

2.1 Safety Inspections

2.1.1 If the *Employer* selects service 1 – Safety Inspections – cyclic activity - the *Contractor* is required under this contract to undertake safety inspections of all parts of the Affected Property (except tunnels), to employ a systematic approach to the identification and recording of defects, and a risk-based approach to dealing with them. If the *Employer* selects service 1 – Safety Inspections – reactive works – the *Contractor* will be required to carry out ad hoc safety inspections in response to concerns expressed by the *Contractor's* staff, the *Employer*, the Police or members of the public.

2.1.2 Safety inspections shall identify all defects likely to create danger or serious inconvenience to users of the Affected Property or the wider community.

Defects are identified in clause 2.1.5 and the level of response required to rectify defects is detailed in clause 2.1.11. Safety inspections shall be undertaken by suitably trained and accredited staff, typically holding City & Guilds 6033 – Unit 311 and being included in the national Register of Highway Inspectors.

2.1.3 Safety inspections shall be undertaken on foot at frequencies to reflect the characteristics of the particular element of the Affected Property and its use, and at times of day which enable the inspection to be carried out thoroughly and safely. However, on high speed Strategic Routes (50/ 60/ 70 mph), on roads where there is no footway, or roads where the carriageway is too wide to identify defects from the footway, safety inspections shall be carried out by two operatives in a slow-moving vehicle. Safety inspections carried out in this way shall, whenever possible, be carried out during off-peak hours.

2.1.4 If selected as a cyclic activity, the *Contractor* shall carry out safety inspections at the following frequencies:

10

Network feature Frequency

Carriageways High speed Strategic Route
(50/60/70 mph)

1 week

Other Strategic Route 1 month

Main Distributor Road 1 month

Secondary Distributor Road 1 month

Link Road 3 months

Local Access Road 6 months

Footways Prestige Walking Zone 1 week

Primary Walking Zone 1 month

Secondary Walking Zone 3 months

Link Footway 6 months

Local Access Footway 1 year

Cycling

Facilities

Category A: Part of

Carriageway

As for road

Category B: Not Part of

Carriageway

1 month

Category C: Cycle Route

through Open Space

1 year

2.1.4.1 Where network features intersect (e.g. at a zebra or a toucan crossing), the feature with the greatest frequency shall be applied.

2.1.4.2 There might be particular locations on the network where more frequent inspections than those set out in the above table are required, such as at accesses to schools, hospitals, etc or on routes which host special events or ceremonies. Any such requirement will be set out in the *Employer's Service Information*.

2.1.5 When carrying out a safety inspection, the following shall be classified as defects:

Carriageway

- A pothole 20mm or deeper over 100sqcm or more within 1.5m of the kerb or within a formally marked cycle lane
- A pothole 30mm or deeper over 100sqcm or more elsewhere
- Spalling of concrete 20mm or deeper over 400sqcm or more
- Crowning of 40mm or more over a 3m length
- A depression of 40mm or more within a 1m length or 25mm or more within a 300mm length
- Rutting of 40mm or more
- A gap or crack 20mm or wider, 40mm or deeper and 500mm or longer
- An oil or diesel spill over 1sqm
- Missing or defective anti-skid surfacing over 1sqm
- Standing water 10mm or deeper over 500mm in width adjacent to the kerb or 20mm or deeper over 1sqm or more elsewhere
- Debris, building materials, abandoned vehicles or other obstruction likely to create a hazard
- Inadequate signing or guarding of works

11

Pedestrian Crossing

- A trip of 20mm or more

Footway/Shared Path/Cycle Track

- A trip of 20mm or more
- A pothole 20mm or deeper over 100sqcm or more
- A rocking slab or block with 20mm or more movement
- A gap or crack 20mm or wider, 20mm or deeper and 200mm or longer
- Standing water 10mm or deeper over 1sqm or more
- Cellar or other access doors or vents likely to create a hazard
- Damaged, misaligned or defective street furniture likely to create a hazard
- Height clearance less than 2.5m to cycle path or cycle track below signs or overhanging trees or vegetation
- Height clearance less than 2.1m to footway below signs or overhanging trees or vegetation
- A tree base 20mm or more below footway level
- A damaged or defective tree grid likely to create a hazard
- Advertising, scaffolding, hoarding, building materials, vegetation or other obstruction likely to create a hazard
- Inadequate signing or guarding of works

Kerbing

- A unit dislodged by 50mm or more horizontally
- A unit sunk by 20mm or more compared to an adjacent unit
- A unit rocking with 20mm or more of movement
- A missing unit

Ironwork

- A broken or cracked cover likely to create a hazard
- A worn or polished cover likely to create a hazard
- A missing cover
- A rocking cover or frame likely to cause a hazard or noise nuisance
- Ironwork sunk or projecting by 20mm or more
- Fluid discharging and likely to create a health or safety hazard
- A missing gully grate
- A blocked gully likely to create a hazard
- A broken or cracked gully grate likely to create a hazard

Grass verge

- Rutting of 75mm or more
- Inadequate signing or guarding of works

Road Markings

- 30% or more missing, faded or worn over a 1m length

Traffic Signals, Lighting, Signs, Bollards, Street Name Plates

- A damaged, misaligned or defective item likely to create a hazard

12

- A missing item likely to create a hazard
- Obscured, dirty or faded items likely to create a hazard
- Exposed wiring
- An open or missing door protecting electrical apparatus
- A traffic signal lamp failure

Fencing, Safety Fencing and Barriers

- A damaged, misaligned or defective item likely to create a hazard
- A missing item likely to create a hazard

Trees and Vegetation

- Obstructing visibility of signs or sight lines
- Obstructing passage in use of the highway
- Dead, diseased or infected trees or branches

Highway Structures

- A damaged, misaligned, loose or defective item likely to create a hazard (eg expansion joint)
- Severe cracking or spalling of concrete
- Missing items or any evidence of tampering with security features
- Inadequate signing or guarding of works

Culverts

- An accumulation of rubbish, debris or any other material at the mouth of the culvert likely to create a flooding hazard

Pedestrian Subways

- Lighting damaged or not functioning
- Wall tiles missing or damaged
- A trip of 20mm or more
- A pothole 20mm or deeper over 100sqcm or more
- Damaged stair treads
- A gap or crack in the floor 20mm or wider, 20mm or deeper and

200mm or longer

- Standing water 10mm or deeper over 1sqm or more
- A handrail loose or missing.

2.1.6 In addition to the above, the inspector shall record anything else which is deemed to be creating, or is likely to create, a hazard to users of the Affected Property. The inspector shall also identify and record any requirement for reactive works associated with, for example, graffiti, animal carcasses, fly tipping or street lights burning during the day.

2.1.7 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
13

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.

2.1.8 All defects identified from the list at clause 2.1.5 above shall be assessed for likely risk. All risks identified through this process shall be evaluated in terms of their significance, which means assessing the likely impact should the risk occur, and the probability of it actually happening.

2.1.9 The impact of a risk occurring shall be quantified on a scale of 1 to 4, assessed as follows:

- 1 little or negligible impact;
- 2 minor or low impact;
- 3 moderate impact;
- 4 major, high or serious impact.

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.

2.1.10 The probability of a risk occurring shall be quantified on a scale of 1 to 5, assessed as follows:

- 1 very low probability;
- 2 low probability;
- 3 medium probability;
- 4 high probability;
- 5 very high probability.

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.

2.1.11 The risk factor for a particular risk is the product of the risk impact and the risk probability and is therefore in the range of 1 to 20. It is this factor which shall identify the overall seriousness of the risk and consequently the speed of response to remedy the defect. Accordingly, the category of the defect and the response time for dealing with it shall be determined by correlation with the risk factor, as follows:

Risk factor Category of defect Response

16 or 20 Cat 1(ECO*) Attend and take appropriate action within 1 hour (for defects affecting the Strategic Route Network) or within 2 hours (for all other parts of the Affected Property)

14

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

* Emergency Call Out

2.1.12 If the *Employer* selects service 1 – Safety Inspections – cyclic activity – the *Contractor* shall operate an electronic management system for recording and reporting on all safety inspections carried out, all defects found, and details of all remedial actions taken. Such a system shall also be used to record incidents and defects reported to the *Contractor* from other sources, including the *Employer*, the Police and the public. For further details see clause 162AR – Electronic Management Systems and Series 3200 Emergency Call Out.