THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

# Highway Safety Inspection, Assessment and Recording

## 1. Background and Objectives

The Royal Borough of Kensington and Chelsea (RBKC) has developed a Highway Safety Inspection (HSI) regime in accordance with the *Code of Practice for Highway Maintenance Management (July 2005) Roads Liaison Group, Well-maintained Highways*, (CoP) principally *Section 9, Inspection, Assessment and Recording*. The regime is set out within a practical and reasonable framework of risk assessment and inspection frequency, taking into account all users of the highway, including those who are most vulnerable.

The main objectives are:

- To locate and identify defects on the highway and where appropriate, adjacent to the highway.
- To assess the potential risks of damage and/or injury to highway users that may result from these defects.
- To ensure that appropriate measures are put in place to manage any risk.
- To ensure that these measures are effective in eliminating or minimising any risk.

In practice, this means making safe, signing, guarding and/or repairing any defect within defined time periods in order that the condition of the highway is what a reasonable person would expect to find.

## 2. RBKC Highway Network Hierarchy

Elements of the RBKC highway hierarchy are categorised into the classes shown in the table below. These classes match those shown in the CoP.

| CoP Category | CoP Type | RBKC Class | RBKC Description |
|---|---|---|---|
| Road 1 | Motorway | Not Applicable | Not Applicable in RBKC |
| Road 2 | Strategic Route | 2 | Principal roads which are the main signed traffic routes for through traffic. |
| Road 3a | Main Distributor | 3a | Other Principal and Borough classified roads providing links to TfL routes and neighbouring boroughs. |
| Road 3b | Secondary Distributor | 3b | Other classified Borough and some unclassified roads providing links between main roads and local roads with a high volume of traffic. |
| Road 4a | Link Road | 4a | Inter-connecting roads which link higher category roads. |
| Road 4b | Local Access Road | 4b | Roads serving residential areas. Cul-de-sacs and mews. |
| Footway 1a | Prestige Area | 1a | Prestige areas in the borough with high visual standards. |
| Footway 1 | Primary Walking Route | 1 | Main shopping and business areas, and main pedestrian routes to transport interchanges, museums and exhibition centres. |
| Footway 2 | Secondary Walking Route | 2 | Relatively high usage routes feeding primary walking routes or serving local shopping centres, schools and bus stops. |
| Footway 3 | Link Footway | 3 | Most footways serving residential areas and routes linking local access footways. |
| Footway 4 | Local Access Footway | 4 | Low usage footways such as short routes linking other low usage footways and cul-de-sacs. |
| Cycle Route A | Part of Carriageway | A | Mandatory or advisory cycle lane marked on the surface of a carriageway. |
| Cycle Route B | Remote from Carriageway | B | Mandatory or advisory cycle lane marked on the surface of a footway. |
| Cycle Route C | Cycle Trails | Not Applicable | Not Applicable in RBKC. |

## 3. RBKC Safety Inspection Frequencies

Safety Inspections Frequencies in RBKC are completed on Monthly, 3-Monthly and 6-Monthly cycles dependant on the RBKC highway element class (shown in the previous table). These inspection frequencies either meet or exceed those laid out in the CoP.

Under normal circumstances, the inspection regime is maintained on a calendar month cycle but factors outside the control of RBKC, for example adverse weather, special events, acts of terrorism or civil commotion, etc. could impact this.

| CoP Category | CoP Road Type | CoP Frequency | RBKC Frequency | RBKC Class |
|---|---|---|---|---|
| Road 2 | Strategic Route | 1 Month | 1 Month | 2 |
| Road 3a | Main Distributor | 1 Month | 1 Month | 3a |
| Road 3b | Secondary Distributor | 1 Month | 1 Month | 3b |
| Road 4a | Link Road | 3 Months | 3 Months | 4a |
| Road 4b | Local Access | 1 Year | 6 Months | 4b |
| Footway 1a | Prestige Area | 1 Month | 1 Month | 1a |
| Footway 1 | Primary Walking Route | 1 Month | 1 Month | 1 |
| Footway 2 | Secondary Walking Route | 3 Months | 3 Months | 2 |
| Footway 3 | Link Footway | 6 Months | 6 Months | 3 |
| Footway 4 | Local Access Footway | 1 Year | 6 Months | 4 |
| Cycle Route A | Part of Carriageway | As for Roads | As for Roads | A |
| Cycle Route B | Remote from Carriageway | 6 Months | As for Roads | B |

The rows highlighted above show where the RBKC inspection frequencies exceed those recommended by the CoP.

## 4. RBKC Defect Response Categories (Intervention Levels)

In section 9.4.18 of the CoP, defects are defined into two categories:

- Those that require prompt attention because they represent an immediate or imminent hazard.
- All other defects.

The CoP (9.4.19) goes on to say that the former should be addressed within 24 hours, whether this is a make-safe, temporary or permanent repair. No specific repair period is defined for the latter (9.4.20).

RBKC operate 3 levels of defect response category, Category 1, Category 2 and Category 3 (Cat 1, 2, 3). These have been set so that they either meet or exceed the levels laid out in Section 9 of the CoP. Further explanation follows:

Category 1

Cat 1 defects are those that present the highest risk of harm to the public. They are defects that require prompt attention because they represent an immediate or imminent hazard or there is risk of short-term structural deterioration.

**Response:** Correct/repair, guard, warn or make safe, including temporary repair, **within 2 hours**. Any non-permanent solution should be monitored daily until a permanent repair has been completed, normally within 28 days. This response level is effectively 'immediate' allowing time for the contractors to reach the location. An officer may be required to wait on site for their arrival should, if in his view, the defect be particularly dangerous.

Category 2

Cat 2 defects are those that present a risk of harm to the public as outlined in the CoP but where that risk is not immediate or dangerous. Generally, these will be any defect that falls within the CoP guidelines for carriageways (40mm) and footways (20mm). Note that the RBKC intervention levels exceed those laid out in the CoP. The CoP recommends above 20mm/40mm, whereas RBKC states 20mm/40mm or more. See below.

**Response:** Correct/repair, guard, warn or make safe, including temporary repair, **within 24 hours**. A temporary repair should be regularly monitored until a permanent repair has been completed, normally within 28 days. In situations where a temporary repair will not be resilient due to conditions such as weather, heavy traffic, etc., a permanent 24-hour repair job should be raised.

Category 3

Cat 3 defects are those that present minimal risk of harm to the public and where they are outside of the RBKC Cat 1 and 2 levels previously described, e.g. less than 20mm/40mm in depth. These are defects that in the view of the inspecting officer could deteriorate within the inspection cycle for that part of the highway, or where a simple, small repair would be cost-effective.
Alternatively, these defects could be of a minor or cosmetic nature that no immediate action is required or that in the view of the inspecting officer they will not deteriorate beyond Cat 3 status during the next inspection cycle. Under these circumstances, no information will be logged on the inspection record unless there is a requirement to monitor the particular situation throughout the next inspection cycle.

**Response:** Complete a permanent repair **within 28 days** or note the details in the inspection record that no immediate action is required.

Under normal circumstances, Cat 3 defects will be recorded but not acted upon in elements of the highway where scheduled maintenance is planned within the next inspection cycle.

In general, a single visit, permanent repair is preferred to rectify a defect. However, in some cases this will not be possible, particularly for carriageway repairs on Principal or busy roads. Therefore, an interim repair may be carried out and a permanent repair planned. In situations where an interim repair may not be resilient due to conditions such as weather, heavy traffic, etc. and could possibly fail within the next inspection period for that road, a permanent repair job should be raised.

## 5. Identification of Defects

This section sets out the various defects to be identified during a safety inspection. The defects are arranged in groups according to the element of the highway in which they occur. The list is not exhaustive; the inspector should record any defect which might create a hazard to users of the highway.

| Element | Defect |
|---|---|
| Carriageway | Potholes.<br>Excessive smoothness.<br>Loose material, including debris, spillages, contamination.<br>Regulatory markings faded and worn.<br>Ironwork missing, broken, tilted, sunken or projecting.<br>Displaced road studs.<br>Edge damage.<br>Unevenness due to rutting, humps, corrugations.<br>Surface cracking and breakup.<br>Blocked or damaged gullies. |
| Kerbing | Loose, tilted, damaged, projecting, including quadrant kerbs. |
| Footway | Pre-formed unit paving trip hazards, rocking or missing units.<br>Damaged bituminous surfaces.<br>Ironwork missing, broken, tilted, sunken or projecting.<br>Slippery or sticky surfaces.<br>Blocked or damaged footway gullies. |
| Cycle Way | For cycle ways on the carriageway, as 'Carriageway' above.<br>For cycle ways on the footway, as 'Footway' above. |
| Furniture | Damaged or hazardous road signs, electrical and non-electrical.<br>Damaged lamp columns.<br>Damaged bollards, electrical and non-electrical.<br>Damaged or hazardous parking equipment.<br>Damaged or vandalised Road Name Plates.<br>Damaged or vandalised statues.<br>Unlawful or inaccurate signs. |
| Trees and Vegetation | Root damage to footway and carriageway.<br>Damaged or overhanging highway trees.<br>Tree pit pedestrian trip hazards. |

| Element | Defect |
|---|---|
| Highway Structures | Bridge defects, where surface elements are exposed to public use. |
| Other Defects | Hazardous litter, waste, fly tipping.<br>Highway obstructions.<br>Damaged or hazardous RBKC benches, cycle loops.<br>Any other safety related item or issue. |
| 3rd party Defects | Damaged utility company equipment in both footway and carriageway.<br>Utility company work-in-progress.<br>Hazardous or inadequate utility company temporary reinstatements.<br>TfL equipment, traffic lights, TfL cycle racks, bus stops, etc.<br>TfL infrastructure on or near RBKC highway boundaries.<br>Private works impacting the highway, skips, scaffolds, hoardings, materials.<br>Any damage or danger from private forecourts, trees and vegetation, footway coal plates and coal plate stones, buildings, walls, fences, gates, barriers, etc.<br>Hazardous access hatches, footway skylights and smoke vents.<br>Hazardous 'A' boards, barriers and footway tables and seating. |
| No Action Required | Defects where no action is required. Example: Plant pots on the highway within a mews where there is no immediate danger to the public. |
| No Defects Found | Where no defects can be identified this is recorded in the Inspection Record. |

## 6. Defect Assessment and Severities

The tables below are to be used as a guide for the safety inspector in identifying defects which present a foreseeable risk to users of the highway. It is important to remember that these are minimum standards; there may well be occasions when it is deemed necessary to increase the response level to a defect dependant on its type, location and particular circumstances.

The three response categories (Cat 1, Cat 2, Cat 3) shown below are detailed in section 4 above.

The response category that a defect is to be allocated is based upon risk assessment which considers impact against probability (likelihood).
Vulnerable Areas are highway locations that have high volumes of vehicle or pedestrian traffic, locations near schools, hospitals, railway stations, conference centres, museums, busy shopping areas, etc. It can also include locations with narrow or restricted access or where there is a high interaction between pedestrians and vehicles.
Lower Risk Areas are all other highway locations.

| Risk Matrix | Anticipated Response Time | Anticipated Response Category | Impact | Probability | Risk Factor |
|---|---|---|---|---|---|
| **Footway** | | | | | |
| Vulnerable Areas >= 20mm | 2 Hour | Cat 1 | 4 | 4 | 16 |
| Lower Risk Areas >= 20mm | 24 Hour | Cat 2 | 3 | 4 | 12 |
| Vulnerable Areas < 20mm | 28 Day | Cat 3 | 2 | 2 | 4 |
| Lower Risk Areas < 20mm | NAR, Monitor | Cat 3 | 1 | 2 | 2 |
| **Carriageway** | | | | | |
| Vulnerable Areas >= 40mm | 2 Hour | Cat 1 | 4 | 4 | 16 |
| Lower Risk Areas >= 40mm | 24 Hour | Cat 2 | 3 | 4 | 12 |
| Vulnerable Areas < 40mm | 28 Day | Cat 3 | 2 | 2 | 4 |
| Lower Risk Areas < 40mm | NAR, Monitor | Cat 3 | 1 | 2 | 2 |

**Other Defects (e.g. Utility, Electrical, Signs, Trees, etc.)**

**Vulnerable Areas: Call in from site**

**Lower Risk Areas: Pass to relevant organisation/department within 24 hours**

## Risk Level

| | | Probability | | | |
|---|---|---|---|---|---|
| | | Very Low | Low | Medium | High |
| Impact | Negligible | 1 | 2 | 3 | 4 |
| | Low | 2 | 4 | 6 | 8 |
| | Noticeable | 3 | 6 | 9 | 12 |
| | High | 4 | 8 | 12 | 16 |

## Defect Category by Risk Level

| | |
|---|---|
| Safety Defect | Cat 1 |
| Safety Defect | Cat 2 |
| Minor and/or Cosmetic Defect | Cat 3 |
| Non Actionable Defect | Cat 3 or monitor, or programmed repair |

## 7. Recording Procedure, Record Keeping and Documentation

Purpose

- To produce all records in a consistent, clear and concise manner, demonstrating that RBKC has fulfilled its duty of care in completing safety inspections of its highway infrastructure at the defined frequencies.
- That all the necessary steps, actions and work were completed to ensure that the highway is safe.

Recording

Inspection details are logged in a DIMS (dimensions) book with a date, road name and description of all identified defects. Where no actionable defects can be found for a particular road, every effort should be made to record details of non-safety related items so that when the record is entered or examined, verification of the inspection completion date is auditable.

Inspection details are entered into one or more General Work Orders (WO) per road. Work Orders are dual purpose documents as they also act as Safety Inspection Records (IR). Therefore, even if no actionable defects are identified for a particular road, a WO/IR record still needs to be raised.

Record Keeping

The WO/IR records are held as individual Excel spreadsheets and stored in a directory hierarchy of Year, Month, Filename, and Number in the Highways shared area of the RBKC LAN.

Documentation

Further details of the day-to-day operational aspects of RBKC HSI are held in the controlled document **RBKC Highway Safety Inspection - User Guide**.

## 8. Health and Safety

Responsibilities

- It is the responsibility of the inspector to operate in a safe manner to himself, his colleagues and to members of the public.
- It is the responsibility of the Borough to provide relevant training and to equip the inspector for the task in hand.
- It is the responsibility of the inspector to attend or complete all prescribed training and to use the equipment provided by the Borough whilst completing the relevant tasks.

- It is the responsibility of the inspector to be familiar and comply with RBKC safety working practices. Details can be found on the RBKC Intranet under: - *KCnet -> Doing my job -> Health and safety information*.
- The 3rd party contractors used by RBKC for completing highway works are responsible for both the Health and Safety and risk assessment procedures of their own operatives.

Inspections

- All scheduled safety inspections are to be completed on foot. There are no 'driven' or 'ridden' scheduled safety inspections.

- Walked inspections will be completed by a lone operative in all but the most difficult of circumstances. Where an inspector requires assistance, this will be provided by another member of the maintenance team.

# 9 Version Control

| Version | Comment | Date | Author |
|---|---|---|---|
| Draft | Initial draft version | 12/5/17 | MEB |
| V1 | Version 1 | 15/5/17 | MEB |
| V2 | Punctuation and minor lay corrections | 19/5/17 | MEB |
| V3 | Layout changes to Risk Matrix tables | 31/5/17 | MEB |
| V4 | Formatting, ampersands removed and RBKC logo added | 20/06/17 | AM |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |