



Communities Group

COUNTY HIGHWAYS



Highway Maintenance Safety Inspections Manual



County Highways
Old Budbrooke Road
WARWICK

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HIGHWAY MAINTENANCE SAFETY INSPECTIONS

Document Record

Date	Amendment Details (including page no.)	Initials
May 2003	Issue No.1	MDA
November 2007	Maintenance Manager/Map Capture defect priority codes added (pages 4 to 12)	RPP
February 2008	Speed, direction and walking of adjacent areas added (page 1 paragraph 1)	RPP
October 2009 Issue 4	Page 3 INTRODUCTION paragraph 2. Amendment to inspection direction and speed.	MDA
January 2014 Issue 5	Page 3 INTRODUCTION Clarification of Inspection frequencies, and other information. Page 6 CARRIAGEWAY Amendment to definitive of carriageway defects.	MDA
January 2015 Issue 6	Page 3 INTRODUCTION. In service review and additional general information. Pages 6 to 9. In service review of defect thresholds and text.	MDA
January 2015 Issue 6a	Page 6 CARRIAGEWAY VERGE Reversion of Category 1 Defect threshold.	MDA

HIGHWAY MAINTENANCE SAFETY INSPECTIONS

1.0 INTRODUCTION.

1.1.1 Safety Inspections are carried out on the Principal, Non-Principal and Unclassified Road Network as part of Warwickshire County Council's obligations under Section 41 of the Highways Act 1980 which places a statutory duty upon the County Council as the Highway Authority to maintain a highway at public expense. Neglecting or failing in this duty can lead to Claims against the County Council for damages resulting from that neglect or failure.

1.1.2 Under Section 58 of the same Act, the Highway Authority can use a "**Special Defence**" in respect of action against it for damages for non-repair of the highway, if it can prove that it has taken such care as was reasonable. Part of the defence rests upon:

"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".

This is where Highway Authorities have to show that they carry out highway safety inspections in accordance with their own policies and national guidance. Highway inspection reports are part of the evidence used to show that the highway authority has acted reasonably.

Section 58 of the Highways Act also says that

"the court shall in particular have regard to

- 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.*

Case history demonstrates that the Highway Authority must also be recording all customer reports of highway defects, however not all defects which the authority becomes aware of by inspection or customer report need to be repaired. Highways Management System (HMS) records may also be used as evidence to show that the Highway Authority has acted reasonably within the budgets available.

1.2 Safety Inspections are undertaken by the County Council to identify where possible those defects which are, or are likely to create, an immediate danger to the public and therefore require immediate or urgent attention, and to remove them. The Inspections are carried out on behalf of the County Council (the Client) as part of the Term Maintenance Contract currently held by Balfour Beatty, using accredited staff.

1.3 Where defects meeting the criteria in this document are observed, everything possible will be done there and then to make them safe, and if possible to undertake a permanent remedy to the defect.

1.4 Inspections shall normally be mobile inspections carried out from a slow moving vehicle, with the occasional need to proceed on foot, at frequencies which reflect the importance of a particular road. The inspections will be carried out by a two-man team, an Inspector and a driver.

1.5 Each Inspection shall be carried out in one direction on each road section. Day to day operational considerations will determine in which direction the inspection is made. Inspections shall be carried out at a speed of 20mph or less, appropriate to the location and the requirement to ensure accurate observation and recording of defects. Where adjacent areas are not visible from the inspection vehicle, the inspector shall carry out a walked Inspection of those areas.

1.6 The County Council has set its own standards for the frequency of its highway safety inspections, taking into account the non-mandatory guidelines in the latest Code of Practice for Maintenance Management "*Well Maintained Highways*" (July 2005). Inspections are arranged to be carried out on a route basis for the A and B roads and on an area basis for the remainder of the network to be inspected.

1.7 The frequency of inspection will be:-

1.7.1 For carriageways

Road Class	Definition	Inspection frequency
A Roads	Principal Road	8 times a year
B Roads	Non Principal Road	4 times a year
C Roads	Non Principal Road	Twice a year
D Roads	Unclassified Road	At least once a year

1.7.2 A programme of inspections is drawn up annually based upon the above frequencies. Some unclassified roads (D Roads) may be inspected at greater frequencies based upon in-service operational needs. These routes may vary from time to time but will always meet the above minimum frequency.

1.7.3 For footways and pedestrian areas, the frequency of inspection will be determined from whether the feature is inspected as part of a driven inspection or as part of a dedicated walked inspection. The frequency as part of a driven inspection will be as above for carriageways and will include where lengths are inspected on foot as part of a driven inspection. The frequency for a dedicated walked inspection will be twelve times a year.

1.7.4 Network other than the above Road Classes will be subject to inspection in response to user complaints, as providing similar planned safety inspections would exceed resources currently available.

1.8 For practicability, a schedule of inspections is laid down as to which road sections will be inspected each week. This weekly schedule builds into a cyclical annual programme, and provides for inspections to be spaced out as equally as possible throughout the year at the stated frequencies. These defined inspection frequencies should be maintained wherever possible; however some flexibility is permitted.

1.9 It is recognised that due to the variable nature of encountering defects to be repaired, severe weather conditions causing delays, and other unforeseen occurrences, completion of a week's schedule of inspections may at times not be possible within the required weekly timescale and delays will occur.

1.9.1 When adverse weather and resource availability means the programme cannot be fully adhered to, individual inspections will be permitted up to five working days earlier than a programmed week and up to five working days later than the planned week.

1.9.2 Any delays to the scheduled programme of inspection will be eliminated within two weeks. For monitoring purposes, any delays will be measured from the expected weekly survey dates in each annual programme. Similarly, where it is known that future delays could arise, e.g. holiday periods or training; the inspecting of routes ahead of programme will be possible up to a maximum of one week in advance, following prior agreement with the Highway Information Manager.

1.10 Two levels of safety defect will be recorded. The definitions of Category 1 or Category 2 defects are dealt with under each Defect heading later in this document.

1.10.1 Category 1 Defects.

These are defects which if reasonably practicable will be normally made safe by the Inspection Team at the time of inspection. Once made safe, the urgency of repair diminishes, and the defect can be recorded as Category 2. If the defect cannot be made safe, a temporary repair to make safe, or a permanent repair should be carried out as soon as possible within 24 hours.

1.10.2 Category 2 Defects

These are defects that, if no action were taken, could become Category 1 defects before the next safety inspection is carried out on the same road section. If possible, these defects will be repaired by the Inspection team. If a full repair is not possible by the

Inspection Team, either immediately or upon a return visit, the defect will be made safe and further action is to record the defect. The defect should then be repaired within 28 days.

1.10.3 In addition, there will be rare occasions when defects are observed that are of an emergency nature, which cannot be dealt with immediately or left unattended. These will be reported direct to the Area Manager, to instigate an immediate response. The Inspection Team is to take advice from the Area Manager as to any action to take depending upon the nature of the emergency.

1.11 The safety inspection will cover the following highway features

1. Carriageway running surface
2. Carriageway edge / verge
3. Footways, Cycleways and Pedestrian Areas adjacent to the carriageway
4. Kerbing
5. Ironwork
6. Drainage (Flooding)
7. Road Signs
8. Street lighting, Illuminated Bollards and Signs (including Traffic Lights)
9. Other

1.12 The following are examples of items that are considered whilst carrying out a routine safety inspection:

- Potholes, crack or gaps in the surface.
- Missing or badly worn road markings and road studs.
- Blocked drains.
- Standing water, water discharging onto or flowing across the road.
- Missing or broken ironwork (manhole covers etc.)
- Damaged safety fencing, parapet fencing, handrails and other barriers.
- Damaged, defective, displaced or missing traffic signs, signals or lighting columns.
- Condition of highway verges and trees, including obvious dead trees
- Sight lines obscured by trees, unauthorised signing and other features.
- Debris, spillage or contamination
- Overhead wires in a dangerous condition
- Vandalism, the results of which are likely to endanger the public
- Abrupt level differences in footways, cycleways, carriageways
- Severely damaged, broken or displaced kerbs
- Edge deterioration of the carriageway
- Damaged, defective, displaced or missing traffic signs, signals or lighting columns
- Bollards and street furniture defects
- Damaged safety fencing, parapet fencing, handrail and other barriers
- Overhanging vegetation causing obstruction to pedestrian or vehicular traffic

The above list is not exhaustive and other items that are observed on the highway to be unsafe will also be considered while carrying out the inspection.

1.13 Actions by the Safety Team

1.13.1 For all of the above defects the first objective of the Safety Inspection is to make the defect as safe as possible, and then make as full repair as possible. This can be either immediately, or if the defect is made temporarily safe, can be pooled with other defects and repaired at a later date, but within the timescale for repairing defects.

1.13.2 In all cases the Safety Team will record the defect in the state it was initially found, as either Category 1 or 2, and take photograph(s) of the defect. The Safety Team will then make the defect safe or make a full repair, and take an "after" photograph for records. If full repair is not possible, the defect will be recorded as needing further repair activity.

1.13.3 Where a number of similar defects are found e.g. potholes, it may be more efficient to firstly record all of the defects on a particular road or group of roads, and return later to complete a number of repairs at the same time.

2.0 Carriageway Running Surface defects

2.1 Category 1 Defect.

Pothole anywhere within the carriageway greater than 100mm in depth.

Action by Safety Team.

Make safe with temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

2.2 Category 2 Defect.

Pothole anywhere within the carriageway between 50mm and 100mm in depth.

Action by Safety Team.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

3.0 Carriageway Edge / Verge defects

3.1 Category 1 Defect.

On unkerbed roads, a negative vertical face at the edge of the carriageway greater than 200mm in depth.

*(Note. Defects to the **structure** of the carriageway edge will be recorded under '2.0 Carriageway Running Surface defects' above.)*

Action by Safety Team.

Make safe with temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

4.0 Footways, Cycleways and Pedestrian Areas

4.1 Where a walked inspection is carried out

Category 1 defects

- (i) a missing slab / block / pavior anywhere within the footway, cycleway or pedestrian area.
- (ii) Loose or rocking slabs, or a trip or pothole anywhere within the footway resulting in a difference in level of 20mm or greater.

Note. For the purposes of this defect category, differences in levels adjacent to kerbing will also be included as footway, cycleway or pedestrian area defects.

Action by Safety Team.

Make safe with temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

4.2 Where a driven inspection is carried out

Category 1 defects

- (i) a missing slab / block / pavior anywhere within the footway, cycleway or pedestrian area.
- (ii) a pothole anywhere within the footway, cycleway or pedestrian area, greater than 40mm in depth

Note. For the purposes of this defect category, differences in levels adjacent to kerbing will also be included as footway, cycleway or pedestrian area defects.

Action by Safety Team.

Make safe with temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

5.0 Kerbing

5.1 Category 1 Defects

- (i) Where kerbs have been displaced and are obstructing the carriageway or footway, or where they are so loose that they might fall onto the carriageway or footway;
- (ii) Where kerbs are missing or damaged so that they are unable to fulfil their purpose.

Note. Where kerbs are adjacent to footways, differences in horizontal levels between kerbing and footway shall be recorded as Footway, Cycleway or Pedestrian Area defects.

Action by Safety Team.

Make safe by removing any obstruction and if needed make a temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

6.0 Ironwork

6.1 Category 1 Defects.

- (i) Missing or broken gully grate, manhole cover or other service cover in carriageway, footway, cycleway pedestrian area or regularly maintained verge.
- (ii) On driven inspections, any ironwork presenting a vertical face greater than 50mm in carriageway or 40mm in footway, cycleway or pedestrian area.
- (iii) On walked inspections, any ironwork presenting a vertical face greater than 50mm in carriageway or 20mm in footway, cycleway or pedestrian area

Action by Safety Team.

Make safe by removing any obstruction and if needed make a temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

6.2 Category 2 Defects.

- (i) Any ironwork presenting a positive vertical face greater than 25mm in carriageway.
- (ii) Any manhole cover or services cover that requires resetting.

Action by Safety Team.

Record as a Category 2 defect for inclusion in a future permanent repair programme.

Some ironwork in the highway belongs to private Utility companies and as such is not primarily the responsibility of the Highway Authority. In cases where defects to Utility apparatus are observed, the Utility concerned shall be given every opportunity to make a permanent repair. The Safety Team shall record the defect as either category 1 or 2 according to the County Council criteria above, take photograph(s) as appropriate, if possible make the defect safe, and forward the information to the Streetworks team tel. 01926 414018, to liaise with the relevant Utility Company. If the ownership of a particular item of apparatus is unknown, any defect will be similarly recorded, and forwarded to the Streetworks team to establish ownership.

7. Drainage (Flooding)

7.1 Category 1 Defect.

Where flooding or standing water is observed on the highway likely to cause danger to the road user.

Action by Safety Team.

Make safe by removing any obstruction to alleviate standing water on the highway or install warning signs.

Record as a Category 2 defect for inclusion in a future repair programme.

If a temporary repair or removal of the obstruction is not possible so as to leave safe, report as a Category 1 defect.

8. Road Signs (including non-illuminated bollards)

8.1 Category 1 Defects.

(i) Where any sign or bollard including supporting post or fixing, that is damaged, in a state of collapse or an obstruction, to the extent that it is a physical danger to the road user.

(ii) Where any STOP sign is missing or obscured.

Action by Safety Team.

Make safe by removing any obstruction and if possible make a temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme, except for missing or damaged STOP signs in which case always record as category 1 defect

If a temporary repair is not possible so as to leave safe, report as a Category 1 defect.

8.2 Category 2 Defect.

Where signs are observed that have been vandalised or damaged by accident but do not present an immediate danger to the travelling public.

Action by Safety Team.

Ensure the installation is safe and record as a Category 2 defect for inclusion in a future permanent repair programme.

9. Apparatus connected to an electricity supply

9.1 For defects to any electrical apparatus (detailed in the following paragraphs), the Safety Team is to report the defect directly to the relevant Group. Only if possible without endangering self or others, make safe by removing any obstruction or protecting.

Safety Inspectors must not attempt to rectify any defect which involves electrical wiring.

10. Street Lighting Units, Illuminated Bollards and Illuminated Signs.

10.1 Category 1 Defect.

Where a street light, bollard or sign is damaged to the extent that it is a physical danger to the road user either by exposed wiring (whether determined to be live or not), broken lamps etc.

Action by Safety Team.

If possible make safe* by removing any obstruction, or protecting.

Report as a Category 1 defect to the Street Lighting team Call Desk on 01926 736548 or 01926 736546. All apparatus has an individual identification number which should be quoted. Record that the defect has been reported.

** Safety Inspectors will not always have the necessary qualifications to handle live electricity installations. Such defects will only be made safe by the Safety Inspector if there is no danger to themselves or others from any live electricity or any other hazard.*

11. Permanent Traffic Signals

11.1 Category 1 Defects.

- (i) Where permanent traffic signals are observed to be not working, either completely or individual lamps.
- (ii) Where a traffic signal is physically damaged or vandalised

Action by Safety Team.

If possible make safe* by removing any obstruction, or protecting.

Report the defect and location to Traffic Group on 01926 412810 Record that the defect has been reported.

** Safety Inspectors will not always have the necessary qualifications to handle live electricity installations. Such defects will only be made safe by the Safety Inspector if there is no danger to themselves or others from any live electricity or any other hazard.*

12. Temporary Traffic Signals (at roadworks etc.)

12.1 Category 1 Defects.

- (i) Where temporary traffic signals are observed to be not working, either completely or individual lamps.
- (ii) Where a traffic signal is physically damaged or vandalised

Action by Safety Team.

If possible make safe* by removing any obstruction, or protecting.

Report defect and location to the Emergency telephone number displayed at the roadworks site. Record that defect has been reported.

** Safety Inspectors will not always have the necessary qualifications to handle live electricity installations. Such defects will only be made safe by the Safety Inspector if there is no danger to themselves or others from any live electricity or any other hazard.*

13. Other

13.1 Category 1 Defect.

Where during the course of an inspection, any other incident, activity or defect is observed likely to cause danger to the highway user.

Such defects will include but not be limited to damaged street furniture, crash barriers, cattle grids; fallen trees, trees in a precarious position, objects fallen from vehicles, fuel spillages. Refer to paragraph 1.12 for a more detailed list

Action by Safety Team.

Make safe by removing any obstruction and if possible make a temporary repair.

Record as a Category 2 defect for inclusion in a future permanent repair programme. If it is not possible or safe to take remedial action, report as a Category 1 defect.