Defects Identified Outside of Safety Inspections

Incidents and defects reported from other sources, including Councillors, members of the public, and the Police shall be recorded in the same manner on the data management system following inspection.

In addition to scheduled safety inspections, the London Borough of Southwark exercises a general duty of care by recording hazards which are identified through the daily work routines, particularly when a Cat 1(ECO) response is required, in the same manner on the data management system.

Street Furniture

This is included within the Carriageway and footway inspections.

Highway Structures

This is included within the Carriageway and footway inspections, but not replacing the GI and PI inspections.

Highway lighting and Illuminated Signs Inspections

All illuminated street furniture is inspected, at night, on a 2 week rota for correct operation. The night 'scout' follows a predefined route ensuring every road in the Borough is visited at least once in 10 working days.

Visual Inspection of Electrical Equipment

So far as reasonably practicable, the visual inspection verifies the health and safety of persons, animals and property is not endangered. The general visual condition of the electrical installation is noted on the inspection report and if any particular item causes concern then this is detailed on an appropriate supporting schedule.

06 – STANDARDS OF SAFETY MAINTENANCE

Scope

This chapter defines the standard of maintenance appropriate for different elements of the highway by defining investigatory levels for potential defects.

Reactive Maintenance

Reactive maintenance involves attending to the rectification of defects and other matters requiring urgent attention, arising either from safety inspections or when identified through other sources, including members of the public, the Police and ad-hoc duty of care defect identification reports.

Previously, irregularities in the highway greater than specified intervention levels were classified as defects, but in accordance with the new code of practice, these now represent the investigatory levels for potential defects. The risk of harm shall be investigated in accordance with the defect risk matrix described in section 05 Highway Inspection Criteria to establish the appropriate response. In addition to these potential defects, when a safety inspection is undertaken a record shall be made of anything else which is deemed to be creating, or is likely to create, a hazard, which shall also constitute a defect on or to the highway.

Footways and Carriageways

Defect Investigatory Levels	
Type	Detailed Description
Carriageway	
Pothole	40mm or deeper over 100mm by 100mm or more within 1.5m of the kerb or within a formally marked cycle lane
Pothole	pothole 40mm or deeper over 100mm by 100mm or more elsewhere
Crowning	40mm or more over a 3m length
Rutting	40mm or more
Spillage	Oil or diesel spill over 1m ²
Anti-skid	Missing or defective anti-skid surfacing over 1m ²
Water	Standing water 25mm or deeper over 500mm in width adjacent to the kerb or 25+mm or deeper over 1sqm or more elsewhere
Obstruction	Debris, building materials, abandoned vehicles or other obstruction likely to create a hazard
Traffic Management	Inadequate signing or guarding of works

Defect Investigatory Levels	
Type	Detailed Description
Pedestrian Crossing	
Trip	25mm or more
Footway/Shared Path/Cycle Track	
Trip	25mm or more
Pothole	25mm or deeper over 100mm by 100mm or more
Rocking	Rocking slab or block with 25mm or more movement
Water	Standing water 25mm or deeper over 1sqm or more
Access Point	Cellar or other access doors or vents likely to create a hazard
Street Furniture	Damaged, misaligned or defective street furniture
Vegetation	Height clearance less than 2.5m to cycle path or cycle track below signs or overhanging trees or vegetation
Vegetation	Height clearance less than 2.25m to footway below signs or overhanging trees or vegetation
Tree	Damaged or defective tree grid likely to create a hazard
Obstruction	Advertising, scaffolding, hoarding, building materials, vegetation or other obstruction likely to create a hazard
Traffic Management	Inadequate signing or guarding of works
Kerbing	
Loose	A unit dislodged by 50mm or more horizontally
Level Difference	A unit sunk by 25mm or more compared to an adjacent unit
Rocking	A unit rocking with 25mm or more of movement
Missing	A missing unit
Ironwork	
Damaged	A broken or cracked cover
Missing	A missing cover
Rocking	A rocking cover or frame likely to cause a hazard or noise nuisance
Level Difference	Sunk or projecting by 25mm or more
Leaking	Fluid discharging and likely to create a health or safety hazard
Missing	A missing gully grate
Blocked	A blocked gully
Damaged	A broken or cracked gully grate
Road Markings	
Worn Regulatory	Missing, faded or worn road marking likely to be a hazard or affecting the effectiveness of enforcing regulations
Fencing, Safety Fencing and Barriers	
Damaged	A damaged, misaligned or defective item
Missing	A missing item (not an item removed to minimise street clutter)

Defect Investigatory Levels	
Type	Detailed Description
Trees and Vegetation	
Obscured	Obstructing visibility of signs, sight lines or street lamps
Obstruction	Obstructing passage in use of the highway

Table 11. Footway and cycleway investigatory levels

Structures

Defect Standards	
Defect Type	Detailed Description
Highway Structures & Riverwalls	
Damaged	A damaged, misaligned, loose or defective item (e.g. expansion joint)
Concrete Damage	Severe cracking or spalling of concrete
Missing	Missing items or any evidence of tampering with security features
Traffic Management	Inadequate signing or guarding of works
Netting	Defective pigeon deterrent netting or mesh
Culverts	
Blocked	An accumulation of rubbish, debris or any other material at the mouth of the culvert likely to create a flooding hazard
Pedestrian Subways and Enclosed walkways	
Damaged	Lighting damaged or not functioning
Missing	Wall tiles missing or damaged over 1 sqm
Trip	Trip of 25mm or more
Pothole	A pothole 25mm or deeper over 100cm ² or more
Damaged	Damaged stair treads
Water	Standing water 25mm or deeper over 1m ² or more
Loose Handrail	A handrail loose or missing.
Monuments and Memorials	
Damaged	A damaged, vandalised misaligned, loose or defective item
Missing	Missing items or any evidence of tampering with security features

Table 12. Structures investigatory levels

Street Furniture

Signs, Bollards, Street Name Plates, Benches and bins	
Defect Type	Detailed Description
Damaged	A damaged, vandalised misaligned, loose or defective item
Missing	Missing items or any evidence of tampering with security features (not an item removed to minimise street clutter)
Obscured	Obscured, dirty or faded items – signs no longer able to convey their message

Table 13. Street furniture investigatory levels

Highway Lighting and Illuminated Signs

Lighting and Illuminated Signs	
Defect Type	Detailed Description
Damaged	A damaged, misaligned or defective item
Missing	A missing item
Obscured	Obscured, dirty or faded items – signs no longer able to convey their message
Wiring	Exposed wiring
Defective Door	An open or missing door protecting electrical apparatus
Day-burning	Lamp column lanterns alight during day light hours

Table 14. Highway lighting and illuminated sign investigatory levels

Gully Emptying

On-going annual inspection (at a minimum) and as per maintenance schedule. A risk based approach has been adopted with improved and targeted maintenance of surface water drainage assets in Local Flood Risk Zones. There is an increased frequency of cleaning in areas at relatively higher risk of flooding and with high incidence of blockages.

Preventative planned maintenance is undertaken for submersible pumps by an independent specialist organisation.

APPENDIX 1

WELL MANAGED HIGHWAY INFRASTRUCTURE: A CODE OF PRACTICE RECOMMENDATIONS

RECOMMENDATION 1 – USE OF THE CODE

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

RECOMMENDATION 2 – ASSET MANAGEMENT FRAMEWORK

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

RECOMMENDATION 3 – ASSET MANAGEMENT POLICY AND STRATEGY

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

RECOMMENDATION 4 – ENGAGING AND COMMUNICATING WITH STAKEHOLDERS

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

RECOMMENDATION 5 – CONSISTENCY WITH OTHER AUTHORITIES

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

RECOMMENDATION 6 – AN INTEGRATED NETWORK

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

RECOMMENDATION 7 – RISK BASED APPROACH

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

RECOMMENDATION 8 – INFORMATION MANAGEMENT

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

RECOMMENDATION 9 – NETWORK INVENTORY

A detailed inventory or register of highway assets, together with information on their scale, nature and use, should be maintained. The nature and extent of inventory collected should be fit for purpose and meet business needs. Where data or information held is considered sensitive, this should be managed in a security-minded way.

RECOMMENDATION 10 – ASSET DATA MANAGEMENT

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

RECOMMENDATION 11 – ASSET MANAGEMENT SYSTEMS

Asset management systems should be sustainable and able to support the information required to enable asset management. Systems should be accessible to relevant staff and, where appropriate, support the provision of information for stakeholders. (HIAMG Recommendation 12)

RECOMMENDATION 12 – NETWORK HIERARCHY

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

RECOMMENDATION 13 – WHOLE LIFE / DESIGNING FOR MAINTENANCE

Authorities should take whole life costs into consideration when assessing options for maintenance, new and improved highway schemes. The future maintenance costs of such new infrastructure are therefore a prime consideration.

RECOMMENDATION 14 – RISK MANAGEMENT

The management of current and future risks associated with assets should be embedded within the approach to asset management. Strategic, tactical and operational risks should be included as should appropriate mitigation measures. (HIAMG Recommendation 11) *Amended 15 March 2017:*

RECOMMENDATION 15 – COMPETENCIES AND TRAINING

The appropriate competencies for all staff should be identified. Training should be provided where necessary for directly employed staff, and contractors should be required to provide evidence of the appropriate competencies of their staff.

RECOMMENDATION 16 – INSPECTIONS

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

RECOMMENDATION 17 – CONDITION SURVEYS

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

RECOMMENDATION 18 – MANAGEMENT SYSTEMS AND CLAIMS

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

RECOMMENDATION 19 – DEFECT REPAIR

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

RECOMMENDATION 20 – RESILIENT NETWORK

Within the highway network hierarchy a 'Resilient Network' should be identified to which priority is given through maintenance and other measures to maintain economic activity and access to key services during extreme weather.

RECOMMENDATION 21 – CLIMATE CHANGE ADAPTATION

The effects of extreme weather events on highway infrastructure assets should be risk assessed and ways to mitigate the impacts of the highest risks identified.

RECOMMENDATION 22 – DRAINAGE MAINTENANCE

Drainage assets should be maintained in good working order to reduce the threat and scale of flooding. Particular attention should be paid to locations known to be prone to problems, so that drainage systems operate close to their designed efficiency.

RECOMMENDATION 23 – CIVIL EMERGENCIES AND SEVERE WEATHER EMERGENCIES PLANS

The role and responsibilities of the Highway Authority in responding to civil emergencies should be defined in the authority's Civil Emergency Plan. A Severe Weather Emergencies Plan should also be established in consultation with others, including emergency services, relevant authorities and agencies. It should include operational, resource and contingency plans and procedures to enable timely and effective action by the Highway Authority to mitigate the effects of severe weather on the network and provide the best practicable service in the circumstances.

RECOMMENDATION 24 – COMMUNICATIONS

Severe Weather and Civil Emergencies Plans should incorporate a communications plan to ensure that information including weather and flood forecasts are received through agreed channels and that information is disseminated to highway users through a range of media.

RECOMMENDATION 25 – LEARNING FROM EVENTS

Severe Weather and Civil Emergencies Plans should be regularly rehearsed and refined as necessary. The effectiveness of the Plans should be reviewed after actual events and the learning used to develop them as necessary.

RECOMMENDATION 26 – PERFORMANCE MANAGEMENT FRAMEWORK

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

RECOMMENDATION 27 – PERFORMANCE MONITORING

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

RECOMMENDATION 28 – FINANCIAL PLANS

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

RECOMMENDATION 29 – LIFECYCLE PLANS

Lifecycle planning principles should be used to review the level of funding, support investment decisions and substantiate the need for appropriate and sustainable long term investment. (HIAMG Recommendation 6)

RECOMMENDATION 30 – CROSS ASSET PRIORITIES

In developing priorities and programmes, consideration should be given to prioritising across asset groups as well as within them.

RECOMMENDATION 31 – WORKS PROGRAMMING

A prioritised forward works programme for a rolling period of three to five years should be developed and updated regularly. (HIAMG Recommendation 7)

RECOMMENDATION 32 – CARBON

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

RECOMMENDATION 33 – CONSISTENCY WITH CHARACTER

Determination of materials, products and treatments for the highway network should take into account the character of the area as well as factoring in whole life costing and sustainability. The materials, products and treatments used for highway maintenance should meet requirements for effectiveness and durability.

RECOMMENDATION 34 – HERITAGE ASSETS

Authorities should identify a schedule of listed structures, ancient monuments and other relevant assets and work with relevant organisations to ensure that maintenance reflects planning requirements.

RECOMMENDATION 35 – ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Materials, products and treatments for highway infrastructure maintenance should be appraised for environmental impact and for wider issues of sustainability. Highway verges, trees and landscaped areas should be managed with regard to their nature conservation value and biodiversity principles as well as whole-life costing, highway safety and serviceability.

RECOMMENDATION 36 – MINIMISING CLUTTER

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