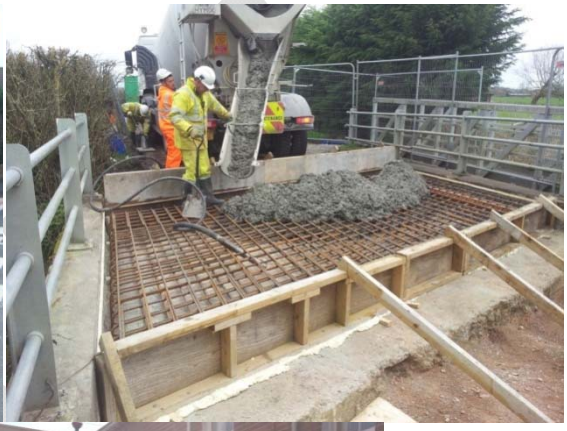
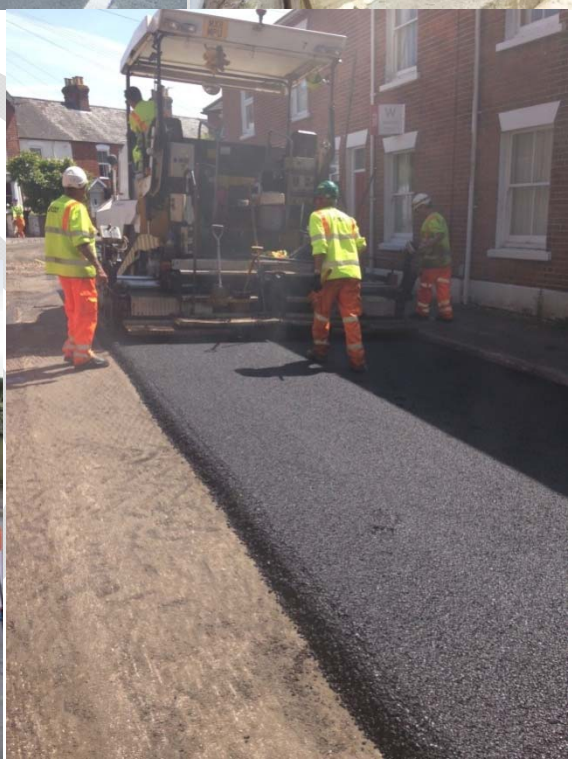
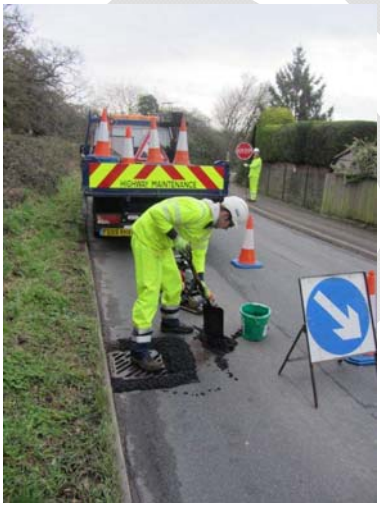
APPENDIX 1

Wiltshire Highways Safety Inspection Manual







September 2018

Wiltshire Council
Where everybody matters

Wiltshire Highway Safety Inspection Manual

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Wiltshire Highway Safety Inspection Manual

Introduction

Legal duties

In complying with its duty to maintain the highway, as outlined within Section 41 of the Highways Act 1980 and for the purposes of Section 58, which provides for special defence, the Council undertakes inspections of the highway incorporating the carriageway, footway, grass verge and pathways upon which the public have a right of access and which are maintained at public expense.

Section 41 of the Highways Act 1980 imposes a duty on the Council, as Highway Authority, to maintain those roads, footways and cycle tracks that are ‘highways maintainable at public expense’.

Section 58 of the Highways Act 1980 states that a statutory defence against third party claims is provided where the Highway Authority can establish that reasonable care has been taken to ‘secure that the part of the highway to which the action relates’ to a level commensurate with the volume of ordinary traffic such that it ‘was not dangerous to traffic’.

Section 130 of the Highways Act 1980 places a general duty on the Highway Authority to ‘assert and protect the rights of the public’ in their lawful use of the highway.

Section 81 of the New Roads and Street Works Act 1991 (NRSWA) places duties on Utility Companies. Concurrent with a highway safety inspection, any item of statutory undertaker apparatus or any utility reinstatement under guarantee, which the highways officer considers defective in accordance with the guidance in the Wiltshire Highway Safety Inspection Manual, will be recorded and reported to the appropriate utility company.

If the utility apparatus / reinstatement is found to be outside its tolerances (as specified in the NRSWA: Street Works (Reinstatement) Regulations) due to settlement, plucking out, heave or other reasons, and it exceeds the category one criteria, any costs incurred in making safe, and/or repair, will be recovered from the undertaker. Notice will normally be served on the undertaker to respond to a category one defect within two hours; however, if such a response is not forthcoming then the highway authority will respond and recover its costs. All costs will be charged in accordance with the Street Works (Recovery of Costs) (England) Regulations 2002.

Other defects associated with statutory undertaker apparatus/ reinstatements (i.e. outside the tolerances of Street Works (Reinstatement) Regulations 1992 but not a category one safety defect) may still require reporting to the appropriate utility

company by serving of a notice under Section 81 of the New Roads and Street Works Act 1991.

Purpose of this document

This document describes Wiltshire Council's policy and procedures relating to highway safety inspections. Those carrying out highway safety inspections, or managing the process, will refer to this document. The document sets out consistent investigatory levels to be applied across the highway network.

Highway safety inspections will be undertaken using the investigatory levels and defect definitions and frequencies given in this document.

The manual has been prepared to meet the requirements of Well Managed Highway Infrastructure, taking into account best practice and knowledge of other highway authorities as well as the Council's own staff.

This is a controlled document and issue records, including updates, are maintained to ensure the current version is being used at all times.

Purpose of safety inspections

The Council's Highways Asset Management Policy was adopted in May 2015 and is:

> *Wiltshire Council is committed to adopting the principles of asset management, and will take a long term view when making maintenance and investment decisions. The asset management approach will deliver value for money and maximise the benefits for future prosperity by ensuring the right investment decisions are made. It will assist in targeting resources and managing risks associated with the statutory duties to maintain the highway infrastructure.*

Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community. Such defects include those that will require urgent attention (usually by the end of the next day) as well as those where the locations and sizes are such that longer periods of response would be acceptable.

The Highway safety inspection process also demonstrates that there is a structured inspection regime, which can provide evidence for the Highway Authority to defend claims.

Health and safety issues

Introduction

Highway safety inspections require the recording of defects that are potentially hazardous to road users, but not at the expense of the inspectors' own safety or that of others using the highway.

If any staff consider that these procedures do not provide sufficient protection at a specific location they should bring the matter to the attention of the local highways manager who will decide the appropriate action.

The following general guidelines must be followed:

Safety inspections from a moving vehicle (driven)

- Highway safety inspections should be avoided during the hours of darkness/dusk or under conditions of poor visibility, including snow, fog, or heavy rain.
- A roof mounted flashing light bar will be provided for use on all inspection vehicles.
- The vehicle must have clearly visible reflective markings, including a sign reading HIGHWAY MAINTENANCE affixed to the rear of the vehicle.
- High visibility jackets to ISO 20471:2013 must be worn whenever inspectors alight from the vehicle.
- When necessary to stop, it is preferable to position the vehicle off the carriageway. If this cannot be achieved, then there should be clear visibility in both directions, the beacon should be switched on and moving vehicles should not be forced to cross continuous white lining. Where the above requirements cannot be met, then advance signing must be put in position.
- When conducting part of the inspection on foot in the carriageway, or on a verge closer than one meter to the carriageway, then adequate signing should be provided. For short duration stops the placing of signs may be more hazardous than conducting the inspection. Each location should be assessed and if it is considered that the placing of signs is hazardous the location should be brought to the attention of the local highways manager.
- When conducting inspections from a moving vehicle this will be a two-person operation with the passenger carrying out the survey and recording the detail.

Safety inspections on foot (walked)

- High visibility jackets to ISO 20471:2013 must be worn.
- Surveys should be conducted from footways or verges where possible to minimize time walking in the carriageway.
- Periods of high pedestrian/traffic flows should be avoided where possible.

Reactive inspections following reports from the public and others

- Reports from the public, other organisations, council and contractors staff may result in additional inspections at specific locations.
- Reactive inspections should be undertaken from footways or verges. If reactive inspections are undertaken from a moving vehicle it should be a two-person operation as described above for driven inspections.
- The inspections should be carried out in accordance with the investigatory levels described in this document.

Network hierarchy

Wiltshire Council has a defined hierarchy of roads based on their strategic importance, traffic flow and other local considerations. The road categories adopted for the hierarchy have been agreed between the South West Highways Alliance (SWHA) members to help achieve a common hierarchy across the region. The SWHA comprises all of the local highway authorities in the south west and has a project board and a series of specialist sub-groups to reflect the different aspects of highway maintenance. The road hierarchy was developed by the South West Highways Asset Managers Group in response to the introduction of the 'Well Managed Highway Infrastructure' Code of Practice.

Road hierarchy

The SWHA Road Hierarchy is summarised as:

Road type	Carriageway hierarchy
2	Strategic route
3	Main distributor
4	Secondary distributor
5	Link road
6	Local link road
7	Local access road
8	Minor road
9	Lanes
10	Green lanes and tracks
11	Disused tracks

The road type 1 is used only for motorways which do not form part of the local road network managed by Wiltshire Council.

Footway and cycleway hierarchy

Wiltshire Council has classified the county footways and cycle-ways as follows:

Footway type	Description
F1	Footways and roads in main shopping areas and town centres with high pedestrian usage
F2	Other urban areas, rural footways, surfaced 'link' footpaths, and shared pedestrian/vehicle areas.

Cycle-way type	Description
C1	Part of carriageway
C2	Remote from carriageway

Safety inspections

Safety inspections record all defects classified as a safety hazard in accordance with the details set out in this manual.

In most cases, the investigatory level is defined by physical dimensions. Whilst it is not anticipated that every potential defect is measured, measurement should be used, if in doubt, to determine a suitable priority and corresponding repair time. Measurement of defects should be made by using a straight edge and established datum points to determine a reference line from which the defect can be measured.

The frequency of safety inspections and time to repair a defect will depend on the road type, taking into account the volume of traffic, including vehicles, pedestrians and cyclists.

Safety inspection frequencies

The frequency of safety inspections for carriageways is:

Road type	Carriageway hierarchy	Inspection frequency
2	Strategic route	Monthly
3	Main distributor	Monthly
4	Secondary distributor	Monthly
5	Link road	Three monthly
6	Local link road	Three monthly
7	Local access road	Annually
8	Minor road	Annually
9	Lanes	Annually
10	Green lanes and tracks	Respond to reports
11	Disused tracks	Respond to reports

The frequency of safety inspections for footways is:

Footway type	Footway description	Inspection type and frequency
F1	Main shopping areas and roads with identified high pedestrian usage	Monthly walked or cycled
F2	Other urban areas, rural areas, 'linked' footways, and shared pedestrian/vehicle areas.	Annually walked, cycled or driven
Other footpaths	Rights of way subject to separate procedure	-

On carriageways in busy shopping and urban areas, a monthly walked inspection is carried out.

The frequency of safety inspections for cycleways is:

Cycle-way type	Cycle-way hierarchy	Inspection type and frequency
C1	Part of carriageway	As for road.
C2	Remote from carriageway	Annually walked or cycled

Reports from the public, other organisations, Council staff and contractors may result in additional inspections of carriageways, footways and other highway assets at specific locations. Such inspections should be carried out in accordance with the investigatory levels described in this document.

Safety inspection tolerances

Planned safety inspections shall be carried out at the frequencies shown above and within the following tolerances:

Frequency of inspection	1 month	3 months	6 months	12 months
Tolerance	+/- 5 days	+/- 7 days	+/- 20 days	+/- 30 days
Maximum period between inspections	36 days	100 days	200 days	400 days

During periods of extreme weather and in exceptional circumstances it may not be possible to meet the required frequency of inspection. The normal inspection regime should be introduced as soon as possible afterwards.

Defect priorities

Some defects need to be treated more urgently than others. The inspectors will allocate one of the following priorities to each defect in accordance with the defect codes described in this manual:

Priority	Description
P1	Repair or provide signing and guarding by 23:59 on the next day.
P2	Repair by 23:59 of the 14th day
P3	Repair by 23:59 of the 28th day
P4	Repair by 23:59 of the 60th day
P5	Defects referred to the local highways manager/highway engineer/head of service for further consideration and logged in HIAMS

During times of severe weather including snow, flooding and high winds, it may not be possible to meet all of the response times, and the duty engineer will prioritise resources as considered appropriate on operational and safety grounds.

Other factors

Many highways have been dedicated and adopted with features or a layout that would not be acceptable in current highway design. This might include steps or cellar openings, or steps which are part of the fabric of the building adjacent to the highway, natural stone surfaces, granite setts, raised footways and drainage arrangements that present potential trip situations in excess of the normal intervention levels. These should not be recorded as a defect, as in law the highway has been adopted with these encumbrances and the public must take appropriate care.

Data requirements

The defects identified during driven and walked inspections are recorded using map based computer software which has Global Positioning System (GPS) functionality, or manually recorded on paper and subsequently entered into the system.

The information recorded in connection with a safety defect comprises:

- Unique road section number

- Inspector's initials or identification
- Second inspector's initials where appropriate
- Weather conditions
- Location
- Priority (of defect)
- Any special instructions (size etc)
- Defect type
- Area (defect attribute)
- Defect description
- X co-ordinate (from GPS)
- Y co-ordinate (from GPS)
- Date inspected (with time)
- Repair description
- Treatment (repair suggested by inspector)

Data processing

The defect information will be held in the Council's Highways Infrastructure Asset Management System (HIAMS). An order will be issued to the contractor through this system where appropriate. In some cases an urgent request may have to be made to the contractor by telephone or email with the asset data updated in HIAMS afterwards. Once the contractor has repaired the defect, the repair date and time are sent back to the system and recorded against the defect thus completing the record.

A record of inspection is kept for each road section on the network even if no defects are found on that particular road section during that inspection.

Other highway inspections

The following highway maintenance and construction functions are outside the scope of this document:

- Winter maintenance
- Highway subject to developers agreement (Section 38 and Section 278 agreements)
- Major maintenance and construction sites
- Statutory undertakers works (NRSWA 1990 and TMA 2005)
- Rights of way inspections and maintenance

Inspector training

To ensure the consistency of defect recording, regular in-house or external training will be carried out with the relevant staff in the use and understanding of the Wiltshire Highways Safety Inspection Manual. Additional training will be given to staff who fail to achieve the necessary standard.

Inspection activities, defect codes and priorities

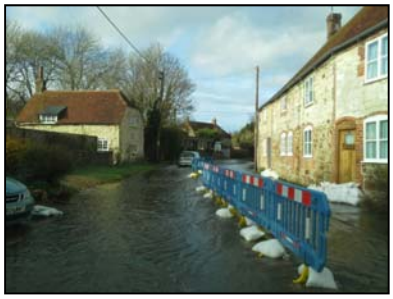
Activity	Defect code	Defect code meaning
Emergency obstructions or hazards (HO)	SUBS FLOD STRU OTHR DEBR OBSV	Major subsidence Major flooding Dangerous structure near highway Other emergency highway issue Debris in traffic lane/roadside Observation comment
Carriageways, (including cycleways forming part of the carriageway) (CW)	POTH ORUN DEPR	Pothole Verge over-run Carriageway depression
Covers, gratings, frames & boxes (drainage structures) (DC)	IBCK MISS IDLV LEVE	Cracked or broken frame/cover Missing cover Difference in level with road (below) Difference in level with road (above)
Road markings (CL)	WEAR	Worn road markings
Kerbs, edging & pre-formed channels (kerbed footways) (CK)	EVPJ DAMG MISS	Vertical projection Damaged kerb (footway edge) Missing kerb
Footways (including cycleways remote from a carriageway) (FW)	POTH SLPF MACK DEPR OTHR	Pothole in footway or cycleway Trip, slab profile/rocking slab Cracks and gaps Depression in footway Other footway defect
Signs (SN)	ACCD COND DIRT OBSG MISS	Accident damaged sign General sign condition Dirty sign Obscured sign Missing sign
Fences, walls & barriers (SB)	DAMM	Damaged safety fence/pedestrian guardrail/wall
Street furniture (SF)	DAST BRGL LIGH	Damaged bus shelter Broken pane(s) glass Faulty lighting/electrics

Emergency obstructions or hazards (HO)

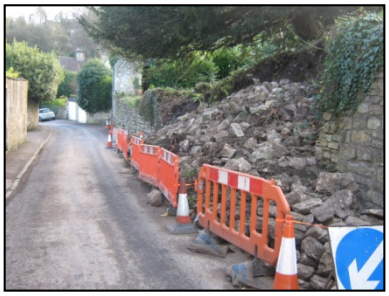
Major subsidence, flooding, damaged structures and other obstructions (SUBS, FLOD, STRU, OTHR, OBSV, DEBR)

Road type	Defect description	Priority
All road types	Major subsidence, sink hole or land slip likely to cause a serious hazard to road users (SUBS).	P1
All road types	Major flooding likely to cause a serious hazard to road users (FLOD).	P1
All road types	Major structural damage or failure likely to cause a serious hazard to road users (STRU).	P1
All road types	Other hazards, damage or failure likely to cause a serious hazard to road users, including damaged street lighting, signs or unsafe trees (OTHR).	P1
All road types	Debris or spillage in the carriageway, including tree limbs, stones, loose cats-eyes, diesel or oil spillage that is likely to cause a hazard (DEBR).	P1

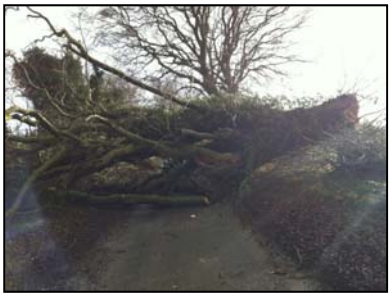
Emergency obstructions or hazards (HO)



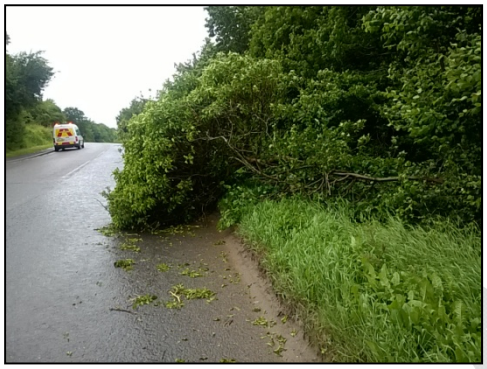
Flooding (FLOD)



Structural failure (STRU)

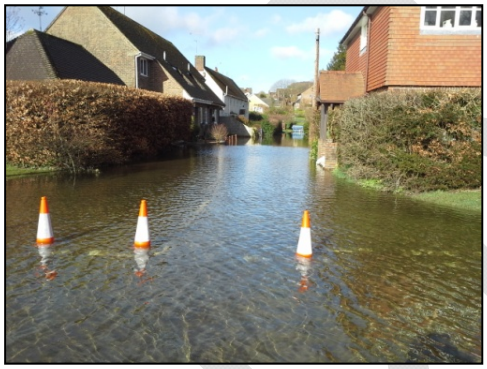


Fallen tree (OTHR)

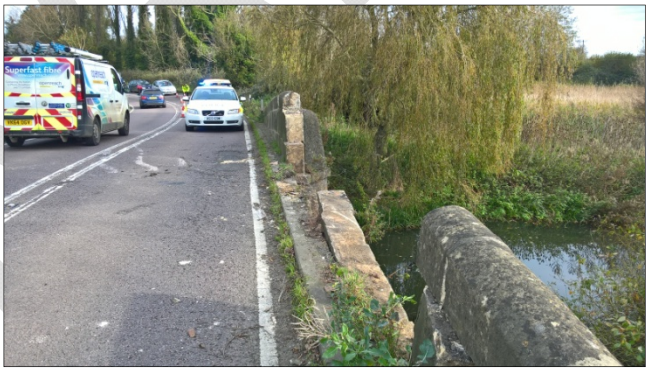


Fallen tree (OTHR)

Surface water and river flooding (FLOD)

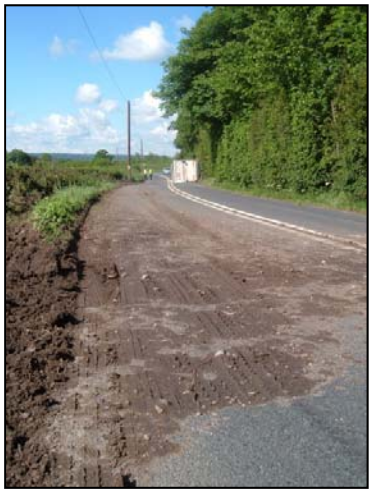
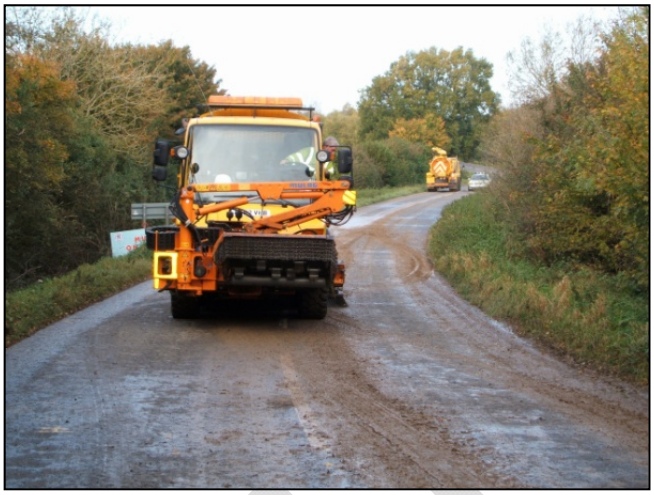
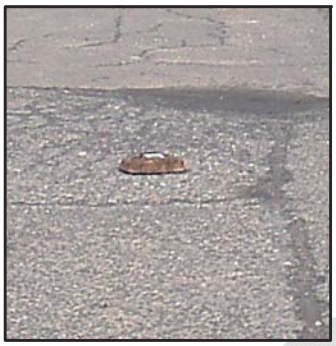
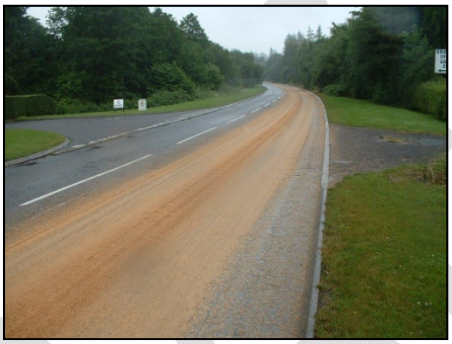
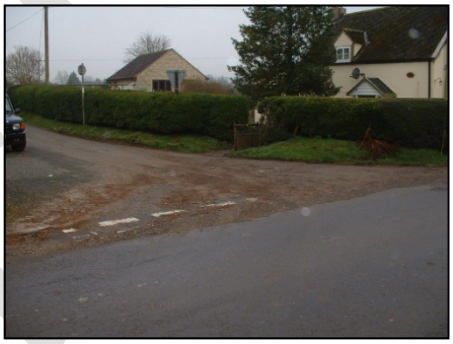


Groundwater flooding (FLOD)



Structural damage (STRU)

Emergency obstructions or hazards (HO)

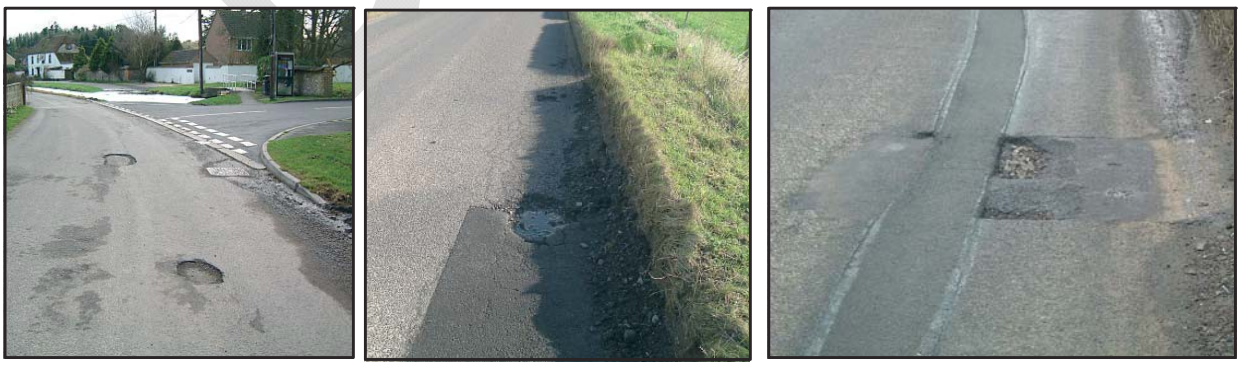
Debris in road (DEBR)

Carriageway (CW)

(Including cycleways forming part of the carriageway)

Potholes (POTH)

Road type	Defect description	Priority
2, 3, 4,	In carriageway more than 75mm deep and horizontal dimensions greater than 300mm x 300mm.	P1
5, 6, 7, 8 and 9	In carriageway more than 100mm deep and horizontal dimensions greater than 300mm x 300mm.	P1
2, 3, 4, 5, 6, 7, 8 and 9	In carriageway at a designated pedestrian crossing point (i.e. Pelican, Zebra, Puffin or uncontrolled crossing where clearly identified as such) exceeding 20mm and extending in one direction more than 150mm.	P1
2, 3, 4,	In carriageway between 40mm – 75mm deep and horizontal dimensions greater than 300mm x 300mm.	P2
5, 6, 7, 8 and 9	In carriageway between 40mm – 100mm deep and maximum dimension greater than horizontal dimensions greater than 300mm x 300mm.	P3
10 and 11	Other defects identified taking into account local condition and usage.	P5

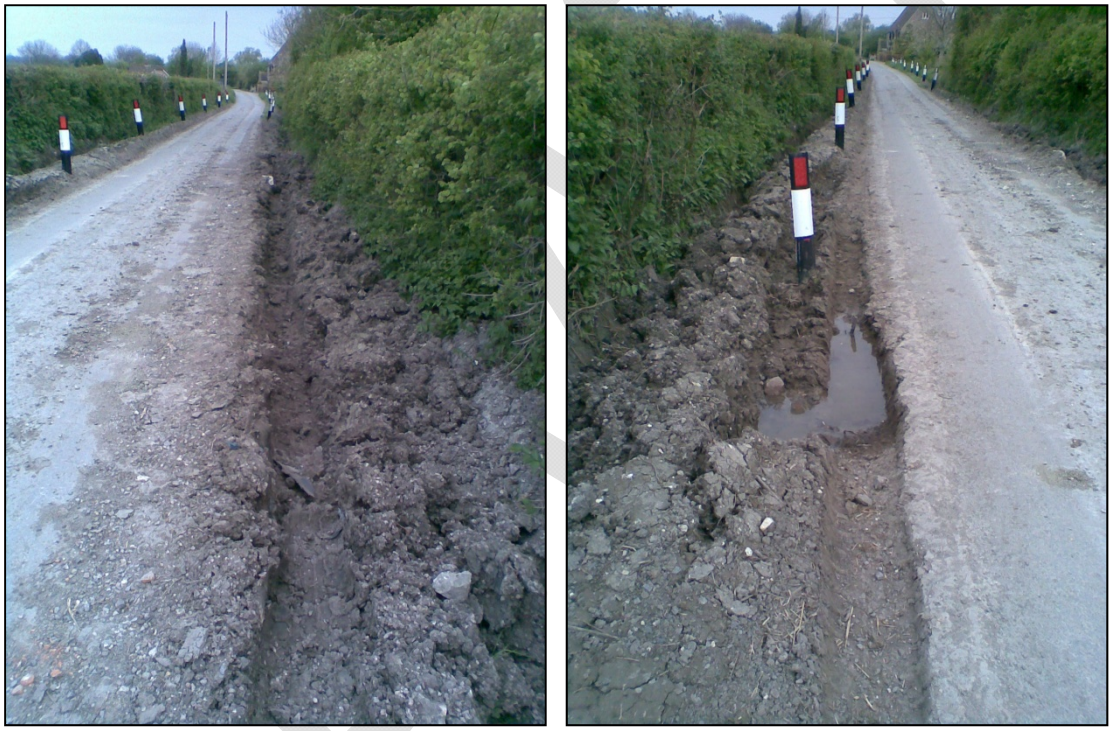


Potholes (POTH)

Carriageway (CW)

Verge overrun (ORUN)

Road type	Defect description	Priority
2, 3 and 4	A verge area without kerbs adjacent to the road with damage more than 150mm deep and width greater than 200mm.	P3
5, 6, 7, 8, 9, 10 and 11	A verge area without kerbs adjacent to the road with damage more than 150mm deep and width greater than 200mm.	P5

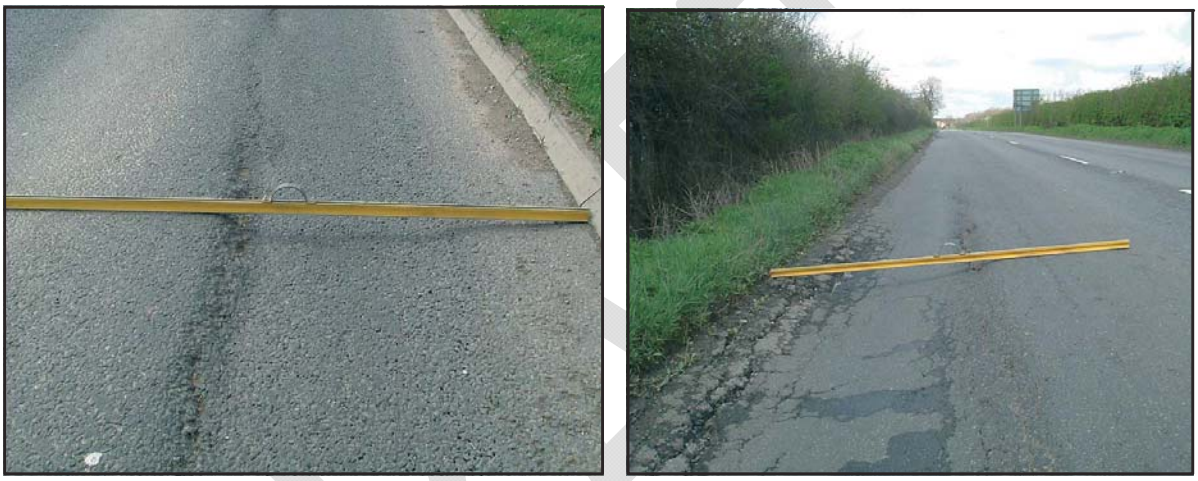


Verge Over-run (ORUN)

Carriageway (CW)

Depression in carriageway (DEPR)

Road type	Defect description	Priority
All road types	Depressions in the carriageway caused by heavy vehicles or ground conditions. (Use of temporary signs informing of uneven road surface may be appropriate).	P5

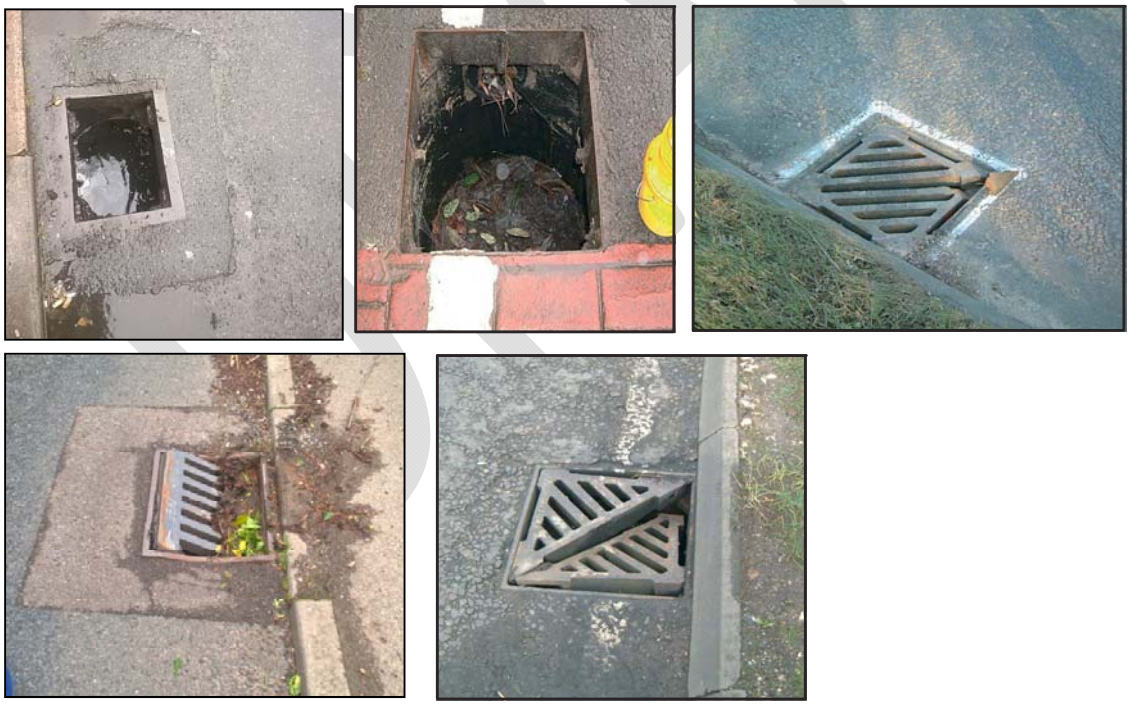


Depression in carriageway (DEPR)

Covers, gratings, frames and boxes (DC)

Cracked, missing, broken or level difference (IBCK, MISS, IDLV, LEVE)

Road type	Defect description	Priority
All road types and footways	Significant part of the insert missing or damaged and liable to render ironwork unsafe. MISS, IBCK	P1
All road types and footways	Cracked or broken covers, frames or boxes liable to render ironwork unsafe. IBCK	P1
All road types	Any ironwork with a level difference above the carriageway surface greater than 40mm. LEVE (ABOVE)	P1
All road types	Any ironwork with a level difference below the carriageway surface greater than 75mm. IDLV (BELOW)	P1

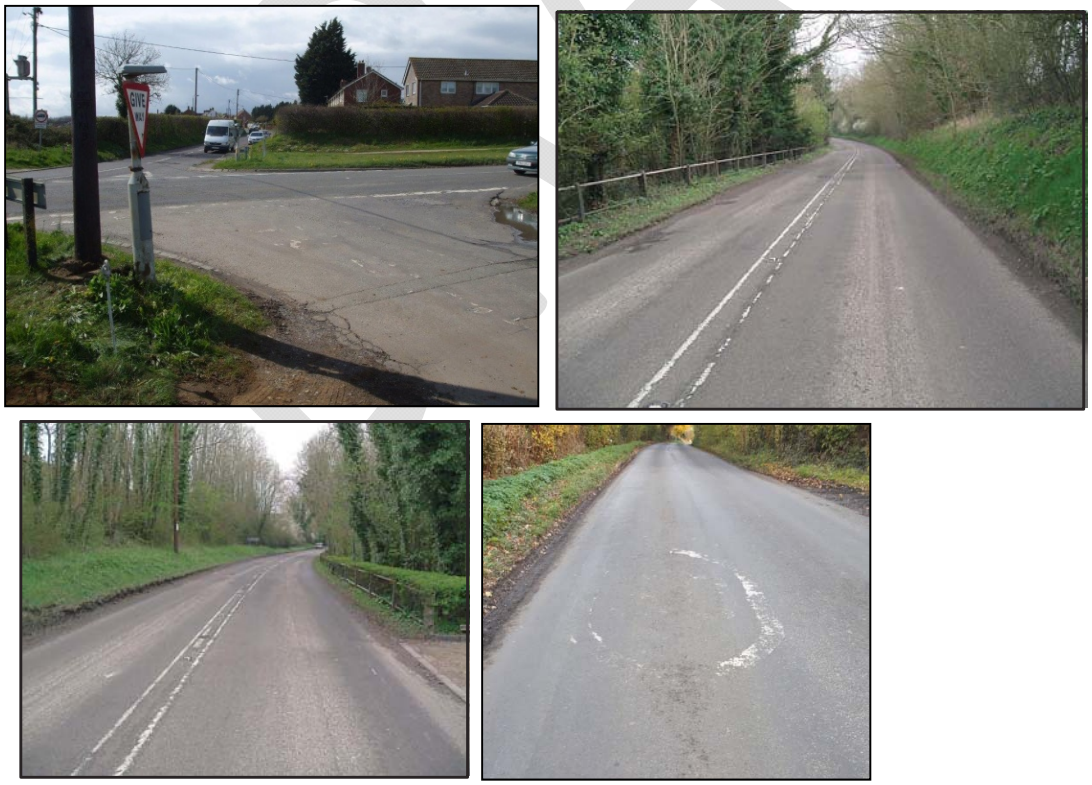


Cracked, missing, broken or level difference (IBCK, MISS, IDLV, LEVE)

Road markings (CL)

Road markings worn (WEAR)

Road type	Defect description	Priority
All road types	Give way, Stop road markings on and adjoining strategic routes, main and secondary distributor roads (types 2, 3 and 4) should be renewed as a safety defect when they are missing or faded to such an extent that they are no longer adequate for their intended purpose.	P3
All road types	Zebra crossing markings should be renewed as a safety defect when they are missing or faded to such an extent that they are no longer adequate for their intended purpose.	P3
All road types	Double white line systems should be renewed as a safety defect when they are missing or faded to such an extent that they are no longer adequate for their intended purpose.	P5
All road types	All other road markings more than 80% worn or missing.	P5

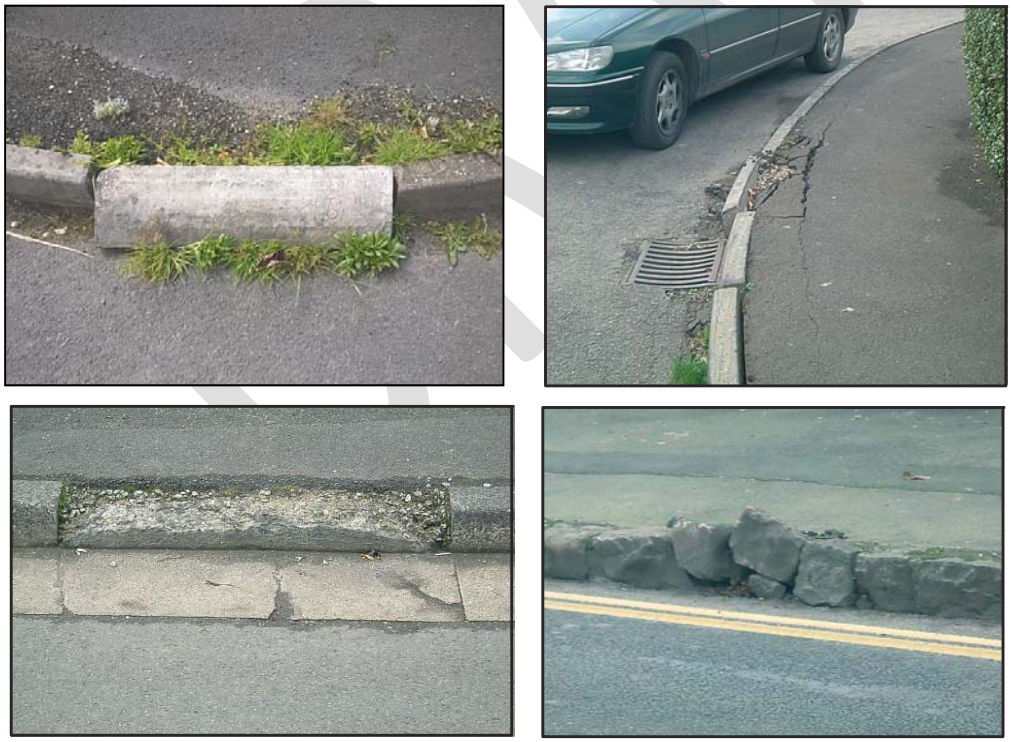


Worn road markings (WEAR)

Kerbs, edgings and re-formed channels (CK)

Vertical projection, damaged or missing (EVPJ, DAMG, MISS)

Road or footway type	Defect description	Priority
F1	Kerbs adjacent to footways with up-stand more than 20mm extending in one direction more than 150mm.	P1
F2	Kerbs adjacent to footways with up-stand more than 20mm extending in one direction more than 150mm.	P3
All road types with kerbs but without footways or cycleways adjacent to road	Kerbs adjacent to carriageways with up-stand more than 20mm extending in one direction more than 150mm.	P5



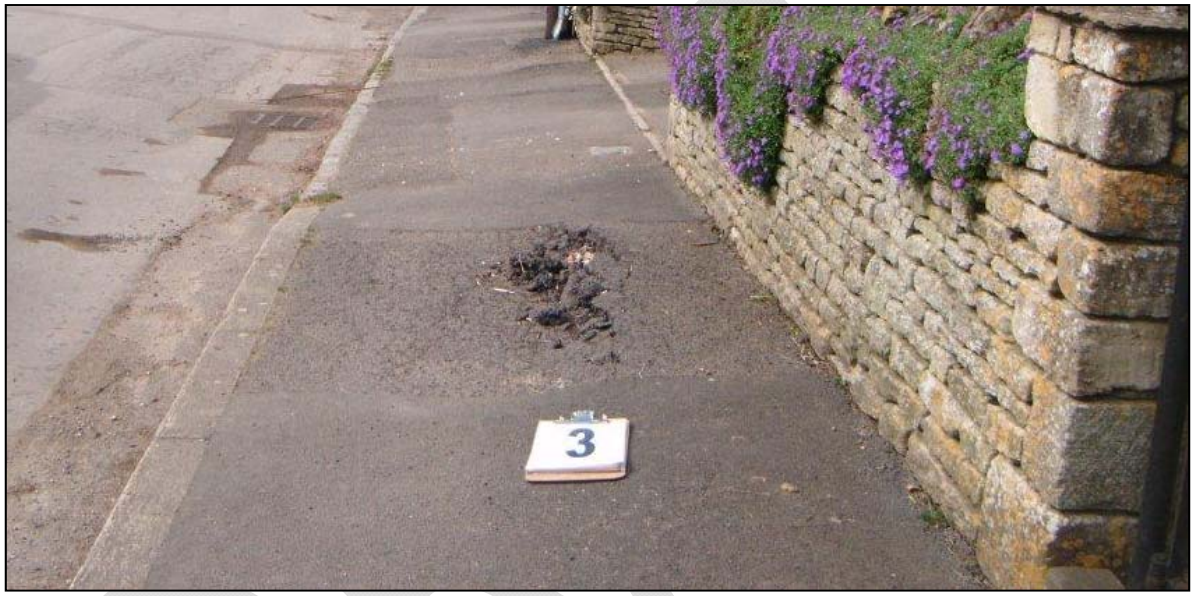
Kerb vertical projection, damaged or missing (EVPJ, DAMG, MISS)

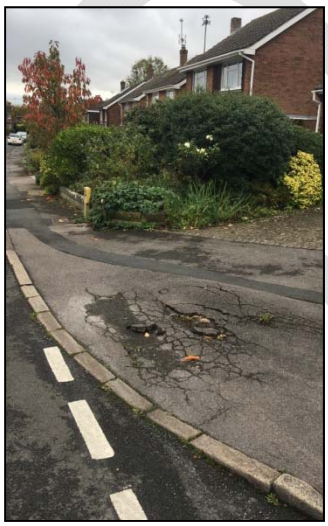
Footways and shared pedestrian/vehicle areas (FW)

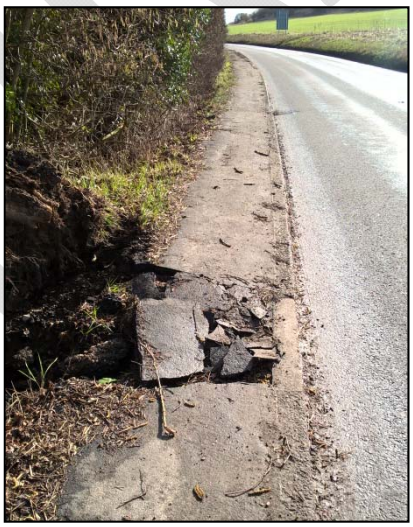
(Including cycleways remote from a carriageway)

Potholes (POTH)

Footway type	Defect description	Priority
F1 and F2	Defect in footway greater than 20mm deep with a maximum dimension greater than 150mm.	P1







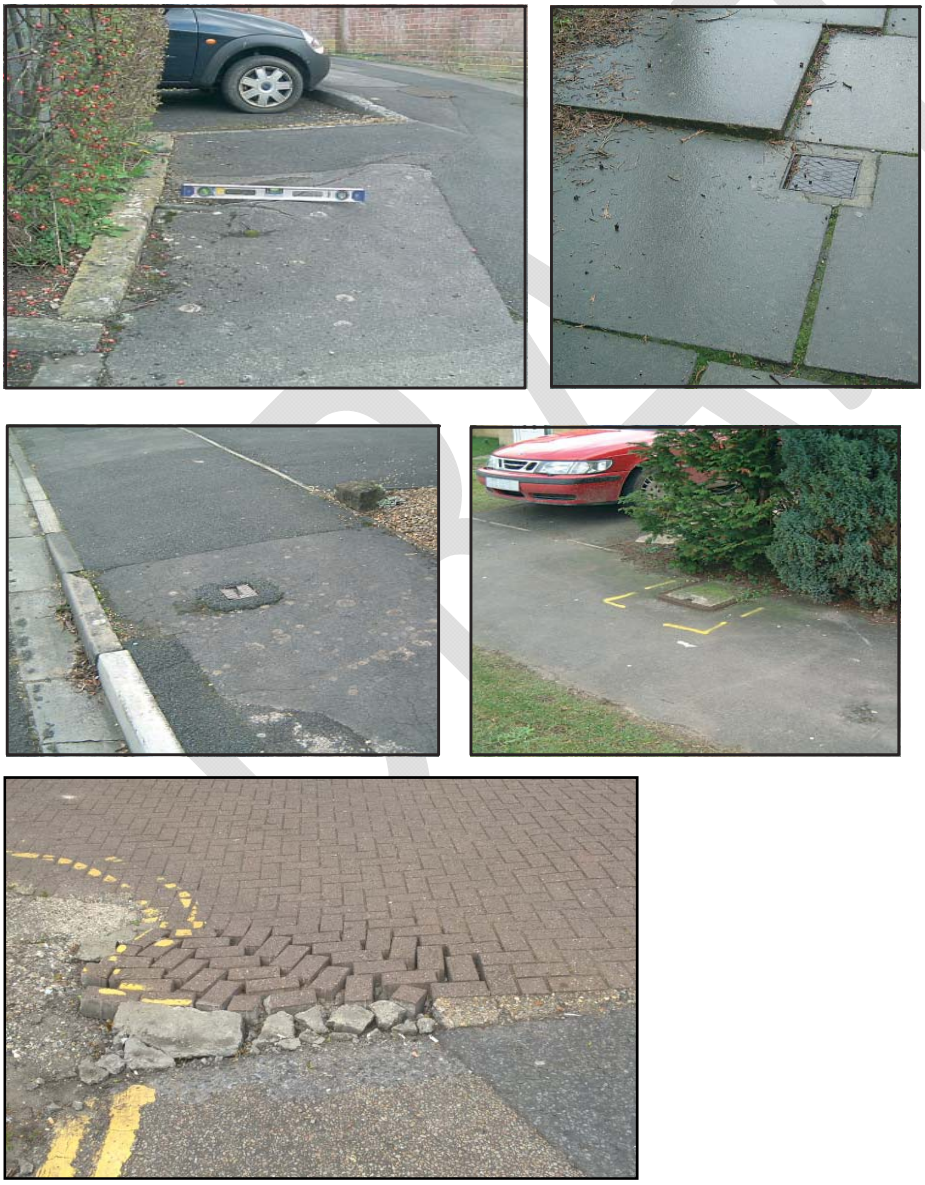
Footway potholes (POTH)

Footways shared pedestrian/vehicle areas (FW)

(Including cycleways remote from a carriageway)

Trip, slab profile/rocking slab (SLPF)

Footway type	Defect description	Priority
F1 and F2	Upstand in footway or pedestrian area greater than 20mm with a maximum dimension greater than 150mm, including rocking slabs if rock creates up-stand.	P1

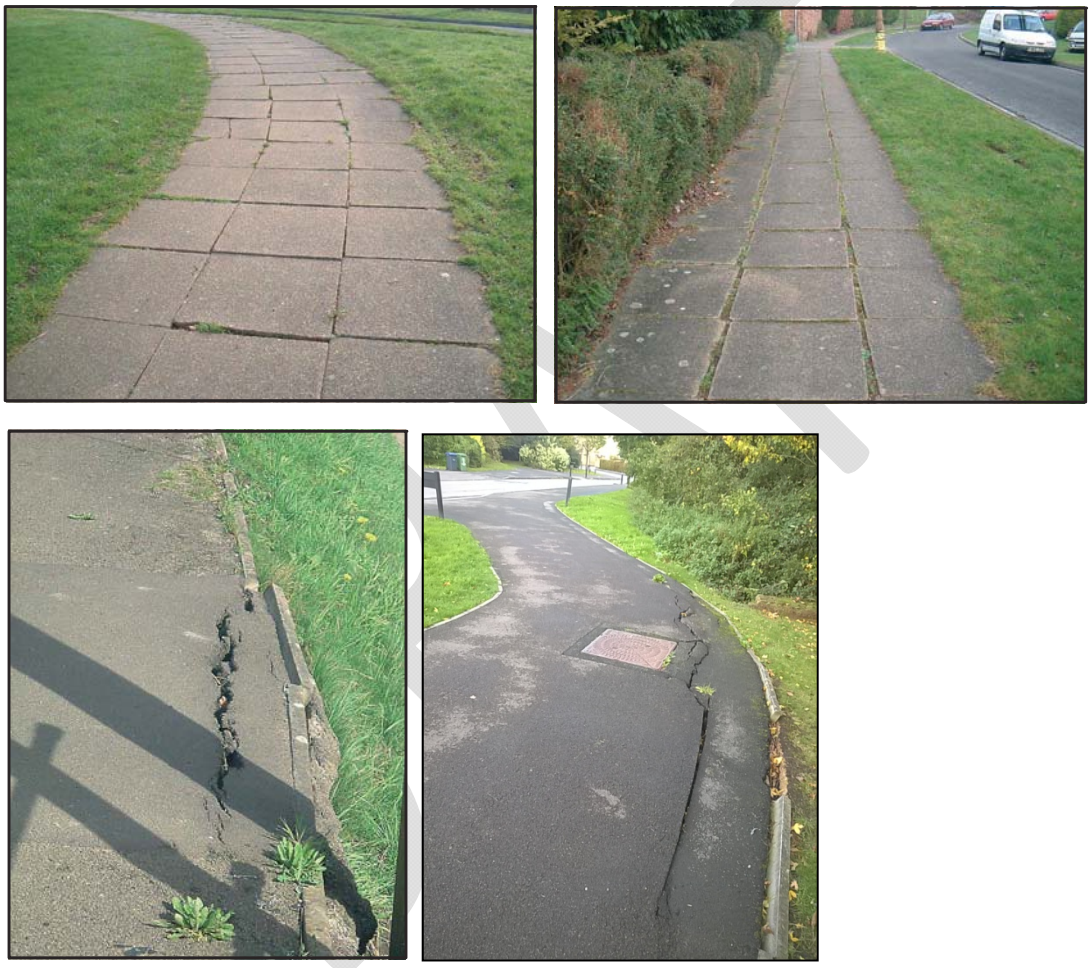


Footway trip, slab profile/rocking slab (SLPF)

Footways shared pedestrian/vehicle areas (FW)

Cracks and gaps (MACK)

Footway type	Defect description	Priority
F1 and F2	Space between paving slabs or cracks in bituminous footways with a width greater than 25mm.	P3



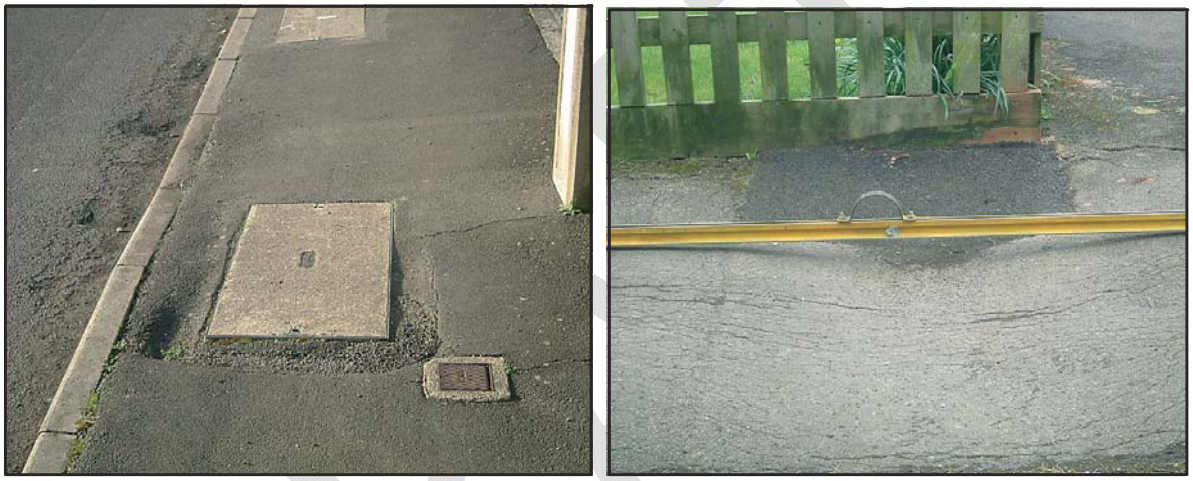
Footway cracks and gaps (MACK)

Footways shared pedestrian/vehicle areas (FW)

(Including cycleways remote from a carriageway)

Depressions (DEPR)

Footway type	Defect description	Priority
F1 and F2	Depression greater than 40 mm in depth and covering an area less than 0.2m^2 (e.g. 450 mm x 450 mm).	P5



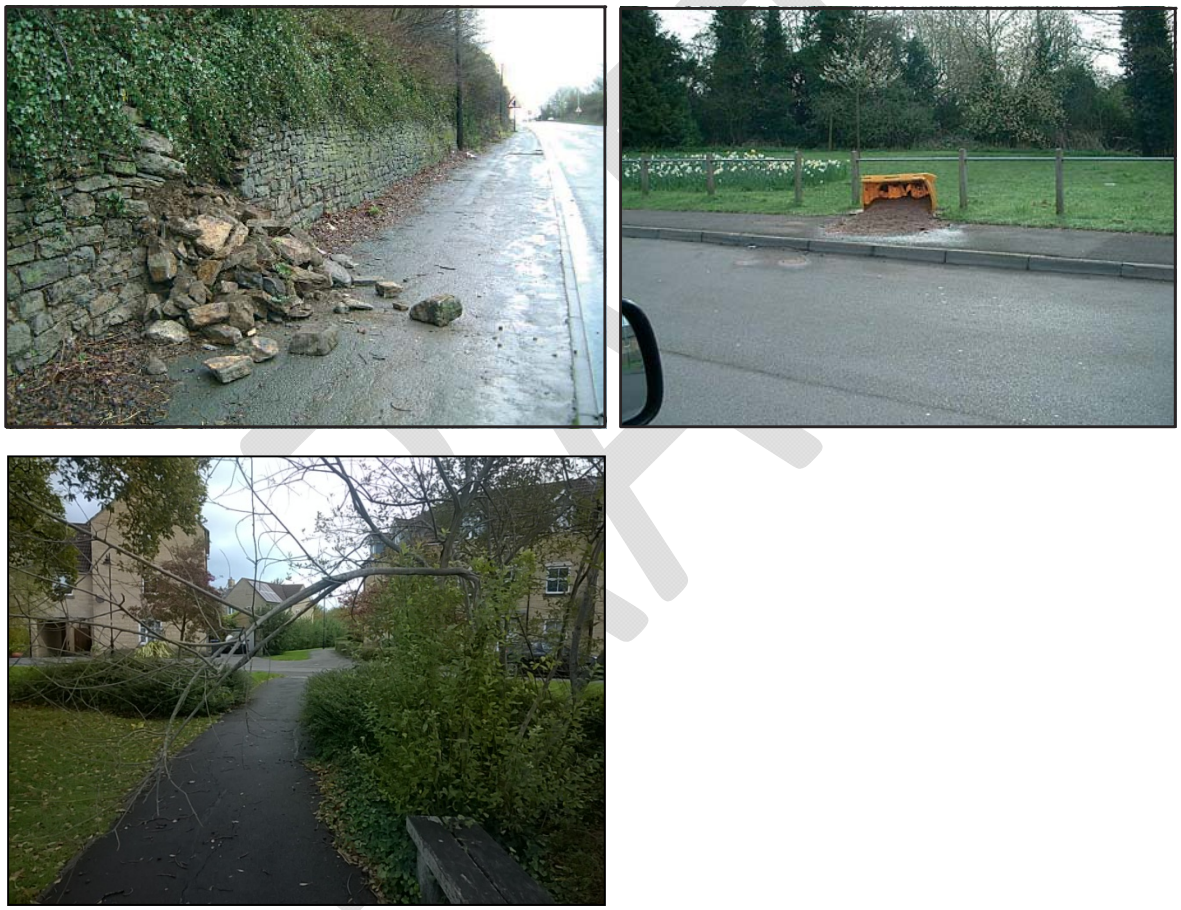
Depressions in footway (DEPR)

Footways shared pedestrian/vehicle areas (FW)

(Including cycleways remote from a carriageway)

Obstruction (OTHR)

Footway type	Defect description	Priority
F1 and F2	Footway or cycleway obstructions or defects that present danger to the public, including fallen and deposited materials.	P1

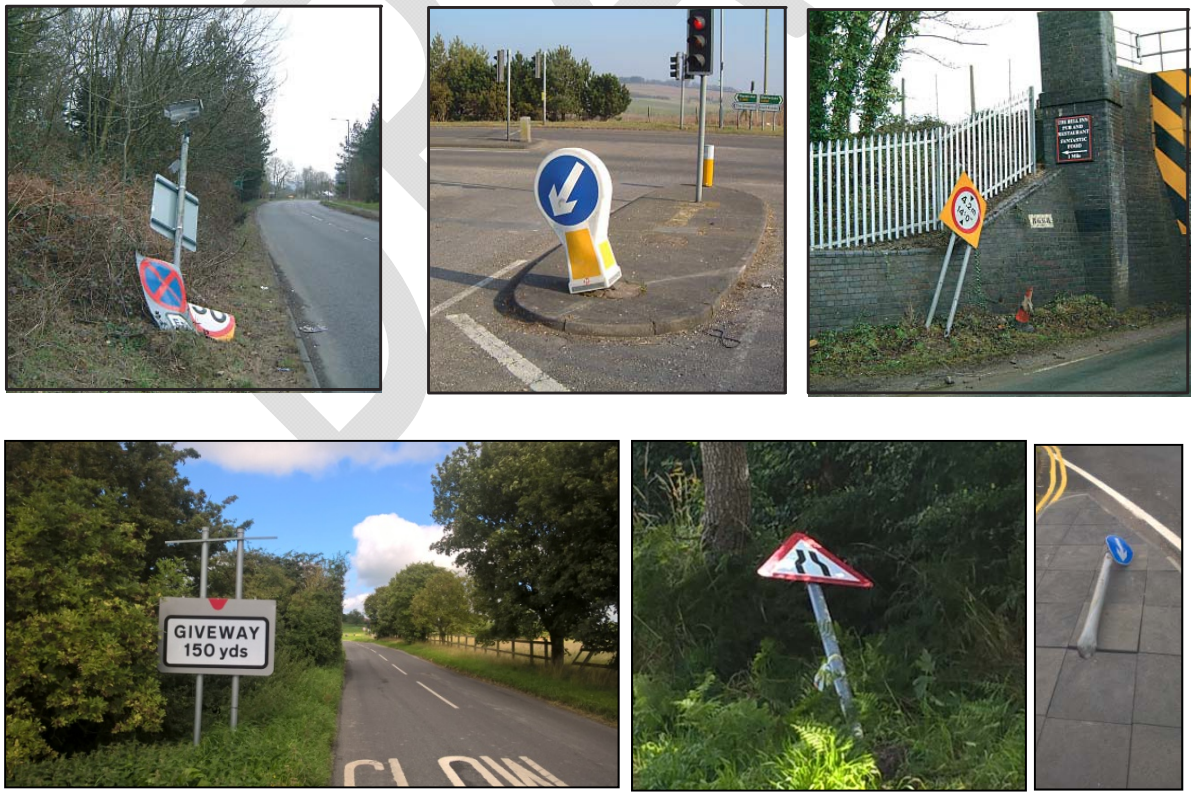


Footway obstructions (OTHR)

Signs (SN)

Sign damaged by road traffic collision (ACCD), dirty (DIRT), obscured (OBSG), or missing (MISS).

Road type	Defect description	Priority
All road types	Stop or Give way signs badly damaged (ACCD), dirty (DIRT), obscured (OBSG), or missing (MISS) at entry to high speed roads.	P4
All road types	Mandatory and prohibitory traffic signs badly damaged (ACCD), dirty (DIRT), obscured (OBSG), or missing (MISS).	P4
All road types	All other signs badly damaged (ACCD), dirty (DIRT), obscured (OBSG), or missing (MISS).	P5



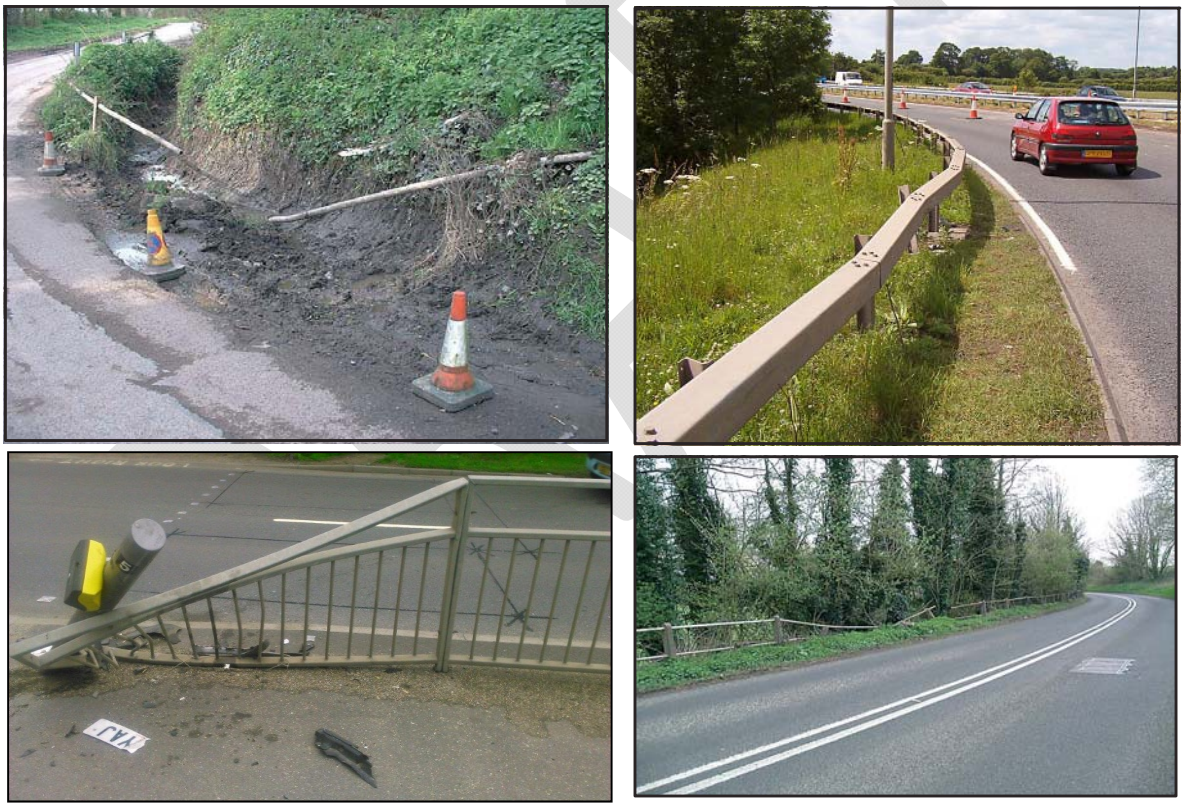
Signs damaged in collisions (ACCD)

Signs illegible because of, dirt (DIRT), turned or obscured (OBSG) or missing (MISS)

Fences, walls and barriers (SB)

Damaged safety barrier, pedestrian guard railing or fence (DAMM)

Road type	Defect description	Priority
All road types	Damaged length of safety barrier, pedestrian guard railing or fence likely to be a hazard.	P1
All road types	Damaged length of safety barrier, pedestrian guard railing or fence.	P5

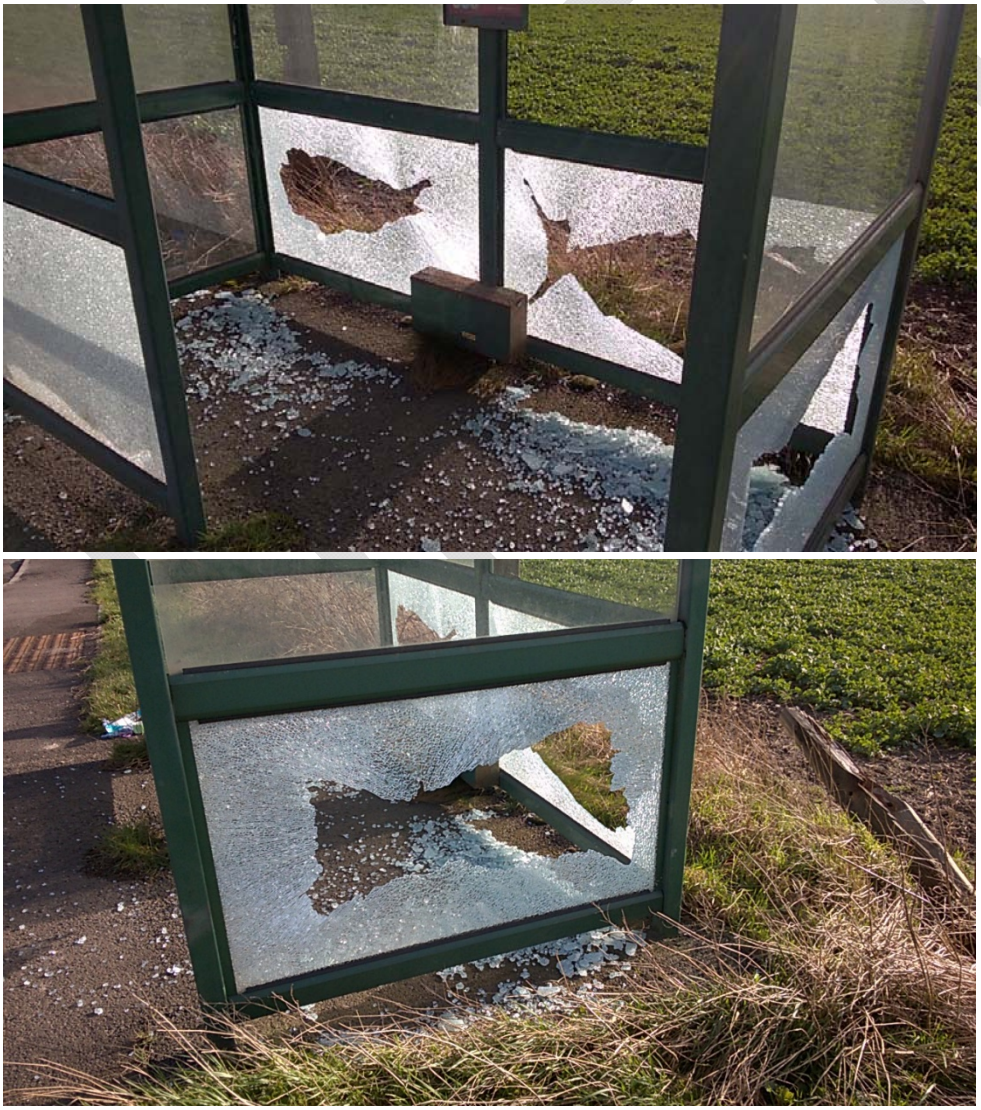


Guard rail or safety fence damaged (DAMM)

Street furniture (SF)

Damaged with broken glass or sharp edges (BRGL)

Road type	Defect description	Priority
All road types	Damaged bus shelter or other street furniture with broken glass or sharp edges likely to be a hazard.	P1
All road types	Damaged bus shelter or other street furniture.	P5

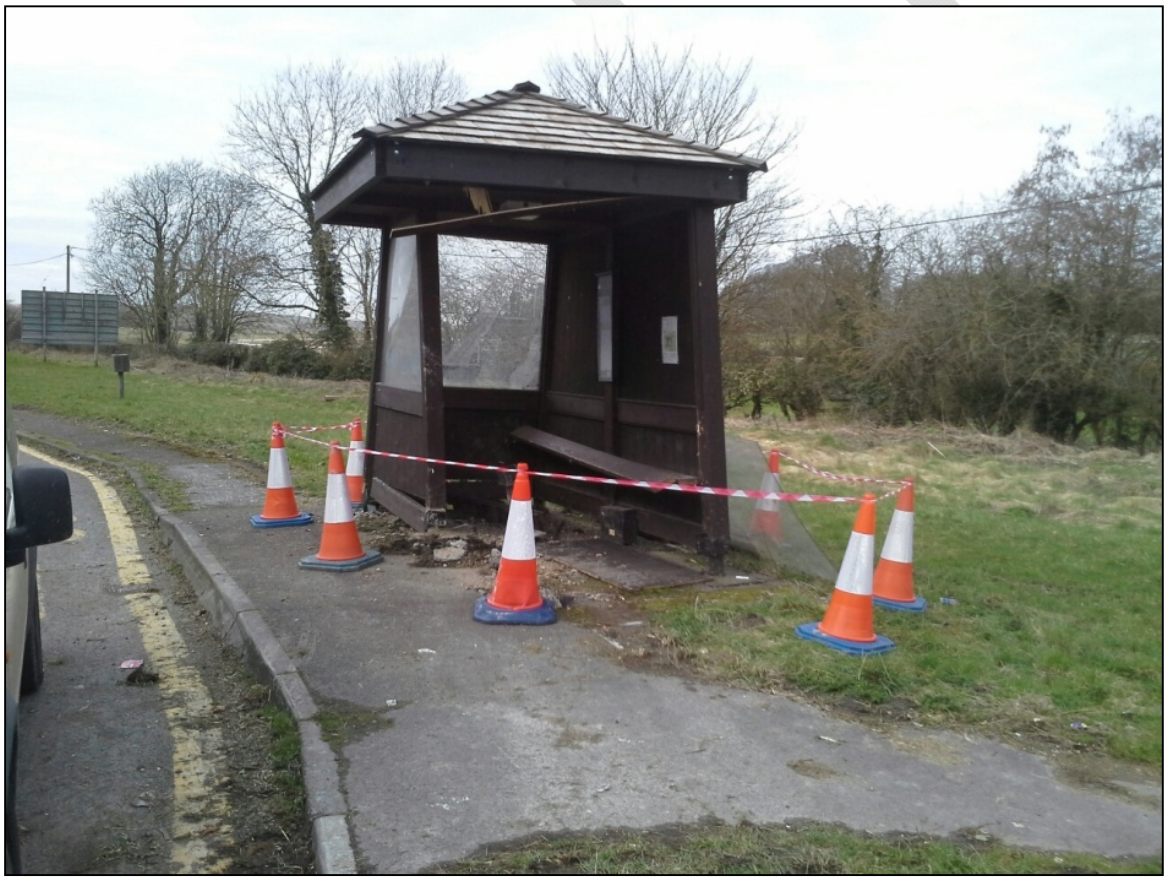


Damaged with Broken Glass or Sharp Edges (BRGL)

Street furniture (SF)

Structural damage (DAST)

Road type	Defect description	Priority
All road types	Damaged bus shelter or other street furniture with serious structural damage likely to be a hazard.	P1
All road types	Damaged bus shelter or other street furniture.	P5

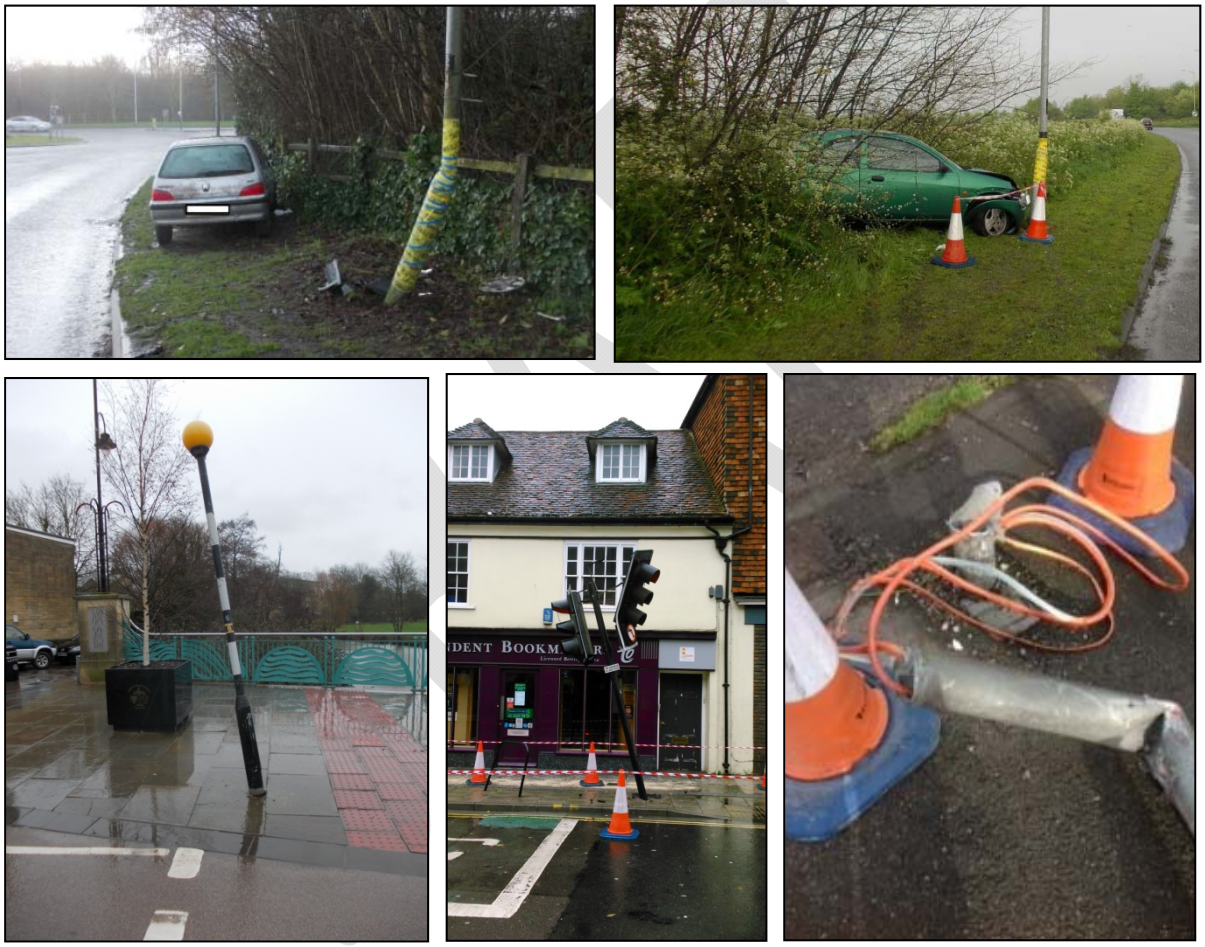


Street furniture structural damage (DAST)

Street furniture (SF)

Electrical installations (LIGH)

Road type	Defect description	Priority
All road types	Damaged bus shelter, lighting column, traffic signal or other street furniture with damage to electrical systems or faults likely to be a hazard.	P1



Damaged electrical installations and equipment (LIGH)

Document control sheet

Issue	Date of issue	Comments
1	12th September 2018	First Issue

This document supersedes the previous Wiltshire Highways Inspection Manual dated May 2013