



Highway Inspections Guidance Manual

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1. Background

- 1.1** Section 41 of the Highways Act places a statutory duty upon Dorset Council, as the local highway authority, to maintain the highway network to safe and serviceable standards.
- 1.2** Hazards & defects affecting the safety and/or the serviceability of the highway network can be identified through various routine highway maintenance operations such as scheduled safety inspections, ad-hoc inspections carried out in response to public enquiries and during cyclical maintenance activities e.g. gully emptying. In addition, emergency events such as road traffic collisions or fallen trees can also compromise the safety of the highway user.
- 1.3** In order to assist those undertaking routine highway maintenance operations the Dorset Highways – Code of Practice for the Classification of Highway Safety Hazards and Defects (COP) provides detailed information for all hazards & defects- from definitions & investigatory levels to sample photographs and recommended treatments.
- 1.4** This CoP also introduces a risk assessment process for determining an appropriate response to each hazard or defect consistent with national guidance on best practice set out in the Road Liaison Groups ‘Well Managed Highways Infrastructure’.

2 Introduction

2.1 This document is intended as a procedural guide for all employees involved in Highway Safety Inspections, of Dorset Council’s highway network. It covers only highway safety inspections and does not attempt to address more detailed inspections and condition surveys.

2.2 This Guidance Manual is to be used in association with Dorset Highways: Code of Practice for the Classification of Highway Safety Hazards and Defects.

3 Implementation & Review

The distribution and subsequent revisions of this document are controlled under Dorset Highways Quality Management System.

4. Inspection Regime

4.1 Inspections are undertaken as an Enhanced Safety inspection. It should be noted that they are in addition to any: -

- Structural Maintenance visual inspections, i.e. CVI and DVI.
- Machine/camera-based surveys, e.g. SCRIM, Deflectograph, and SCANNER
- Streetworks inspections
- Ad-hoc inspections in response to specific service requests
- Other Specialist Inspections, e.g. trees, bridge/structures, lighting columns
- wet weather inspections etc

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NB Safety defects resulting from any of the above must be reported and dealt with under the appropriate procedure.

4.2 Enhanced Safety inspections are carried out to ensure that, as far as is reasonable, the safety of the public is not jeopardised by the condition of the highway. They are designed to identify those defects likely to create an immediate and/or imminent danger to the public and which require either immediate or essential work to be undertaken. Hazards are rectified according to their urgency – this could be within 2 hours for emergency hazards or up to 28 days after identification for less urgent defects.

4.3 In addition to highway inspections, inventory surveys can be undertaken to identify and record the Authority’s highway assets. The surveys are carried out on newly adopted sections of highway or when an existing section is altered/improved.

The inventory data collected is used for cyclical maintenance and asset management strategies, as well as for determining the activities requiring detailed inspection for all road sections.

4.4 Under section 58 of the 1980 Highways Act, the highway authority can use a “Special Defence” in respect of action against it for damages for non-repair of the highway if it can prove that it has taken such care as was reasonable. Part of the defence rests upon: *“whether the highway authority knew , or could reasonably have been expected to know, that*

the condition of the part the highway to which the action relates was likely to cause danger to users of the highway” This is where highway authorities have to show that they carry out highway safety inspections in accordance with their policies and national guidance

5. Highway Network

- 5.1** The highway network comprises roads split into links and sections, each of which is assigned a maintenance hierarchy type, i.e. a Maintenance Category (MC). This relates to its importance for transportation and usage. Footways and cycleways have their own categories (FCs & CWs)) and are thus in addition to carriageway hierarchies. Therefore, a large percentage of road sections have an MC, FC, and CW classification. For both the carriageway, footway, and cycleway respectively.

Carriageways without an adjacent footway and footways without an adjacent carriageway (the latter typically called 'linked' footways and usually found in urban areas), have only one MC or FC associated classification. Cycleways without an adjacent footway or carriageway are cycle tracks and typically found across open land or parks.

- 5.2** Cycle ways (as set out in their separate hierarchy table) will be subject to the same investigatory levels as footways.
- 5.3** Carriageways will be subject to the same investigatory levels as Footways at all defined pedestrian crossing areas (See section 4, in the code of practice for the Classification of Highway safety Hazards (CoP) for a more detailed definition).
- 5.4** The detailed definitions of each hierarchy classification, as they appear in the current Highway Maintenance Policy document, are detailed in the table 6.1.

6. Inspection Frequencies

6.1 The inspection frequencies within Dorset are detailed in the table below.

Carriageway hierarchy

DC Network Hierarchy	Annual inspection Frequency	Hierarchy Description	Road Type	Detailed Description
2	12	Strategic Route	National primary, county, regional and freight routes	Roads forming the strategic backbone of the County's network, catering for heavy goods vehicles and longer distance traffic. Connecting the county to adjoining counties and the national road network.
3	12	Main Distributor	Heavily trafficked routes, freight and major bus routes	Roads connecting the larger towns and industrial estates to each other and to the strategic routes
4	12	Secondary Distributor	Other heavily trafficked routes	Important links in the network connecting towns and larger villages.
5	4	Local Distributer	Roads connecting villages to the distributor road network	Roads within towns and urban areas and rural roads that connect the larger villages and industrial estates to the distributor network.
6	1	Collector Road	Roads connecting villages to the distributor road network	Roads serving villages, connecting communities and smaller industrial estates to the distributor network.
7	1	Minor Collector Road	Minor roads serving hamlets with 6 or more properties	Roads providing access to 6 or more properties in both urban and rural areas.
8	1	Minor Access Road	Minor roads serving 5 or fewer properties	Roads providing access to 5 or fewer properties and farms.
9	0	unpaved	Adopted highway that's is unpaved/unmetalled.	Tracks that have not been paved to a recognised standard.

Footway Hierarchy

DC Network Hierarchy	Annual inspection Frequency	Hierarchy Description	Detailed Description
1	12	Strategic footways	Footways within urban areas that contain 10 or more shops or businesses in close proximity. Footways that are contiguous with significant supportive community infrastructure i.e. hospitals, schools, and major transport terminals.
2	4	Distribution footways	Footways linked to network sections that contain additional contiguous category 1 footways or footways that are contiguous to areas of 5 or more shops or businesses in close proximity.
3	2	Secondary distribution/ busy local access footways	Local pedestrian routes within urban areas; and main pedestrian routes in rural and sub-urban areas with adjoining public amenity infrastructure e.g. post office, village shop etc
4	1	Local access footways	Footways providing primary access to groups of 10 or more properties
5	0	Adopted highway that's is unpaved/ unmetalled.	Footways that have not been paved to a recognised standard.

Cycleway hierarchy

DC Network Hierarchy	Annual inspection Frequency	Hierarchy Description	Detailed Description
1	Inspected as part of associated Asset	Cycle lane	A part of the carriageway allocated for use by cyclists. Includes areas delineated by a kerb line or other physical feature.
2	Inspected as part of associated Asset	Cycle lane	A part of the carriageway allocated for use by cyclists. Includes areas delineated by road markings or by delineation on the surface.
3	Inspected as part of associated Asset	Cycle track	A track over which the public have a right of way on pedal cycles that does not form part of a carriageway, but which can be within a highway that includes carriageway. This would include shared footway/ cycleway provision with or without segregation.
4	1	Remote Cycle track	Cycleways and shared pedestrian/ cycleways that are not contiguous with the carriageway. Those that go across open land or through parkland.
5	0	Adopted highway that's is unpaved/	Cycleways that have not been paved to a recognised standard.

		unmetalled.	
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6.2 Additional Information: -

a) If a single section of road is bordered by a footway(s), then the higher hierarchy for inspection is deemed to apply to both the carriageway and footway and for all of the other separate occurrences of footway along the Section.

b) The annual programme of inspections is created to ensure that all sections are inspected at the designated frequency. The schedules must be programmed to provide an acceptable interval between each inspection throughout the year. In this way the hierarchy '1' footways are to be inspected at a one monthly interval throughout the year. The pattern of inspections should be consistently applied to consecutive years so that the inspection intervals are maintained year on year. It is important to ensure that those sections, which are inspected twice a year, are programmed for approximately the same period in consecutive years to maintain the inspection pattern.

c) Cycleway inspections are to be included with the adjacent carriageway inspection for 'cycle lanes' and included with the adjacent footway inspection for 'shared cycle/footways'.

d) When carrying out scheduled inspections for any road category/type, it is realised that keeping exactly to the programmed interval between inspections would be extremely difficult, if not impossible. Therefore, an agreed tolerance (as set out in the table below) between an inspection and its scheduled inspection date is deemed reasonable and acceptable. This is in line with national recommendations. The performance indicator measures, calculated monthly, are to use this agreed tolerance.

Annual inspection frequency's	Tolerance in calendar days
12	+/- 5 Days
4	+/- 10 Days
2	+/- 20 Days
1	+/- 30 Days

7. System Procedure and Security

- 7.1** Dorset Highways provides the Inspection Service for all of the Dorset Council administrative area with the exception of the A35/A31/A303 Trunk Road
- 7.2** Each member of staff required to carry out inspections and/or to administer the inspection system and the issuing and managing of work, must be defined within the 'Highways by Confirms' system. Security shall be maintained by allocating each Inspector/Technician/Manager a Username login based upon their initials, together with an appropriate and unique password. The combination of name and log-in details is also used to determine which Inspector carried out an inspection and how the results were entered into the system, either manually or electronically.

8. Inspection Arrangements

- 8.1** Where a location/section/inspection type requires two members of staff, then the responsibility for the inspection is to be taken by one person defined as the Inspector and the second acting as the assistant or '2nd Inspector'. On occasions where only one person is involved, then that person shall be deemed 'The Inspector'.
- 8.2** Any inspections carried out as observations from a vehicle shall require two members of staff, with the passenger/observer defined as the Inspector and the driver as the assistant. Inspections carried out on foot will generally only require one person, designated as the Inspector. However, any road section where there is a combination of car travel and walking and/or where there are walked inspections with footways on either side of the carriageway, an assistant may be required.
- 8.3** The hierarchy '1' and '2' footway inspections must be carried out on foot. In addition, footways that have a slabbed or modular surface shall be carried out on foot. Generally, all other footways will be inspected from a vehicle except where visibility is obstructed. If, in circumstances due to parked vehicles or other obstructions where the Inspector(s) is unable to see the footway(s) clearly, then the obstructed section must be walked.
- 8.4** Carriageways adjacent to Type '1' and '2' footways shall be inspected at the same time as the adjacent footway inspection (thus sometimes receiving an increased frequency of inspection than the actual carriageway MC would require).
- 8.5** All Linked Footways shall be inspected on foot.

- 8.6** Usually, FC Type '4' footway inspections are carried out from a car during the same inspection as the adjacent carriageway. During these inspections, there will inevitably be occasions when parked vehicles obstruct the view of the footway. If, in the opinion of the Inspector, the hidden footway is prone to damage or has other relevant importance, i.e. elderly persons' home, a school etc in close proximity, then the inspection of that area of footway shall be undertaken on foot.
- 8.7** Cycleway inspections to remote cycle tracks/ cycle tracks (hierarchy 3 and 4) may be carried out by foot or on a cycle. If carried out on a cycle, then it should be ridden at a slow speed to ensure that it is done in a safe manner and that all safety defects are observed.
- 8.8** The following maximum speeds have been defined for inspections carried out from a moving vehicle: -
- a)** Rural carriageway inspection (including 'combined' carriageway, cycleway, and footway inspections) - 20 mph.
 - b)** Urban inspections (carriageway, footway, cycleway or 'combined') - 15 mph.

9. Inspection Data

- 9.1** All Highway inspection data files are validated to ensure that links/sections and describing codes activities/Defects/Treatments are correct before being transmitted to the designated network server.
- 9.2** DC has commissioned Confirm as the HMMS. With this systems tool in place, it has been necessary to convert all old road section ID's to the National Street Gazetteer (NSG) reference. The NSG is a centralised unique referencing system, designed to improve the relationship between local authorities and utilities. Its fundamental aim is to make the street works process more convenient to the citizens who use them. For example, the 1200A30W/00290, is now known as the i/A30/210.
- 9.3** Confirm Connect provides the DC Inspection team full mobile working. The Inspection team operate with mobile tablet devices for their enhanced safety inspections. This enables DC to send defects to the relevant agent/ scheduler immediately which in turn is sent to the gangs to repair. Any other unscheduled inspection files, e.g. 'Ad Hoc' shall also be treated and loaded in the same way.
- 9.4** Defects not recorded correctly will not be sent, until corrected. These defects are forwarded to the 'Jobs not committed from Inspections' file, in the area team leader Dashboard. The area team leader will then investigate and correct, before forwarding on to be processed.

9.5 Unprocessed data files for all inspection types are the responsibility of the organisation carrying out the inspection and shall be suitably stored, unaltered for a period of six years and, if required, made available for authorised use as and when required.

10. Auditing Arrangements

10.1 The area team leaders routinely audit inspection quality twice a year unless concerns are raised about a particular route or inspector. In such cases audits will be increased to a suitable level until the issue has been resolved. Information relating to the timeliness of inspections is provided by the data team monthly. The information provided by the team leaders and the data team are presented and discussed at monthly (or otherwise) management meetings.

10.2 From time to time, information and data may be required for service improvement and efficiency saving purposes. In the main, the statistics will be obtained from the Highway Maintenance Management Systems and may be supplemented with additional Quality Inspection data to ensure on-going compliance with the requirements of this manual and the Council's Highway Maintenance Policy.

11. Inspectorate

11.1 Inspectors shall be suitably experienced and competent to carry out the tasks of highway inspections as described in this manual. They shall have a good working knowledge of relevant inspection procedures, safety requirements, together with knowledge of the appropriate inspection equipment and software. They shall also be conversant with the relevant parts of the DfT's 'Chapter 8 - Traffic Signs Manual', highway working practices and ideally has undertaken Institute of Highways Engineers (IHE) accredited training and be registered on the IHE website.

11.2 Inspectors shall carry out inspections in a uniform manner and to a uniform standard across the County. This is particularly important when deciding on a suitable category and treatment of repair for the defect or observation. If the parties responsible for the issue and/or repair of the works consider that the selection of any item or treatment code is incorrect, then full details of the correct information shall be passed to the Inspecting teams for future reference.

11.3 The person undertaking the inspection is responsible for the accuracy of that inspection. In certain circumstances, that person may be called into Court to substantiate their inspection results.

12. General Guidance for Non-Safety Observations

12.1 Non-safety observations are recorded for the purposes of bringing the condition to the attention of those responsible in order for further investigation(s) to be carried out. They are of a non-urgent nature but if left and not treated, could lead to serious disruption or deterioration. There is not an expectation that all potential observations will be identified, particularly on sections of the network subject to a driven inspection.

13. Find, Record, Repair and Completion of a Defect

With the introduction of Highway Inspection Vans, the Inspectorate now have the facility to repair defects they may find. This gives Dorset advantages in such ways as efficiency and speed of repairs. Although to carry out such a repair the protocol below must be followed.

14. Asset Inspection Defect Repairs Protocol

It has been decided that on category 4 to 9 carriageways, cycleways and 1 to 4 footways, that the inspector can carry out repairs to any defects found if they have facility to do so.

In order that this can be achieved, the inspector will be carrying in each van, at the start of each day.

- signs and cones for traffic management,
- cold lay material, for bituminous repairs
- Shovel and brush
- Pruning saw and loppers to remove any overhanging vegetation

All inspectors will have been on a manual handling and Chapter 8 course before they undertake repairs and will have all relevant PPE.

When finding a defect, the inspector will firstly record the defect, and then assess if it is to be repaired by the following checks

- **Will the site conform to Chapter 8?**

i.e. is there adequate visibility to be seen, is the traffic count and speed of traffic too high, is the carriageway wide enough to allow passing traffic

safely and is there a safe place to park while setting up site. (Always refer to the risk assessments and safe working practices)

- **Are weather conditions safe to carry out the repair?**

i.e. if foggy can you be seen, in wet weather are stopping distances and visibility affected, is it too cold to apply materials

- **Do I have time to repair the defect?**

There must be time to carry out the repair without compromising the inspection frequencies or other community work.

- **Do I have the correct/enough materials and tools for the repair?**

Inspectors will not be expected to return to depots for more materials, this will result in a greater loss of time. Never undertake a job if you do not have the correct equipment.

If all four can be answered 'yes' then the repair can take place and recorded that the defect has been '*Repaired by Highways Inspector*', with the works order being completed.

All potholes will be filled with a cold lay material, which can constitute a permanent repair. Also placing a cone on a defect can constitute a temporary repair, thus reducing the need for a call out.

An inspector repairing, immediately, a category 1 defect, minimises any potential for an accident to occur, within the 32 hours allocated for its repair. This principle can then be applied to 2a and 2b defects, especially if these defects are remote, from the area depots.

It is important to note that the completion of routine inspections on schedule is imperative and any degree of 'find and fix' would need to be balanced with work demands. For example, if an officer were to encounter, say 20 defects, in a section, it is feasible that they could repair them all, but in doing so could jeopardise the completion of the scheduled inspection and community work.

This process enhances, an already robust inspection procedure, and as long as the above criteria has been met, there can be no debate as to why some repairs have been undertaken and others not. Either way all defects will still be repaired within their allocated timescales, with the council benefiting from some rapid repairs to which the public will see.

Inspection frequencies must be strictly adhered to and must not be allowed to lapse.

15. Asset Inspections Health and Safety File

All Inspectorate have been issued with the above file. In summary the file contains DC Lone Working Policy, COSHH details, accident reporting, Contact numbers, Risk Assessments, Safe Working Practices, Accident Reporting, and Inspection Duties in Adverse weather conditions.

