



**Clackmannanshire
Council**

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Road Safety Inspection Standards & Procedures 2014



PREFACE

This Clackmannanshire Council Road Safety Inspection Standards and Procedures manual in this first edition reflects the recommendations contained in Well Maintained Highways: the Code of Practice for Highway Maintenance Management (published July 2005).

This manual is for use by operational staff, namely roads officers. It will reinforce the current procedures, particularly for the ongoing safety inspections carried out by this Service. Emphasis is placed on Best Value in responding to the needs of road users (our customers). This requires a systematic approach in identifying the risks that defects pose to these users, and the management of these risks within our network.

This plan identifies our policy and strategy, it shows how our roads are prioritised, the frequencies of inspections that each road section receives and it provides intervention limits to help determine when defects are actioned.

It is important to take account of previous Case Law, involving road authorities and others, where defectiveness of the road is seen as a contributory factor in the judgement.

Road defects have to be prioritised for treatment taking into account the scale of the defect, the location, the prevailing conditions, the traffic or pedestrian flow in the vicinity and an assessment of the risk posed to traffic and pedestrians. Because of this range of factors it is important not to be too prescriptive about setting priorities as the level or risk from a defect can vary dramatically depending upon its location etc. There has to be an element of judgement based on the risk presented by the observed hazard. However, this document provides guidelines for inspections and intervention limits that officers can take into account when assessing priorities.

The standards and procedures contained in this manual will commence into operation from February 2008.

1. ROAD MAINTENANCE POLICY

There is a range of legislation covering all aspects of road maintenance and management. Under the Roads (Scotland) Act 1984, the Council has a duty to maintain all roads within its boundary to an acceptable standard to permit the safe usage of vehicles and / or pedestrians.

Well Maintained Highways (the Code of Practice) provides guidance for inspecting and maintaining roads and footways and defines suitable standards. It encourages the adoption of a Road Maintenance Policy that is consistent with the wider principle of integrated transport, sustainability and Best Value.

This document clarifies the methodology used to inspect and maintain our network to an acceptable standard. Engineering staff will use their best endeavours to maintain the road network to as high a standard as possible in accordance with this policy and within the confines of the available budget.

This policy is part of an overall Roads Asset Management Plan (RAMP) which aims to achieve a sustainable road network, leading to increased standards over time. In situations where budgetary constraints conflict with requirements for sustainability, the safety of the network will take precedent over all other considerations.

The Code highlights that the establishment of an effective regime of inspection, assessment and recording is the most critical component of road maintenance. The characteristics of the regime should be defined following an assessment of the relative risks. The regime is designed to meet the principles and objectives of the RAMP and in particular to:-

- ◆ Comply with legal obligations to maintain the network in a safe condition
- ◆ Establish the extent of outstanding work and funding requirements
- ◆ Monitoring trends in the network, both locally and against national criteria, including Performance Indicators
- ◆ Enable funds to be allocated effectively and priorities set.

Other methods of assessment such as machine collected survey information (Scottish Road Maintenance and Condition Survey) are also used to determine our priorities for maintenance programmes. Schemes are determined following further visual assessments of the road and the proposed programmes are notified to the Member / Officer working group.

This document focuses on standards & procedures for road safety inspections. Additionally, this specification should be used for defects reported by third parties (elected members, police, general public, etc).

2. OBJECTIVES

This Road Safety Inspection regime has been developed in accordance with the recommendations contained in the Code of Practice for Highway Maintenance Management (July 2005), principally sections 9.4 and 9.5. Our regime is set out within a practical and reasonable framework of risk assessment and inspection frequency, which takes account of all road users, including those who are most vulnerable. It aims to set a framework of standards that all staff can adhere to, in order to ensure consistency across the entire network.

Our main objectives are:

- ◆ To locate and identify defects on the public road, and where appropriate, adjacent to the road.
- ◆ To assess the potential risks of damage and / or injury to network users that may result from these defects.
- ◆ To ensure that appropriate measures are put in place to manage the risk.
- ◆ To ensure that the measures are effective in eliminating, or at least minimising the risk.

In practice, making safe, signing and/or repairs should be carried out within the designated time constraints, in order that, as far as is reasonably possible, the condition of the road network is what a reasonable person would expect to find.

This Policy identifies any areas where standards fail to match those specified within the CoP. These differences are required in order that the standards meet those specified within the Policy, given the limitation of available resources.

Please note that this document does not cover procedures to be followed on discovery of defective reinstatements or defective ironwork for which responsibility lies with a Statutory Undertaker (under the New Roads & Street Works Act 1991).

However these defects should be logged (as any other) when discovered during the course of any safety inspection.

2. NETWORK HIERARCHY

A network hierarchy is the foundation of a coherent, consistent and auditable maintenance strategy. It is also crucial to asset management in establishing levels of service and to the new statutory network management role for developing co-ordination and regulating occupation.

It is important that the hierarchy adopted reflects the needs, priorities and actual use of each road in the network. These may be determined by:-

- ♦ importance - e.g. a route leading to school
- ♦ environment – rural, urban, busy shopping street, residential street etc
- ♦ non-vehicular traffic factors such as pedestrian usage.

Footway priorities may conflict with carriageway priorities, therefore it is necessary to define separate footway and cycle route hierarchies.

The approved Code of Practice for Highways Maintenance was updated in July 2005 (Well Maintained Highways) and provides guidance for inspecting and maintaining roads and footways and defines suitable standards.

As part of the SCOTS Asset Management inception project, all Authorities have agreed to adopt the categories used within the hierarchy suggested within Well Maintained Highways, with the proviso that each Authority is able to amend the descriptions to suit their own network. It is recognised that some Authorities may not require to use all the available categories.

Due to the limitation of resources available, Clackmannanshire has altered its adopted hierarchies from those suggested within the Code. Our adopted hierarchies are shown in comparison to those set out within the Code in the tables below.

The priority values (1f, 3f and 4f) used for the footway categories have been extended for database recording functionality.

Route Hierarchy - National and Local

Code of Practice 2004			Clackmannanshire Council			
Carriageways	Cat	Type Of Road		Priority	Sub Cat / Description	Road Type
	2	Principle 'A' roads between primary destinations	Strategic Routes	2	Principle 'A' roads through County	Strategic A class routes (A91 A907 A977)
	3a	Major Urban Network & Inter-Primary Links. Short-Medium distance traffic	Main Distributor	3a	Routes between Strategic Routes and linking towns and villages to the Strategic Network, with relatively short origins and destinations	Other A roads & heavily trafficked B roads
	3b	Classified (B & C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent development	Secondary Distributor	3b	B Class & busier C Class roads and heavily trafficked unclassified urban roads	Remaining B routes, busier urban C routes & routes with high levels of pedestrian usage
	4a	Roads linking between the Main and secondary distributor network with frontage access and frequent junctions	Link Road	4a	Link roads in urban areas and remainder of network with speed limit over 30mph.	More heavily trafficked roads in residential areas and rural routes serving small settlements
	4b	Roads serving limited No's of properties carrying only access traffic	Local Access Road	4b	Roads serving limited No's of properties carrying mainly access traffic	Remainder of network inc residential areas (cul-de-sacs etc)

Route Hierarchy - National and Local

Code of Practice 2004			Clackmannanshire Council			
Footways & Footpaths	Cat	Type Of Road		Priority	Sub Cat / Description	Road Type
	1(a)	Prestige Walking Routes				
	1	Primary Walking Routes		1f	Primary Walking Routes:-	Busy urban shopping areas (10+ units) and main pedestrian routes to public transport links and car parks.
	2	Secondary Walking Routes		2f	Secondary Walking Routes	Medium usage routes feeding primary routes, hospitals, shopping centres and schools
	3	Link Footways		3f	Link footways:-	Linking local access footways through urban areas and busy rural footways.
	4	Local Access Footways		4f	All other footways and link footpaths	Footways with low usage, cul de sacs, and housing areas.

Cycle Route Hierarchy

Category	Description
A	Cycle lane forming part of the carriageway, commonly a strip adjacent to the nearside kerb delineated by lining / special surfacing
B	Cycleway, a route for cyclists not contiguous with the public footway or carriageway and part of the National Cycle Network
C	Cycle trails, leisure routes through open spaces. Not the responsibility of the highway authority.

3. INSPECTION FREQUENCIES

The frequency with which these inspection are undertaken on any part of the network is determined by its position within the hierarchy shown in Section 2, based on the road categories suggested in the Code of Practice.

The basis of establishing the frequency of inspection is the balance between the rate of deterioration of the road and the degree of risk any defect has on road users.

Due to the limited resources available to this Service, the inspection frequencies suggested within the Code require to be altered to ensure that the inspection process and policy is fully achievable. Table 1 shows the adopted safety survey frequencies for the Clackmannanshire network.

Table 1 – Safety Survey Inspection Frequencies

Feature	Category	Reference (Priority)	Frequency
Roads	Strategic Route	2	3 months
	Main Distributor	3a	3 months
	Secondary Distributor	3b	3 months
	Link Road	4a	6 months
	Local Access	4b	1 year
Footways	Strategic Routes	1F	3 months
	Secondary Routes	2F, 3F & 4F	1 year or as for adjacent roads if less and walked
Footpaths	Strategic Routes	1F	3 months
	Secondary Routes	2F 3F & 4F	6 months Every 2 years (alternating with condition survey)
Cycleways	Part of Carriageway	A	As for Roads
	Remote from Carriageway	B	1 year

4. RESPONSE CATEGORIES

Responding to Reports of Defects

All reports of defects should be investigated within one working day from the time that the report was recorded, in normal circumstances. Any defects which are reported as or believed to be urgent / dangerous should be investigated within 2 hours.

Categorising Defects & Response Categories

All defects identified during safety inspections are to be classed as **Category 1** or **Category 2**, in accordance with the recommendations in the Code of Practice. The definitions within the Code are as follows:

Category 1 – Those defects that are deemed by the attending Officer to pose a significant risk to life or limb.

Category 2 – All other defects.

Further explanation of Category 1 defects - are those presenting the highest risk of harm to the public, thus requiring immediate or urgent attention to secure, guard, warn, and / or make safe. Occasionally, the risk to the public of a Category 1 defect will be such that the Roads Officer will remain at the site of the defect until the necessary resources have arrived and the defect secured / repaired to the satisfaction of the Officer.

Response

Correct / repair, guard, warn, or make safe, including temporary repair, within a period **not exceeding 24 hours** from discovery of the defect. It is only in cases where there is a **likelihood** of a threat to life or limb that staff should remain with a Category 1 defect.

A permanent repair is to be completed within 28 calendar days of discovery of a defect where appropriate i.e. unless maintenance / improvement works are planned within a **short** timescale. This timescale should be appropriate to the defect type, location, road / footway classification and usage.

Note: For practical reasons certain permanent repairs (e.g. road subsidence) may take longer than 28 days to plan and complete.

Category 2 defects are to be prioritised into Category 2H, 2M and 2L for purposes of the engagement of resources required to make safe the defect.

Category 2H Response

Category 2H - Defects that require prompt attention because they represent an imminent hazard or because there is a risk of short-term structural deterioration.

Correct / repair, guard, warn, or make safe, including temporary repair, **within 7 calendar days (maximum)** from discovery of the defect. A permanent repair is to be completed within 28 calendar days of discovery of the defect, where appropriate i.e. unless maintenance/improvement works are planned within a **medium** timescale. This timescale should be appropriate to the defect type, location, road/footway classification and usage.

Category 2M Response

Cat 2M – All other defects on Priority 2, 3a & 3b routes (strategic routes and main / secondary distributors) meeting the criteria specified in Section 6. A permanent repair should be carried out **within 28 calendar days**, where appropriate, i.e. unless maintenance / improvement works are planned. Justified customer service requests for defects on Priority 4 routes should also receive a 2M response (or temporary repair within 28 days if resources are inadequate)

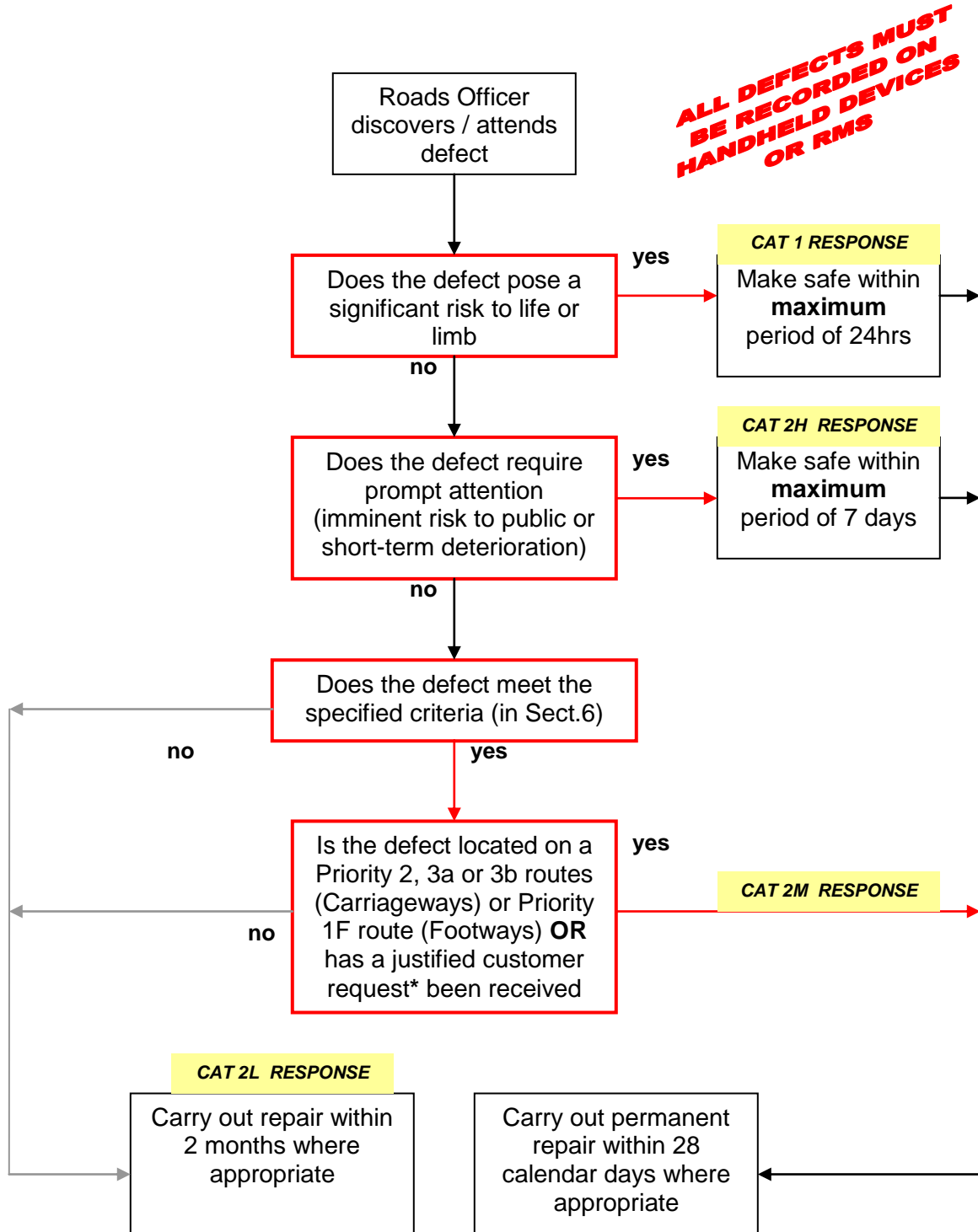
Category 2L Response

Cat 2L - All other defects on all other routes. Normally, these will be made safe within 2 months. However, the Roads Officers may decide to schedule a more detailed inspection, include on a condition survey ranking system, or, if resources permit, correct during the next available works programme.

An assessment of risk is required as part of the Safety Inspections for each observed defect. Categorisation will depend upon:

- ◆ extent of the defect (depth, surface area)
- ◆ location of the defect relative to highway features (bends, junctions, etc)
- ◆ location of the defect, relative to the use by highway users (particularly vulnerable users) such as wheel tracks, cycle lanes, sight lines, cross section of footways
- ◆ relationship to other nearby defects
- ◆ expected weather conditions and seasons

Fig 1 – Flow Chart of Response to Defects



**If a permanent repair to customer request cannot be carried out within 28 days - a temporary repair should be undertaken within this period.*

5. IDENTIFICATION OF DEFECTS

This section sets out the various defects to be identified in a safety inspection. The defects are arranged in groups according to the element of the road in which they occur. The list is not exhaustive and persons carrying out the safety inspections are requested to record any defect that might create a hazard to network users.

It is vital to record inspections where there are no relevant defects found. In other words, the Courts require a NIL return where that is appropriate.

Identification of defects

Element	Defect
Carriageway	Potholes. Loose material (to include debris, spillages or contamination). Regulatory markings faded and worn. Ironwork, missing, broken, tilted, sunken or projecting. Displaced road studs. Edge damage on unkerbed roads. Unevenness due to rutting, humps, corrugations.
Kerbing	Loose, tilted, projecting
Footways and Town Paths	Edgings – rotten, trips or broken. Pre-formed unit paving rocking, trips or missing. Potholes. Ironwork, broken, tilted, rocking, missing or projecting.
Furniture	Rails, barriers, safety fencing, fences, posts missing- excessive defects. Road signs and signals - excessive defects. Unlawful signs – safety hazard.
Trees and Vegetation	On the road – diseased, dead, dangerous all or part about to fall. Off road – safety hazard.
Buildings, Land, Walls and Fences	Abutting the public road – danger to the public.
No defects	No relevant defects found.
External defect	Third party, statutory undertaker defect

(Codes to be completed to match WDM system)

6. IDENTIFICATION OF DEFECT SEVERITIES

The following tables are intended as a guide for inspectors to enable them to identify **defects, which present a foreseeable risk of injury or damage to users of the road network**. It is important to remember that these are minimum standards, and there may be occasions where it is necessary to review the response level appropriate to the defect type and its location, as well as the road / footway classification and usage.

Category 1

Category 1 interventions shall apply to missing or broken gully grates, missing or broken manhole covers, collapse of carriageway or footway, standing water (running lane wide), exposed live electrical apparatus and other immediate dangers to the public or property.

Category 2

Category 2 interventions shall apply to the following indicative level of defectiveness:

<u>Carriageways Defect</u>	<u>Depth</u>	<u>Notes</u>
Pothole/trips/sunken trench	40mm	100mm x 100mm min
Edge deterioration	40mm	100mm min length
Setts/ other modular paving	40mm	Single modular unit
Deformation	50mm	Within 500mm
Ironwork	40mm	High / low / rocking / cracked
Kerbs / Channels displaced / rocking	40mm	From vertical / horizontal alignment 100mm min length
Depressed surface	50mm	Within 1m adjacent to ironwork

Minimum Intervention Levels

* Carriageway defects: 40mm generally but 20mm in Town Centres and other areas of heavy pedestrian carriageway usage (e.g. Crossings, schools, hospitals etc)

<u>Footways & Cycleways Defects</u>	<u>Depth</u>	<u>Notes</u>
Pothole/trips/sunken trench	20mm	50mmx25mm min
Flags / blocks / channels / modular paving	20mm	Single modular unit displaced or rocking
Deformation	50mm level change	Within 300mm
Ironwork	20mm	High / low / rocking / cracked
Depressed surface adjacent to ironwork	20mm	Within 500mm
Tree Roots deformation	20mm	Within 300mm
Street Furniture		

7. RECORDING PROCEDURE

Site Recording Procedure

Safety Inspection results should be recorded with the use of a hand held data capture device. The use of such a device provides the following benefits:

- Data logged electronically in the first instance and uploaded to desktop computer, avoiding need for subsequent manual input.
- Inspection data is automatically date and time stamped to ensure the integrity of the data that is collected.
- Data is logged in a central database and can be used to generate reports detailing the inspection history of a street.
- Defect data is used to generate works instructions to a contractor, providing an audit trail of works.

The current device for recording inspection data is a Toughbook. The following data **must** be selected / recorded for each road inspected:

- The inspection route, the road to be inspected (The name and Unique Street Reference Number are both displayed)
- The Section to be inspected (Each street is divided into sections for maintenance purposes. Each street section requires a separate inspection to be logged)
- Description of defects (A free text description of the defect - e.g. "large pothole")
- Location of the defects (A free text description of where the defect appears on the section of the streets - e.g. "outside no.21")
- Defect Type (The type of defect found, to be selected from a pick list of defect types)
- Condition Assessment data (if applicable)

If no defects are found during an inspection, this information **must** be clearly recorded during the inspection.

All defects found during the survey must be recorded, even if immediate action is taken to rectify the problem. This will assist this Service in investigating, and defending against, any future public liability insurance claims.

8. RECORD KEEPING

Permanent records of safety inspections are to be maintained from the data logged during the inspection and of the action taken to make safe. Records must contain the following basic information:

- Date of inspection
- Road ID
- Road name
- Priority Level
- Location of defect
- Severity of defect
- Defect description
- Response category
- Works order reference and date
- Date work carried out
- Inspector name and reference
- Details of work carried out

Other records will also need to be available from those carrying out and supervising the work of making safe and repair.

In summary, the requirement is to produce all the records that demonstrate that the road authority fulfilled its duty of care in inspecting its network for safety reasons to the specified frequencies and that all work necessary to make the road safe was carried out to its requirements and that of the road user.

9. HEALTH AND SAFETY

Responsibilities

- It is the responsibility of the individual to operate in a manner safe to themselves, to colleagues and to the public.
- It is the responsibility of the employer to train and equip the employee for the task in hand.
- It is the responsibility of the employee to attend all prescribed training and use equipment provided by the employer, whilst carrying out the relevant task.

Procedures can be found in the Service's Health & Safety Policy Documentation.

10. ADDITIONAL INFORMATION ON INSPECTION, MONITORING AND RESPONSE ARRANGEMENTS

Other inspection regimes

Street lamps and columns, internally illuminated road signs and external lighting units, together with traffic signals, pedestrian signals and other control and monitoring installations are generally included for inspection purposes in other maintenance regimes. Nevertheless, the road officer is expected to note and report a potential hazard found during a safety inspection. These examples may include missing or insecure switchgear, access doors and columns or posts leaning to the extent they might be an obstruction to passing vehicular or pedestrian traffic.

Role of the Local Transportation Service

Works affecting the road - works on or adjacent to, the public road may increase the likelihood of localised defects. Where the road authority could reasonably be expected to know of these circumstances and the possibility of increased risk of defects, it should carry out additional monitoring of the relevant road, or part thereof.

These additional monitoring arrangements would reinforce the scheduled safety inspections for the period of the perceived increased risk. Warning notices of the conditions may need to be placed on the length of road in question. Examples of such works might be in connection with:

- Agriculture Mineral extraction
- Buildings demolition Buildings renovation and construction
- Landfill activity Earthmoving

Records of the dates of monitoring of works are to be kept, together with the relevant road details and action taken. Such records will form part of the “ad-hoc” system, which comprises complaints and reports from the public and other agencies.

These requirements are not intended to duplicate inspection and signing already undertaken by the road authority for work by other parties.

Optimising Inspections

Due to the differences in categories between carriageways, footways and cycle ways, it becomes necessary in many instances to inspect each element at different times. However, there will be instances where the frequencies for each

are the same. These elements may thus be inspected at the same visit. For example, where a Priority 1 road forms part of a primary walking route and both carriageway and footways are subject to 3 monthly inspections.

Officers must report any observed hazardous defects on those sections of the public road, which are not part of their current inspection route.

Those defects observed by other members of staff and the public through the Contact Centre, must be verified before issuing a works order to Contract Services (where appropriate).

Inspection Procedures

Urban footway safety inspections (Priority 1F) should be carried out on foot or by bicycle. Generally, Category 2F+ footways will be inspected by the officers preferred means, except where there are other practical difficulties (where routes should be walked or cycled). All carriageway safety inspections and footway inspections (on predominately rural routes) can be driven. At least once per annum all carriageway inspections in busy urban areas should be carried out on foot or by bicycle.

Footway defect standards should be applied to mixed movement areas in housing estates and carriageways adjacent to high use primary footways, as defined in the footways hierarchy. The latter will be limited to important urban centres where pedestrians make extensive use of the carriageway.

During walked inspections of the footway, the opportunity should be taken to check under vehicles in parking areas for obvious defects.

Definition

Urban – under normal circumstances 40mph or less, but this has to be considered in conjunction with evidence of development / built-up areas.

Temporary Repairs and Making Safe

All temporary repairs should remain in place, and be able to perform satisfactorily until a permanent replacement repair, or other planned works, can be completed. All arrangements to make safe must be robust and secure, and generally in accordance with current standards.