PUBLIC

HIGHWAY INFRASTRUCTURE ASSETS SAFETY INSPECTIONS MANUAL

JUNE 2018

AN ELEMENT OF THE HIGHWAY INFRASTRUCTURE ASSET MANAGEMENT SYSTEM

If this document is printed or copied it must be treated as an uncontrolled version as it will only be correct at the dates published in the document when it was printed or copied.

Document Information

Title	Highway Infrastructure Assets Safety Inspection Manual
Author:	Teri Ford
Reviewed:	Neill Bennett

Document Issue Status

TABLE OF AMENDMENTS					
NO	**APPROVAL DATE**	**SECTION**	**PARAGRAPH**	**DETAILS**	**AUTHOR**
1	25/07/2018	All	All	First Issue	TF
2	31/01/2019	see review schedule 1		First Review	TF
3	13/03/2019	see review schedule 2		Second Review	TF
4	01/06/2019	see review schedule 3		Third Review	TF
5	01/02/2020	see review schedule 4		Fourth Review	TF

Contents

1 BACKGROUND 4
2 THE NEED FOR HIGHWAY INFRASTRUCTURE ASSET SAFETY INSPECTIONS 4
3 PURPOSE OF SAFETY INSPECTIONS 5
4 PERSONS UNDERTAKING INSPECTIONS 6
5 NETWORK HIERARCHY AND SAFETY INSPECTIONS 6
6 RISK BASED APPROACH 9
6.1 General 9
6.2 Ancillary Defects 10
6.3 Examples of Defects 10
6.4 Defect Reporting Process 10
7 METHOD OF INSPECTION AND RECORDING 12
7.1 General 12
7.2 Driven Inspections 12
7.3 Walked Inspections 12
7.4 Alternative Methods 13
7.5 Recording 13
8 REVIEW PROCESS 13
APPENDIX A – RISK ASSESSMENT QUESTION DEFINITIONS 14
APPENDIX B – EXAMPLES OF HIGHWAY DEFECTS 15

1 BACKGROUND

1.1 This document supersedes the previous document titled – '*Highway Safety Inspections Manual (Instructions to for Safety Inspections)'* dated July 2013.

1.2 The changes required to the previous version, as set out in this new edition, are essential to reflect the 2016 Code of Practice for Well-Managed Highway Infrastructure and the 2013 Highways Maintenance Efficiency Programme (HMEP) Highway Infrastructure Asset Management Guidance. This document forms part of the suite of 'Highway Infrastructure Asset Management' documents.

1.3 This manual is intended for employees involved in the safety inspections of Derbyshire's highway network, whether that be through routine safety inspections or ad-hoc safety inspections generated as a result of an enquiry investigation. It is not intended to cover inspections of Public Rights of Way (unless they form part of the footway hierarchy within or on the fringe of urban areas). The use of this Manual applies to adopted highways only.

1.4 The safety inspection includes those highway infrastructure assets within the following main asset groups:

- carriageways, including on-road cycle ways
- footways, including shared use
- structures
- drainage
- street lighting
- traffic management and management of electronic traffic equipment
- street furniture, including pedestrian barrier/restraint system and traffic signs
- trees and verges

1.5 This is a controlled document and it will be updated as details of legislation, updates to the Code of Practice for Highway Maintenance Management, other national guidance and resources etc. change. It is supported by the Quality Management System Highway Maintenance Process.

2 THE NEED FOR HIGHWAY INFRASTRUCTURE ASSET SAFETY INSPECTIONS

2.1 As the Highway Authority, Derbyshire County Council (DCC) has a statutory duty to maintain highways maintainable at public expense under Section 41 of the Highways Act 1980. Neglecting this duty can lead to claims against the County Council for damages resulting from a failure to maintain a highway.

2.2 Section 58 of the Act, allows the Council to use a '**Special Defence**' in actions against it for damages for non-repair of a highway if it can demonstrate that it has taken such reasonable care to ensure that the highway was not dangerous to traffic having 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'*
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. *Whether warning notices were displayed when immediate repair could not reasonably be expected.*

2.3 The establishment of an effective regime of inspections, assessment, recording and prioritisation of defect repairs is a crucial component of highway maintenance. It provides a robust framework to address key objectives for the maintenance of the highway in a safe and serviceable manner, as required by Section 41 of the Highways Act 1980 and consistent with the Council's Highways Infrastructure Asset Management process.

2.4 Case history demonstrates that the Highway Authority must also record 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. All defects are recorded in the Single Asset Management System (SAMS) and these records may also be used as evidence to show that the Highway Authority has acted reasonably.

2.5 The Highways Communications Plan details the expectations that can be anticipated when an enquiry is made by a member of the public. It outlines the approach to keeping stakeholders informed and aware of our work on the highway, using the most suitable communication channels, whilst ensuring that there are appropriate opportunities for feedback from users.

3 PURPOSE OF SAFETY INSPECTIONS

3.1 Safety inspections are designed to identify, assess, record and prioritise the repair of defects which may present an immediate danger or significant inconvenience to users of the highway. A defect may apply to the structural condition of the highway or the infrastructure assets contained within the highway boundary. In addition, safety inspections may be used to identify defects of a lesser magnitude which may be included within future programmes of planned maintenance work to preserve the highway infrastructure assets and keep the highway in a serviceable condition, or to indicate that a more in depth service inspection may be required. This is in line with our overall aims of network safety, serviceability and sustainability. This manual does not include inspections for snow and ice. Winter maintenance and adverse weather policy and practice is provided in a separate document.

3.2 Safety inspections are supplemented by other inspections and assessments undertaken in line with national standards and/or good practice. These are discussed in the relevant Highway Infrastructure Asset Management Plan for each asset area.

3.3 Safety inspections are visual inspections undertaken in accordance with risk assessment as outlined through the risk based approach in Section 6 of this document. They are designed to provide complete, accurate and timely information,

as far as is reasonably practicable, on the safety maintenance needs of the highway infrastructure network and its ancillary assets based on site observations and measurements. These are applied through a risk based approach reflective of the characteristics of the defect, the local environment and network usage. All information is recorded and stored within SAMS.

4 PERSONS UNDERTAKING INSPECTIONS

4.1 The person undertaking an inspection should be provided with appropriate training, regular updates and audited and accredited as competent in the required field of expertise. Training should have been undertaken to the DCC required level, which includes the following:

- Lantra accredited training
- Training on Highways Infrastructure Assets Safety Inspections Manual
- Systems training
- Risk assessment and defect report process training
- Chapter 8 safety at street works and road works

4.2 Inspectors' are required to undergo continual professional development, to be regularly audited and appraised annually to ensure continuing capability within the field.

4.3 The Inspector is responsible for the accuracy of that inspection and the recorded information. In certain circumstances, that person may be called into Court to substantiate their inspection records. Any employee involved in the inspection process may be required to provide information relating to third party claims received and provide statements towards the defence of claims where the County Council's legal and insurance representatives are involved.

4.4 It is desirable that all personnel involved in safety inspections should be included on the National Register of Highway Inspectors currently held by the Institute of Highway Engineers.

5 NETWORK HIERARCHY AND SAFETY INSPECTIONS

5.1 An integrated Network Hierarchy is crucial to asset management. It is formed through a series of network hierarchies that have been identified for each road user type. The network hierarchy is user defined, based on usage and not dependent on the current road classification system. A Resilient Network has been developed and has the highest priority.

5.2 DCC has set its own standards for the frequency of its highway safety inspections. The frequencies have been determined for each Network Hierarchy, using a risk based approach based on usage, ie the hierarchy with the most usage has the highest inspection frequency. The frequencies are shown in the table overleaf. These have been approved by Elected Members.

5.3 Each part of the network is assigned a hierarchy which relates its importance to usage. These hierarchies are stored in SAMS and records are kept of hierarchy changes.

5.4 Hierarchies need to be as dynamic as possible and regularly reviewed to reflect changes in network characteristics and functionality, so that maintenance policies, practices and standards reflect the current situation rather than the use expected when the hierarchy was originally defined and or last modified.

5.5 Highway Inspectors are able to evaluate their inspection routes when changes occur in characteristics and functionality and, as a result, they can make recommendations for a hierarchy review as they see appropriate.

5.6 Footway and cycleway hierarchies can be different to carriageway hierarchies and therefore some roads have different hierarchy classifications and potentially different inspection frequencies for carriageways, footways and cycleways.

All defined inspection frequencies should be maintained in accordance with Table 1 below.

TABLE 1	FREQUENCY OF INSPECTIONS		
Feature	**Hierarchy**	**Category**	**Frequency of Safety Inspection***
Carriageways	Resilient Network	Priority network required to maintain economic activity and key services	1 month
	Network Hierarchy 1	Annual Average Daily Traffic Flow >= 9000	1 month
	Network Hierarchy 2	Annual Average Daily Traffic Flow >= 6000 and < 12000	1 month
	Network Hierarchy 3	Annual Average Daily Traffic Flow >= 3000 and < 8000	1 month
	Network Hierarchy 4	Remaining Strategic Regional Routes, Main Distributor Roads and Secondary Distributor Roads	1 month
	Network Hierarchy 5	Remaining Link Roads	3 months
	Network Hierarchy 6	Remaining Local Access roads that are not a cul-de-sac	1 year
	Network Hierarchy 7	Remaining Local Access roads that are a cul-de-sac	1 year
Footways	1A	Prestige Area	1 month
	1	Primary walking route (including shared use facilities)	1 month
	2	Secondary walking route (including shared use facilities)	3 months
	3	Link Footways	As for c/way
	4	Local Access Footways	As for c/way
Cycleways	A	Carriageway – Contiguous or shared	As for c/way
	B	Footway – Contiguous or shared	As for f/way

* The inspection due date will generally default to the 15th of the month for each inspection

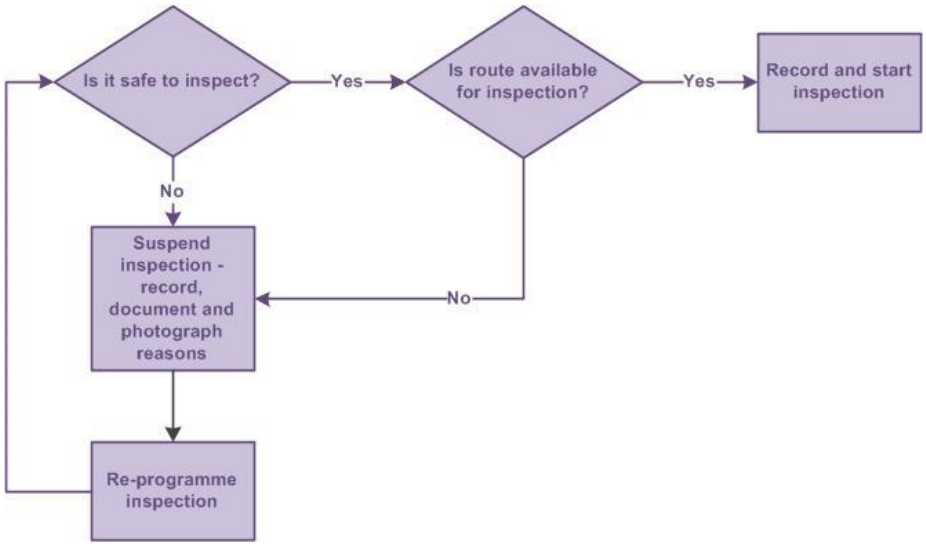
5.7 Where carriageway and footway hierarchies intersect, for example, at pelican or zebra crossings, bollards or other defined crossing points at junctions, the higher inspection frequency should always take precedence in determining the inspection frequencies, defect definition and responses. This principle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

5.8 Tolerance levels for safety inspection frequency are shown in the table below:

TABLE 2	SAFETY INSPECTION FREQUENCY TOLERANCE
Inspection Frequency	**Tolerance**
Monthly	+/- 10 days
Quarterly	+/- 15 days
Annually	+/- 30 days

5.9 Structures safety inspections are not carried out on a specific frequency and are a reactive process which will only occur after an event, such as a flood or after an enquiry.

5.10 Before an inspection takes place, each section of the route is assessed for its availability and whether it is safe to complete the inspection. If, for any reason, part or all of the route cannot be inspected, then the inspection is recorded as suspended, and the reasons and photographs recorded as appropriate. The route or route section is then reprogrammed for inspection at the next available opportunity. If sections of a route continue to be unavailable due to the presence of street works or parked vehicles, then it may not be practicable to inspect those parts of the highway that are obstructed to the same standard as the rest of the highway. The process is shown below:



5.11 Due to the differences in categories between carriageways, footways and cycleways, it may be necessary in certain instances to inspect each element at different times. Conversely, there will be instances where the frequencies for each are the same. These elements may, therefore, be inspected at the same visit.

5.12 Link footways are linking local footways through urban areas and busy rural footways. They are **not** interlinking footways, which are, for example, footways between two housing estate roads.

5.13 DCC will ensure that the routes include the existing highway network and any newly adopted highways, where appropriate. These will be added to the inspection routes as necessary.

6 RISK BASED APPROACH

6.1 General

6.1.1 The Code of Practice does not specify defined intervention levels where action is required to rectify a defect. It allows local authorities to decide if or what investigation criteria is appropriate and requires a risk based approach to the identification, assessment, evaluation, priority and nature of response to defects.

6.1.2 The safety inspection regime uses a defect risk assessment process to determine the degree of risk a defect, which meets an investigation criterion, presents to all highway users and not just motor vehicle users. All risks identified through this process have to be evaluated in terms of their significance, which means assessing the probability/likelihood of contact with the defect and the extent of likely damage or loss arising (if any at all) in the event of impact/contact arising.

6.1.3 The **probability** is quantified by assessing the likelihood of users, coming into contact with the defect. As the **probability** is likely to increase with increasing vehicular or pedestrian flow, the Network Hierarchy and defect location are, constantly, important considerations in the assessment.

6.1.4 The **impact** is quantified by assessing the extent of the damage likely to be caused should the risk become an incident. As the **impact** is likely to increase with increasing speed, the amount of traffic, mode of transport and type of road are clearly important considerations in the assessment.

6.1.5 To guide the inspectors in the risk assessment, the SAMS system asks a series of questions relating to impact and probability for each defect type. A definition guide to these questions is provided in Appendix A.

6.1.6 The SAMS system will automatically calculate the risk assessment score. The result of this assessment identifies a response. The available responses are as follows:

- Reduce risk or repair within 32 hours
- Reduce risk or repair within 9 days

- Reduce risk or repair within 28 days
- Consider an appropriate response including no further action

6.1.7 Defects identified that pose a threat to life are considered an emergency. These must be responded to, normally within 2 hours, and either the risk reduced or the defect repaired. Until the response team arrives the inspector must stay with the defect if it cannot be made immediately safe by the inspector and it is safe to do so. Any actions undertaken by the Highways Inspector to reduce risk should be recorded using the "Fix Now" function in the SAMS system.

6.1.8 The SAMS system requires the Highway Inspector to agree/disagree with the identified system response. This provides the Highway Inspector with the discretion to use local knowledge and any other risk assessment factor that the automated system has not considered to override to a higher priority response time. Examples of reasons to alter the identified response time (not exclusively) include: knowledge of local upcoming events, knowledge of previous location history and lack of street lighting at the location etc. All reasons should be provided within the Notes section of the system.

6.1.9 All timeframes begin once the identified defect is recorded and uploaded onto the SAMS system, and all timeframes are consecutive.

6.1.10 The risk assessed response times may be suspended if a state of emergency situation has been declared for either part or the whole of the County as itemised and defined within the Service Levels Suspension Plan.

6.2 Ancillary Defects

6.2.1 Not all defects can be rectified by the Highway Authority and require action by others. These defects will be directed, via the SAMS system, to the Control Centre or action officer for distribution to other sections or agencies, as appropriate.

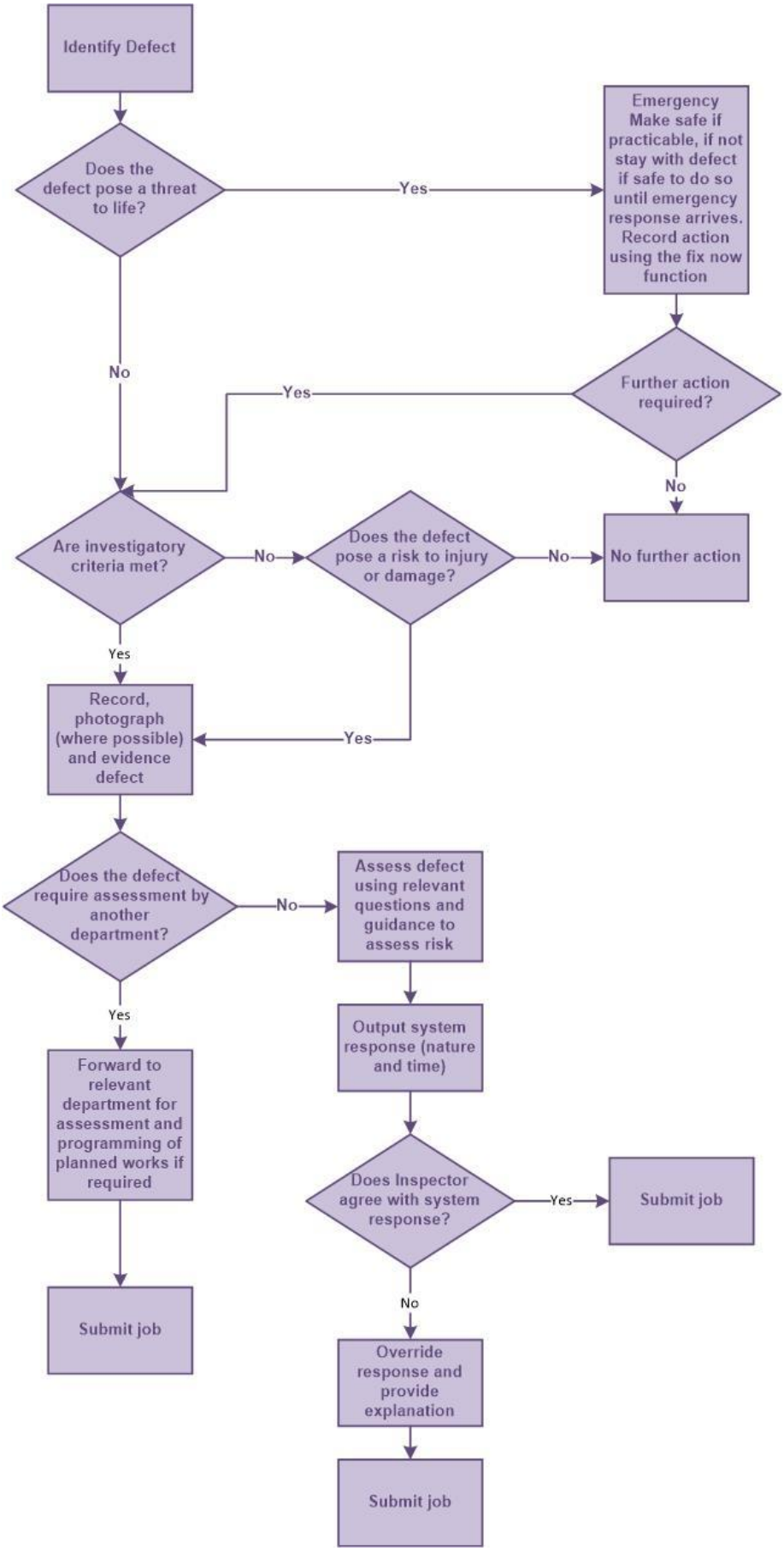
6.2.2 Ancillary defects may range from those that need prompt attention to those that are deemed not to present an immediate or imminent hazard.

6.3 Examples of Defects

6.3.1 The classifications, guidance and remarks are contained in Appendix B.

6.4 Defect Reporting Process

6.4.1 The defect reporting process is shown in the figure overleaf:


Identify Defect
Does the defect pose a threat to life?
Yes
Emergency Make safe if practicable, if not stay with defect if safe to do so until emergency response arrives. Record action using the fix now function
Further action required?
Yes
No
No
Are investigatory criteria met?
No
Does the defect pose a risk to injury or damage?
No
No further action
Yes
Record, photograph (where possible) and evidence defect
Yes
Does the defect require assessment by another department?
No
Assess defect using relevant questions and guidance to assess risk
Yes
Forward to relevant department for assessment and programming of planned works if required
Output system response (nature and time)
Does Inspector agree with system response?
Yes
Submit job
No
Override response and provide explanation
Submit job
Submit job

7 METHOD OF INSPECTION AND RECORDING

7.1 General

7.1.1 Inspections must be carried out in a safe manner so as not to endanger staff or the public. All operations **have a current risk assessment** and all supporting documents are available on either the DCC intranet or in Electronic Data Records Management (EDRM) as appropriate.

7.1.2 When an Inspector identifies defects on the highway, the opportunity is available to identify hazards that potentially could affect work teams or contractors undertaking the subsequent repair. This hazard identification is not only a duty of Designers under Construction Design Management (CDM), but is an important part of risk evaluation in departmental procedures and leads to improved efficiency when work teams or contractors are mobilised. The document CDM (GCP 15) is available on either DCC Intranet or in EDRM.

7.1.3 The document **'**Working on the Highway' (GCP 9) informs employees of safety precautions that **must** be followed in order to reduce the risk of such collisions, not only to themselves, but to all road users. It must be adhered to and is available on either DCC Intranet or in EDRM.

7.1.4 If in doubt, employees should consult their manager and/or refer to the risk assessments and general codes of practice.

7.2 Driven Inspections

7.2.1 Highway Infrastructure Assets Safety Inspections, when driven, **must** be undertaken by **two people,** with one driving and the other inspecting in a suitable vehicle travelling at an appropriate speed for the location and the requirement to enable adequate recording of defects. The driver will not be expected to be actively involved in identifying and recording defects, but will concentrate on ensuring the safe passage of the vehicle. Where the Highway Inspector determines that, in their reasonable opinion, the inspection cannot be undertaken and defects effectively observed from the vehicle, then the inspection will be walked.

7.2.2 A highway with footways on either side must be driven in both directions.

7.2.3 The survey vehicle should be equipped with high intensity roof-mounted, flashing beacons and high visibility reflective markings as a minimum, with other additional features being required subject to certain situations that may include, for example, high speed roads and highly trafficked roads etc.

7.2.4 The inspection of any Traffic-sensitive streets should be surveyed at off-peak times, where practical.

7.3 Walked Inspections

7.3.1 Highway infrastructure assets can be inspected by one person on foot if the person is walking on a footway and can inspect the footway and carriageway at the same time.

7.3.2 All Category 1 and 2 footways (if there is a footway on both sides of the road) are to be inspected in both directions.

7.4 Alternative Methods

7.4.1 Where alternative methods are available, such as drones or high resolution photography, they will be considered and tested to assess whether they provide a viable alternative method under appropriate circumstances.

7.5 Recording

7.5.1 The inspection regime must be applied and recorded systematically and consistently. As well as information relating to defects, all inspections must also, therefore, record the following through the use of a hand held device (HHD) capable of transferring data from the field into SAMS:

- Time of inspection and defect identification
- Route section availability for inspection and if safe to inspect
- Weather conditions
- Any unusual circumstances of the inspection
- Person(s) conducting the inspection

7.5.2 Each inspection must record the following:

- The relevant Unique Street Reference Number (USRN) for the named street.
- All actionable defects found must be recorded as part of the inspection
- If no defects are present this must be recorded as part of the inspection
- Photographs taken of each actionable defect showing scale and context must be attached to the enquiry or defect if an inspection has been walked. For a driven inspection, photographs should be taken only were practical and safe to do so
- Be time and date stamped

7.5.3 High Risk defects which require immediate attention should be transferred from the device as soon as the inspection on a particular street has been completed. If it is not possible to transfer the defect(s) at the time of inspection, it must be transferred within **1 hour** of it being recorded or as soon as practicable. Low Risk defects can be transferred once an inspection has been completed.

7.5.4 All records will be kept in accordance with the Data Management Strategy and all inspections will be retained by DCC for future reference.

8 REVIEW PROCESS

8.1.1 This manual will be maintained through a formal review process which will generally occur annually. However, feedback and lesson learned will also be reported and any resulting changes required to the manual or process will be disseminated through the monthly Inspector's team meetings as a regular agenda item.

APPENDIX A – RISK ASSESSMENT QUESTION DEFINITIONS

Probability Questions:

SAMS Detail	Definition
P2 Both Sides of Cway?	Does the defect alter the path of vehicles into the path of oncoming traffic?
P3 At High Risk location?	Is the defect located in the wheel track/cycle track/pedestrian desire line?
P4 At Hazard location?	Is the defect located at a hazard ie on a bend, outside a school, at a junction, at a crossing?
P6 Debris/Spillage on Hway?	Is there a debris/spillage on the highway?
P7 Affect the Fway?	Does the defect affect the footway?

Impact Questions:

SAMS Detail	Definition
I1 Speed Limit > 40mph	Is the speed limit greater than 40mph?
I2 Impact Non-Motorised Users?	Does it impact road users such as pedestrians, cyclists etc?
I3 Impact Grade	**Negligible/None** – no injury and/or wear and tear only on vehicle **Minor** – slight bruise/muscle injury and/or instant vehicle repair required eg puncture **Moderate** – injury not requiring hospital treatment and/or damage to running of vehicle eg wheel damage **Serious** – injury requiring hospital treatment and/or significant damage to vehicle ie suspension breakage, body damage
I4 Worsen By Next Inspection?	Will the defect cause the asset condition to deteriorate further **before the next inspection**? This is less likely to occur where inspections occur frequently ie monthly
I5 Does it affect cyclist? (was previously entitled Affect Peds & Cyclists)	Is it located on a dedicated cycleway, or a segregated footway/cycleway or at an identified high risk cycle location?
I6 Reduced risk?	Have temporary measures been required to reduce risk?

APPENDIX B – EXAMPLES OF HIGHWAY DEFECTS

The defects listed are **not** exhaustive and the Inspector will need to use risk assessments to decide what is likely to be hazardous, as local circumstances will apply.

How these defects should be treated will depend on the particular circumstances and the nature and speed of response required.

The following defects listed below will be applied to the appropriate element of the highway. A more detailed description of each defect and the position within the highway is provided defect by defect.

1.1 Pothole
1.2 Standing/running water
1.3 Embankment or bank slips
1.4 Spillages/obstructions/debris
1.5 Overriding
1.6 Defective high friction surface
1.7 Dangerous or obstructing trees
1.8 Obscured visibility and overgrown hedges, bushes and verges
1.9 Defective roadmarks
1.10 Defective ironwork
1.11 Defective cattle grid
1.12 Defective overhead cables
1.13 Defective roadworks signing
1.14 Obstructions – materials, goods, equipment, and signs
1.15 Cracks and gaps
1.16 Abrupt level differences/trip
1.17 Rocking flag
1.18 Damaged road restraint systems
1.19 Defective boundary fences
1.20 Streetlights, illuminated traffic signs and illuminated bollards
1.21 Defective road signs
1.22 Defective traffic signals
1.23 Damaged steps
1.24 Damaged handrails
1.25 Defective escape lanes/arrester beds
1.26 Carriageway/footway/cycleway Deterioration
1.27 Defective traffic calming features
1.28 Damaged kerb/channel
1.29 Street furniture

1.1 POTHOLE	**Version 5.0 – 1st June 2019**
Investigatory Criteria An area of material loss resulting in a vertical edge depression.	
Minimum criteria where applicable	
Carriageway	40mm deep.
Footway & Cycleway	20mm deep.
SAMS Codes:	**Carriageway**: RC01 Cway Pothole **Footway**: RF01 Fway Pothole

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Forward to relevant department for further investigatory work/assessment if required.

Notes and Further Investigation

- The footway investigatory criteria will be applied to a carriageway at defined pedestrian crossing points, where there is a marked cycle lane on the carriageway, or where there is a high risk to cyclists on the carriageway.
- Consideration should be given for powered two wheeled vehicles, cyclists, equestrians and pedestrians as appropriate.
- Where multiple defects have been identified and assessed with the same defect response time output then these may be inputted as one defect. However, it should be possible to identify each defect from the information provided to ensure that the correct defects are repaired.
- If defect forms part of possible NRSWA reinstatement failure contact NRSWA inspector to establish if within guarantee period. If it is confirmed within period record use code IT03 if not record as above response.

1.2 STANDING/RUNNING WATER	**Version 5.0 – 1st June 2019**
Investigatory Criteria Standing or running water on carriageways where excess water requires signing and guarding or properties are at risk of severe flooding.	
Minimum criteria where applicable	
Carriageway	If, after 24 hours from when rain has ceased, the road is impassable, or it is forcing vehicles, cyclists or pedestrians away from the nearside of the carriageway by more than 1m, or if vehicles have to cross the centreline marking.
Footway & Cycleway	If, after 24 hours the footway is impassable
SAMS Codes:	**Carriageway**: RC02 Cway Gully Blocked, RC03 Cway Grip Blocked, RC04 Cway Ditch Needs Clearing, RC05 Cway Culvert Defective, RC06 Cway Linear Beany Drain Defect, RC07 Cway Flooding/Ponding, RC08 Cway Gully Parallel Grating, RC09 Cway Bothole Defective **Footway**: RF02 Fway Gully Blocked, RF03 Fway Flooding/Ponding, RF04 Fway Gully Parallel Grating

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. Attempt to clear standing water if appropriate.
3. If unable to clear water either: use flood sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
4. Investigate permanent solution.
5. Forward to relevant department/other body if required.

Notes and Further Investigation

- During prolonged heavy rain, standing / running water will not be treated as requiring further investigation.
- Consultation will be required with adjacent landowner/occupier where appropriate.
- Statutory undertakers should be contacted where appropriate.
- Flooding of properties to be reported to the Flood Risk Team create an enquiry and link to the defect.

1.3 EMBANKMENT/BANK SLIPS/ RETAINING WALL COLLAPSES	**Version 5.0 – 1st June 2019**
Investigatory Criteria An embankment, bank slip or retaining wall collapse obstructing a highway surface or leaving the haunch exposed or unsupported.	
Minimum criteria where applicable	
Carriageway	When the road is obstructed or support lost; or it is forcing vehicles, cyclists or pedestrians away from the nearside of the carriageway by more than 1m; or if vehicles have to cross the centreline marking; or if cyclists have to cross a cycle lane boundary marking.
Footway & Cycleway	A slip when either material has deposited on the footway so that it is blocked, pedestrians are forced off of the footway, or leaving the footway foundation exposed or unsupported.
SAMS Codes	NR01 Embankment/Bank Slip Collapse NR02 Retaining Wall Collapse

Sample Photograph

Carriageway/Footway/Cycleway

Response

1. Undertake defect reporting process.
2. Any debris should be recorded as a separate defect (using 1.4). Consider other traffic management requirements until obstruction removed and any underlying problems are resolved.
3. Damage to structure should be logged and forwarded to structures for further investigation and assessment.

Notes and Further Investigation

- Consultation will be required with adjacent landowner/occupier where appropriate. Where washout/slips occur frequently, the procedures for powers under Section 151 of the Highways Act 1980 should be followed.
- Clear any gullies that are blocked and outfall through retaining walls, significant collapses and cost can be avoided by quick action.
- If significant support removed from carriageway, road/lane closure may be needed.

1.4 SPILLAGES/DEBRIS	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Spillages include: hazardous liquid, effluent, diesel, oil, petrol and mud.
Debris on the carriageway, examples include: fallen trees or tree limbs, excessive surplus surface dressing chippings, debris dropped from vehicles, excessive mud, sand, animals, soil or slurry.

Minimum criteria where applicable

Carriageway	Item causing immediate danger to highway users.
Footway & Cycleway	Item causing immediate danger to highway users.
SAMS Codes:	**Carriageway**: RC10 Cway Debris/Spillage, RC11 Mud on Cway, NR03 Dead Animal on Highway **Footway**: RF05 Fway Debris/Spillage, RF06 Mud on Fway, NR03 Dead Animal on Highway

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Treat spillage with appropriate material and sweep surface if necessary.
4. Clear obstruction if possible and investigate a permanent solution if required.

Notes and Further Investigation

- Where a spillage is, or could be, of a hazardous nature, remedial action must be undertaken strictly in accordance with the Health and Safety Manual to protect operatives and road users.
- General detritus/rubbish clearance is a District/Borough responsibility.
- Isolated incidents may be removed to an appropriate temporary location for removal later.
- Dead animals should be moved to the adjacent verge and the District/Borough Council contacted to arrange removal.
- Landowners should be investigated and contacted through Highways Hub for mud deposits.

1.5 OVERRIDING	**Version 5.0 – 1st June 2019**
Investigatory Criteria An area of verge immediately adjacent to the carriageway generally rutted below the level of the carriageway.	
Minimum criteria where applicable	
Carriageway	Greater than 100mm drop-off at the edge of an unimpeded road
SAMS Codes:	RC12 Cway Edge Deterioration
Sample Photograph	
Carriageway	

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.

Notes and Further Investigation

- Edge deterioration that has broken away should be reinstated as like for like.

1.6 DEFECTIVE HIGH FRICTION SURFACING	**Version 5.0 – 1st June 2019**
Investigatory Criteria A loss of aggregate or fatting up within a high friction surface or slippery covers within a high friction surface.	
Minimum criteria where applicable	
Carriageway	Report any areas where serious loss of skidding resistance suspected.
Footway & Cycleway	N/A
SAMS Codes:	NR04 High Friction Surfacing Defect

Sample Photograph

Carriageway

Response

1. Undertake defect reporting process.
2. Erect slippery road signs if necessary.
3. Forward to traffic and safety team for further investigation and assessment.

Notes and Further Investigation

- Permanent action to be undertaken in accordance with the Council's Skidding Policy.
- All slippery covers within high friction surfacing, see 1.10 Defective Ironwork.

1.7 DANGEROUS OR OBSTRUCTING TREES	**Version 5.0 – 1st June 2019**

Investigatory Criteria

A tree requires investigation when it is: obviously diseased, leaning precariously towards the highway (especially if the inspector considers it to have moved towards the highway since the last inspection), or it is damaged or has damaged or dead limbs which could fall directly onto the highway user or is obstructing.

Minimum criteria where applicable

Carriageway	The minimum vertical clearance over the carriageway needs to take account of the traffic using the route (minimum clearance of 5m).
Footway & Cycleway	Obstructing the clear passage of pedestrians/cyclists forcing them off the footway/cycleway, or it reduces the vertical clearance above the footway to less than 2.1m or 2.3m on a cycleway.
SAMS Codes:	**Carriageway**: RC13 Cway Tree Defective **Footway**: RF07 Fway Tree Defective

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Forward to tree inspector for further investigation and assessment if required.
4. Initiate noticing procedure via Highways Hub for overgrown vegetation if appropriate.

Notes and Further Investigation

- Separate specialist technical tree inspections are completed by the designated tree inspectors and these inspections follow the guidelines held within the Highway/Countryside Tree Inspections document.
- Responsibilities for landowners/occupiers with trees adjacent to the highway, and the powers of DCC in this respect, are contained in Section 154 of the Highways Act 1980. Where possible, the landowner/occupier should be given the opportunity to undertake the appropriate remedial work and retain ownership of any waste material.
- When a dangerous or damaged tree is identified as a safety defect, details of the tree should be forwarded to the Tree Inspector for further investigation and assessment.

1.8 OBSCURED VISIBILITY AND OVERGROWN HEDGES, BUSHES & VERGES	**Version 5.0 – 1st June 2019**
Investigatory Criteria Obscured highway visibility due to overgrown/overhanging vegetation, including obscured traffic signal heads, street light lamp, regulatory/warning traffic sign or bollard.	
Minimum criteria where applicable	
Carriageway	Overhanging/overgrown in sight lines at bends, junctions or laybys. Overgrown hedges and bushes when obstructing the highway user; or obstructing the clear passage of the highway user or it is forcing vehicles, cyclist or pedestrians away from the nearside of the carriageway by more than 1m; or vehicles have to cross the centreline marking; or if cyclists have to cross a cycle lane boundary marking.
Footway & Cycleway	Overhanging/overgrown in sight lines at locations where pedestrians/cyclists are encouraged to cross the carriageway; or it is overhanging the highway and obstructing the clear passage of pedestrians/cyclists forcing them off the footway/cycleway, or it reduces the vertical clearance above the footway to less than 2.1m or 2.3m on a cycleway.
SAMS Codes:	**Carriageway**: RC14 Cway Verge Defective, RC15 Cway Hedge Defective **Footway**: RF08 Fway Verge Defective, RF09 Fway Hedge Defective

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. Cut back overgrowth or, if required either: close road/footway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Initiate noticing procedure for private overgrown vegetation by creating an enquiry and linking it to the defect and forwarding to Highways Hub for action.

Notes and Further Investigation

- Responsibilities for landowners/occupiers with hedges, trees and bushes adjacent to the highway, and the powers of DCC in this respect, are contained in Section 154 of the Highways Act 1980.
- Where possible, the landowner/occupier should be given the opportunity to undertake the appropriate remedial work and retain ownership of any waste material. However this should be completed within the output risk assessed defect response time provided for inclusion in the correspondence.

1.9 DEFECTIVE ROADMARKS	**Version 5.0 – 1st June 2019**
Investigatory Criteria Faded or missing regulatory lines such as stop lines, double white line systems and parking enforcement lines.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR05 Hway Markings Defective NR06 Hway Studs Defective
Sample Photograph	
Carriageway	**Footway/Cycleway**
Response 1. Undertake defect reporting process. 2. Forward to maintenance for further investigation and assessment. Advice to be sought from Traffic and Safety as required.	
Notes and Further Investigation • Non regulatory lining and missing studs are to be identified for lining and stud programmes and should be forwarded to maintenance for further investigation and assessment. • Major junction lining faults to be passed to Area Manager.	

1.10 DEFECTIVE IRONWORK	**Version 5.0 – 1st June 2019**

Investigatory Criteria

A missing or broken cover to any chamber/box. A collapsed or collapsing chamber. A high or low cover or frame when the cover within the frame or the frame itself, is above or below the immediate surrounding carriageway level by 40mm or greater. A rocking cover when the rocking is greater than 40mm. A grating where the slots run parallel to the carriageway edge without lateral infill members. A slippery cover within an area of high friction surfacing.

Minimum criteria where applicable

Carriageway	High/low or rocking cover +/- 40mm.
Footway & Cycleway	High/low or rocking cover +/- 20mm.

SAMS Codes:	**Carriageway**: RC16 Cway Service Cover Defective, RC17 Cway Gully Missing Lid, RC18 Cway Gully Broken Lid, RC19 Cway Ironwork Defective **Footway**: RF10 Fway Service Cover Defective, RF11 Fway Gully Missing Lid, RF12 Fway Gully Broken Lid, RF13 Fway Ironwork Defective **Statutory Undertakers**: IC16 Apparatus, IC17 Apparatus-Escalation

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. If related to statutory undertaker's equipment follow New Roads and Street Works Area (NRSWA) Section 81 Defective Apparatus Process Map.

Notes and Further Investigation

- Rocking covers in urban areas that move less than 40mm but under traffic cause noise levels unacceptable to persons living in the vicinity, are not a safety defect but should be rectified as soon as possible, using the Section 81 notice if appropriate.
- The footway investigatory criteria will be applied to a carriageway at defined pedestrian crossing points, or where pedestrians are encouraged to cross, or where there is a marked cycle lane on the carriageway, or where there is a high risk to cyclists on the carriageway.

1.11 DEFECTIVE CATTLEGRIDS	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Any damage to the cattle grid panel or structure or a loose panel, rendering it dangerous; or damage to the associated fence or gate rendering it dangerous or not stock proof or when the voids between the bars are clogged up with debris to the point that stock can walk across without impediment.

Minimum criteria where applicable

Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR07 Cattle Grid Defective

Sample Photograph

Carriageway

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.

Notes and Further Investigation

- Contact the landowner to remove stock if required, or request that stock is removed to enable side gates to be used if practicable.

1.12 DEFECTIVE OVERHEAD CABLES	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Low cables across carriageways, footways and cycleways.
A supporting pole or structure that is damaged or leaning dangerously, adjacent to the highway that could fall on to it or affect the cable it is supporting across the highway.

Minimum criteria where applicable

Carriageway	Vertical clearance to lower than 5m (16' 6'') (Chapter 4 Traffic Signs Manual) Cycleway – vertical clearance to lower than 2.3m (7”6’)
Footway & Cycleway	Footway - vertical clearance to lower than 2.1m (6' 10'') Cycleway - vertical clearance to lower than 2.3m (7' 6'')
SAMS Codes:	UR01 Overhead Wires - Dangerous

Carriageway

Response

1. Undertake defect reporting process.
2. If related to statutory undertaker’s equipment follow New Roads and Street Works Area (NRSWA) Inspector to instigate Section 81 Defective Apparatus Process Map.
3. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.

Notes and Further Investigation

- The height of a cable should be estimated and under no circumstances should it be actually measured by highway inspectors. Measurements should only be taken by a person holding a valid proximity permit.

1.13 DEFECTIVE ROADWORKS SIGNING	**Version 5.0 – 1st June 2019**
Investigatory Criteria Any roadworks signing (including DCC or Statutory Undertakers works, or at scaffold or skips sites) that is not in accordance with Chapter 8.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	Through enquiry system
Sample Photograph	
Carriageway	**Footway/Cycleway**
Response 1. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function. 2. Undertake enquiry reporting process.	
Notes and Further Investigation • Inspectors should contact the Highways Hub or NRSWA Inspector during office hours to report inadequate signing or guarding. Determine if a Section 65 notice is required.	

1.14 OBSTRUCTIONS – MATERIALS, GOODS, EQUIPMENT AND SIGNS	**Version 5.0 – 1st June 2019**
Investigatory Criteria Materials, goods, canopies, equipment or illegal signs that impede or obstruct pedestrians/cyclists, or restrict visibility	
Minimum criteria where applicable	
Carriageway	Vertical clearance to permissible overhanging signs or banners of less than 5m for carriageway
Footway & Cycleway	Vertical clearance to overhanging signs or banners on a footway of less than 2.1m or 2.3m on a cycleway
SAMS Codes:	**Carriageway**: RC20 Cway Obstruction **Footway**: RF14 Fway Obstruction

Sample Photograph

Carriageway

Footway/Cycleway

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function .

Notes and Further Investigation

- Where a notice is required, a Section 148 depositing anything whatsoever on the highway notice must be issued.
- Banners over the highway must be authorised under the ‘Conditions for Erection of a Banner over the Public Highway’.

1.15 CRACKS AND GAPS	**Version 5.0 – 1st June 2019**
Investigatory Criteria A crack or gap meeting the dimension criteria below:	
Minimum criteria where applicable	
Carriageway	Void is greater than 40mm deep, 20mm width and 200mm in length
Footway & Cycleway	Void is greater than 20mm deep, 20mm width and 200mm in length
SAMS Codes:	**Carriageway**: RC21 Cway Cracks and Gaps **Footway**: RF15 Fway Cracks and Gaps

Sample Photograph

Carriageway	**Footway/Cycleway**	

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Repair as appropriate.

Notes and Further Investigation

- This defect does not apply to a kerb. For defects relating to kerbs see defect 1.28 Damaged Kerb/Channel.
- This defect is usually caused by the loss of mortar or the movement of flags and pedestrians may catch their heel or toes in the void.
- The footway investigatory criteria will be applied to a carriageway at defined pedestrian crossing points, where pedestrians are encouraged to cross, where there is a marked cycle lane on the carriageway or where there is a high risk to cyclists on the carriageway.
- If defect forms part of possible NRSWA reinstatement failure contact NRSWA inspector to establish if within guarantee period. If it is confirmed within period record use code IT03 if not record as above response.

1.16 ABRUPT LEVEL DIFFERENCE/TRIP	**Version 5.0 – 1st June 2019**
Investigatory Criteria An abrupt level difference in the carriageway when it has a vertical displacement. A sharp edged defect on a footway/cycleway with a vertical deviation. For issues with Kerbs please see 1.28 Damaged Kerb/Channel.	
Minimum criteria where applicable	
Carriageway	Void is greater than 40mm deep
Footway & Cycleway	Void is greater than 20mm deep
SAMS Codes:	**Carriageway**: RC22 Cway Trip Hazard **Footway**: RF16 Fway Tactile Slabs Trip Hazard RF17 Fway Trip Hazard
Sample Photograph	
Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Repair as appropriate on footway/cycleway.
4. Forward to relevant department for further investigatory work/assessment if required, i.e. structures.

Notes and Further Investigation

- Examples of this defect include: uneven or broken flags, blocks, paviours; channels or edgings; damaged steps.
- The footway minimum dimensions will be applied to marked pedestrian crossing points within the carriageway, e.g. pedestrian crossings and pedestrian phase signalled crossings.
- If defect forms part of possible NRSWA reinstatement failure contact NRSWA inspector to establish if within guarantee period. If it is confirmed within period record use code IT03 if not record as above response.

1.17 ROCKING FLAG	**Version 5.0 – 1st June 2019**
Investigatory Criteria A moving flag, paviour, block or channel where on edge rises or falls.	
Minimum criteria where applicable	
Carriageway	Greater than 40mm
Footway & Cycleway	Greater than 20mm
SAMS Codes:	**Carriageway**: RC23 Cway Modular Defective **Footway**: RF18 Fway Modular Defective
Sample Photograph	
Carriageway	**Footway/Cycleway**
Response 1. Undertake defect reporting process. 2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function. 3. Relay or undertake an action to reduce the risk of a rocking flag.	
Notes and Further Investigation	

1.18 DAMAGED ROAD RESTRAINT SYSTEMS	**Version 5.0 – 1st June 2019**
Investigatory Criteria A length of vehicular restraint system or safety fence, pedestrian guardrail or bridge parapet or retaining wall parapet with obvious impact damage; or missing, loose.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR08 Parapet Defective NR09 Ped Guard Rail Defective NR10 Safety Fencing Defective

Sample Photograph

Carriageway		**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Forward to Traffic and Safety Section (for vehicle restraint system and pedestrian guardrail/Structures (for bridge parapets) for assessment and planned works.

Notes and Further Investigation

- Any debris should be recorded as a separate defect (using 1.4).
- Vehicle restraint systems at railway level crossings and railway bridges must be inspected regardless of ownership and any defects reported to Network Rail as appropriate.
- When damage has been noted to a bridge or retaining wall parapet, the Inspector should contact the Bridges and Structures section or Highways Hub (outside office hours) for action.

1.19 DEFECTIVE BOUNDARY FENCES & WALLS	**Version 5.0 – 1st June 2019**
Investigatory Criteria A length of boundary fence or wall with impact or other damage that would render it dangerous, or ineffective for stock proofing. A fence with an exposed length of tubular metal rail.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR11 Fencing Defective

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Arrange for livestock to be removed from highway immediately.
4. If private fence/wall inform owner.
5. If DCC fence/wall arrange repair.

Notes and Further Investigation

- Any debris should be recorded as a separate defect (using 1.4).
- This defect also applies to a boundary hedge where the stock is straying on to the highway. The maintenance category refers to the carriageway, footway and/or cycleway the boundary fence protects.
- Ownership of the boundary wall should be determined and, in the case of a private wall, the private landowner is informed.
- If a highway wall, report damage to Structures section or Highways Hub (outside office hours) for action. When appropriate use local building control.

1.20 STREET LIGHTS, ILLUMINATED TRAFFIC SIGNS & ILLUMINATED BOLLARDS	**Version 5.0 – 1st June 2019**
Investigatory Criteria Any damage to a streetlight, externally and internally illuminated sign or bollard, where the electricity supply is exposed, or the column or lamp is unstable. An externally or internally illuminated sign or bollard where the illumination does not work.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	**Carriageway**: NR12 Cway Column/Illum-Asset Defect **Footway**: NR13 Fway Column/Illum-Asset Defect

Sample Photograph

Carriageway	**Footway/Cycleway**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Forward to street lighting section for action. If urgent defect then also ring 01629 531588, if no response 01629 538630, then 01629 531932

Notes and Further Investigation

- Under no circumstances should the Highway Inspector attempt to affect a repair.
- Any damage to the road traffic sign that is part of an illuminated or non-illuminated bollard should be noted as a damaged road traffic sign.

1.21 DEFECTIVE ROAD TRAFFIC SIGNS AND POSTS	**Version 5.0 – 1st June 2019**
Investigatory Criteria Any regulatory/mandatory sign or warning signs relating to bridges, level crossings and deviation of route (bends) that is damaged, missing, faded, obscured or covered in dirt/algae. Any type of sign or bollard that is a danger to road users.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR14 Hway Sign Defective NR15 Hway Sign Obscure/Dirty NR16 Bollard Non-Illum Defective

Sample Photograph

Roadside

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.
3. Forward to Traffic and Safety Section for assessment.

Notes and Further Investigation

1.22 DEFECTIVE PERMANENT TRAFFIC SIGNALS	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Any defect on any type of permanent traffic signal, zebras, vehicle activated signs and flashing amber warning lights including traffic signal heads which are out of alignment and therefore not visible to highway users. Electrical or control boxes that are open or tampered with.

Minimum criteria where applicable

Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR17 Traffic Signals Defective

Sample Photograph

Roadside

Response

1. Undertake defect reporting process.
2. Forward to traffic signals for action.
3. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function.

Notes and Further Investigation

1.23 DAMAGED STEPS	**Version 5.0 – 1st June 2019**
Investigatory Criteria A sharp edged defect with a vertical deviation from the adjacent surrounding area.	
Minimum criteria where applicable	
Carriageway & Cycleway	N/A
Footway	20mm
SAMS Codes:	RF19 Fway Steps Defective
Sample Photograph	
Footway 	
Response 1. Undertake defect reporting process. 2. If required either: sign and guard area or close footway or stay with defect to reduce risk if safe to do so using the Fix Now function.	
Notes and Further Investigation	

1.24 DAMAGED HANDRAILS	**Version 5.0 – 1st June 2019**
Investigatory Criteria A loose or broken handrail.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR18 Hand Rails Defective
Sample Photograph	
Footway/Cycleway	

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function .

Notes and Further Investigation

1.25 DEFECTIVE ESCAPE LANES/ARRESTER BEDS	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Any obstruction in the vicinity of the lane. Weeds or compacted/uneven/lack of/contaminated material which prevent the effect of the arresting capability of the material.

Minimum criteria where applicable

Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR19 Esc Ln/Arrest Bed Defective

Sample Photograph

Roadside

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close escape lane/arrester bed or stay with defect to reduce risk if safe to do so using the Fix Now function .
3. Investigate permanent repair.

Notes and Further Investigation

- During the winter service period, consideration must be given to applying salt to the arrester bed material to prevent freezing.

1.26 CARRIAGEWAY/FOOTWAY/CYCLEWAY DETERIORATION	**Version 5.0 – 1st June 2019**

Investigatory Criteria

Includes spalling, depressions, bumps and rutting. The void from missing or sunken preformed flags, slabs, channels or paviours, pre-formed modules

Minimum criteria where applicable

Carriageway	40mm
Footway & Cycleway	20mm

SAMS Codes:	**Carriageway**: RC24 Cway Deterioration <= 20 Sqm, RC25 Cway Deterioration >20 Sqm, RC26 Cway Subsidence **Footway**: RF20 Fway Deterioration <=20 Sqm, RF21 Fway Deterioration >20 Sqm, RF22 Fway Subsidence

Sample Photograph

Carriageway

Footway

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function .
3. Investigate permanent repair.
4. Forward to relevant department for further investigatory work if required, i.e. structures - if defect is in the vicinity of a structure which could be the underlying cause.

Notes and Further Investigation

- For some carriageway defects it may not be possible to complete a permanent repair within the required risk assessed defect response time due to the size and location of the defect. In these cases an interim response should be provided, such as providing warning signs on the approaches to the defect, or minor patching within the risk assessed defect response time. A request for a permanent repair should be forwarded to the area district manager where further investigation should be undertaken for possible inclusion in the forward works programme.
- The footway investigatory criteria will be applied to a carriageway at defined pedestrian crossing points, or where pedestrians are encouraged to cross, or where there is a marked cycle lane on the carriageway, or where there is a high risk to cyclists on the carriageway.
- If defect forms part of possible NRSWA reinstatement failure contact NRSWA inspector to establish if within guarantee period. If it is confirmed within period record use code IT03 if not record as above response.

1.27 DEFECTIVE TRAFFIC CALMING FEATURES	**Version 5.0 – 1st June 2019**
Investigatory Criteria Missing or loose sections within constructed and modular calming features or missing or proud bolts within a modular traffic calming feature.	
Minimum criteria where applicable	
Carriageway	40mm
Footway & Cycleway	20mm
SAMS Codes:	NR20 Traffic Calming Defective

Sample Photograph

Carriageway

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road or stay with defect to reduce risk if safe to do so using the Fix Now function .
3. Forward to Traffic and Safety Section for further investigation and assessment.

Notes and Further Investigation

1.28 DAMAGED KERB/CHANNEL	**Version 5.0 – 1st June 2019**
Investigatory Criteria (a) within a pedestrian or tactile crossing point. (b), all other locations.	
Minimum criteria where applicable	
a) Pedestrian or tactile crossing point	Missing/damaged/rocking - 20mm
b) all other locations	Each location to be risk assessed
SAMS Codes:	**Carriageway**: RC27 Cway Kerb Defective (code to be used if no footway present) **Footway**: RF23 Fway Kerb Defective (code to be used if footway present)

Sample Photograph

Pedestrian or tactile crossing point	**All other locations**

Response

1. Undertake defect reporting process.
2. If required either: sign and guard area or close road/footway/cycleway or stay with defect to reduce risk if safe to do so using the Fix Now function. Investigate permanent repair.
3.

Notes and Further Investigation

1.29 STREET FURNITURE	**Version 5.0 – 1st June 2019**
Investigatory Criteria Damage to parking meters, speed cameras, grit bins, bus stop related equipment, public rights of way equipment.	
Minimum criteria where applicable	
Carriageway	N/A
Footway & Cycleway	N/A
SAMS Codes:	NR21 Parking Meters Defective NR22 Grit Bin Defective NR23 Safety Cameras Defective NR24 Public Transport Defect NR25 Defect on Right of Way

Sample Photograph

Roadside

Response

1. Undertake defect reporting process.
2. If required, sign and guard area or close road/footway/cycleway to reduce risk if safe to do so using the Fix Now function.
3. Forward to Highways Hub/Public Transport Unit/Public Rights of Way for notification to relevant body for repair to be completed.

Notes and Further Investigation

- Liaison may be required with Traffic Signals/Street Lighting.