



Environment Department

Roads and Transportation Service

Safety Inspection Procedures and Guidance

March 2014

Ver. 1

Contents

- 1 Introduction
- 2 Legal obligations for inspection and maintenance
- 3 Objectives of safety inspection
- 4 Principles of service delivery
- 5 Types of road inspections
- 6 Safety inspection regime
- 7 Network hierarchy and inspection frequency
- 8 Safe working practices
- 9 Inspection procedure
- 10 Items for inspection
- 11 Degree of deficiency
- 12 Speed and nature of response
- 13 Recording and ordering works
- 14 Works completion and confirmation
- 15 Monitoring and review

Appendices

- A Descriptions of road categories

Safety inspections Procedures and guidance

1 Introduction

1.1 This manual defines the standards for inspections on the public roads of East Renfrewshire Council together with the nature and priority of response to defects encountered. It is intended to provide guidance for all staff engaged in condition inspections. For convenience the general term 'inspector' has been used to cover all those involved in reporting process irrespective of their actual job title. The formal inspections undertaken by the technical staff will be covered by the term "Inspector".

1.2 There will be some circumstances not explicitly covered by the manual and Inspectors will require to use their best judgement in relation to assessing the risk and potential consequences resulting from the presence of the defect with regard to the necessary response based upon the principles set out in this manual.

1.4 Recording details of all inspections promptly, including 'nil returns', together with action taken, is essential as such information will be needed in the event of any legal action against the Council for alleged failure to maintain. The completeness and accuracy of the records are crucial.

1.5 This manual also acknowledges the guidance contained in Well-maintained Highways the Code of Practice for Highway Maintenance Management (published by The Stationery Office (TSO) – ISBN 0 11552 643 9) in July 2005, the principles and recommendations of which are applied by East Renfrewshire Council. Any reference in this document to the 'Code of Practice' is a reference to that document.

1.6 As part of the introduction of this manual, the details of its contents have been delivered to our Inspectors to ensure the consistent application of the procedures and standards as set out in the manual. In addition it is expected that each Inspector will attend a specific course tailored in relation to Safety Inspections.

2 Legal obligations for inspection and maintenance

2.1 The legal obligations of the Council, as local roads authority, are defined by Section 1 (1) of the Roads (Scotland) Act (R(S)Act)1984. This places a duty on the Roads Authority to manage and maintain the roads included on the list of 'public roads' which it is required to compile.

2.2 The safety inspection regime is applied to public roads. These roads are the roads included in the list of public roads as defined in Section 151 of the R(S)A .

2.3 This manual is intended to provide guidance for Inspectors on all aspects of the safety inspection regime as applied to public roads. In particular its aim is to encourage clarity and consistency of standards and processes. These are key requirements in providing a high level of service delivery and preventing or defending claims for alleged failure to maintain.

3 Objectives of safety inspections

3.1 The objective of the safety inspection regime is to meet the Council's legal obligations in relation to the safety of road users. The risk of injury or disruption to road users can be minimised by:-

- Providing regular structured inspections of all parts of the network
- Delivering a consistent and reliable response to identified defects
- Maintaining accurate and comprehensive records of inspections and responses
- Providing clear, accurate and comprehensive response to any claims
- Monitoring performance in order to improve where necessary

4 Principles of service delivery

4.1 Although safety inspections and associated treatment responses are only part of the wider roads maintenance and management service, the Council regard it as a priority. The safety inspection process is a tool to ensure that our legal responsibilities with regard to the inspection and maintenance of public roads are fulfilled. It allows us to demonstrate this and has the benefit of reducing the number of claims made against the Council and enhances the ability to better defend those which are made.

4.2 Safety inspection and response is one of the most important and highly visible demonstrations of the Council's commitment to its customers and the delivery of its duty of best value. Response times and quality of work are dependent upon effective partnership between the office based staff and the contracting arm of the service, the Roads Contracting Unit (RCU). This should be seen by the public as single single organisation sharing common objectives, information and standards.

4.3 The Council has an obligation to ensure that the Inspectors and the staff within the roads depots are well trained, supported and able to work together effectively as a single organisation.

4.4 In the case of the absence of an Inspector due to annual leave or ill health it is the line manager's responsibility to ensure a suitably trained substitute Inspector undertakes any inspection due within the time frames set down in this manual.

5 Types of road inspections

5.1 Safety inspections are one of a wider range of road inspections defined by the Code of Practice. These are set out below for convenience:-

- Safety inspections (Ref 9.4. The Code of Practice)

“Scheduled comprehensive inspections of all road elements to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community.” The category also includes routine scouting for failures of road lighting and illuminated signs and less frequent specialised inspections for electrical safety.

- Service inspections (Ref 9.9 The Code of Practice)

More detailed inspections of particular road elements to ensure that they meet requirements for serviceability. The category also includes inspections for regulatory purposes including New Roads and Street Works Act (NRSWA) and Transport Scotland Act 2005 intended to maintain network availability and reliability. It also includes specific inspections of bridges and structures, road lighting and other items. These are specialist service inspections out with the remit of this manual, which has been written to assist with safety inspections.

- Structural condition surveys (Ref 9.21 The Code of Practice)

Structural condition surveys are primarily intended to identify deficiencies in the road fabric which, if untreated, are likely to adversely affect network value. They may also have implications for serviceability in the short term. The Council presently undertakes structural condition surveys through the national Scottish Road Maintenance Condition Survey (SRMCS). These surveys are also out with the remit of this manual.

6 Safety inspection regime

6.1 Safety inspections are designed to identify all defects likely to create a danger or serious inconvenience to users on the network. Such defects should include those that will require urgent attention as well as those where the locations and sizes of defects and their consequent risks are such that longer periods of response would be acceptable. Safety inspections are not however intended to identify defects with mainly 'nuisance or aesthetic value', where there is little risk of injury or serious inconvenience.

6.2 Additional specific safety inspections may be necessary in response to user or community concern, as a result of incidents, police reports, extreme weather conditions or in the light of other information suggesting that problems may be occurring.

6.3 The elements involved in safety inspection are as follows. These are dealt with in detail in subsequent sections:-

- Network hierarchy and frequency of inspection
- Inspection procedure
- Safe working arrangements
- Items for inspection
- Degree of deficiency
- Assessment of risk probability
- Categories and nature of response
- Recording and ordering works
- Works completion and confirmation
- Monitoring and review

6.4 Safety inspections are not the only means of identifying safety defects. All Roads and Transportation employees may identify potential safety problems in the general course of their duties. Reports by the Police, road users and others may also identify items requiring inspection by the service, but are not an alternative to the process of programmed safety inspection.

6.5 All road users, including members and employees should be encouraged to report road defects to the Roads Service either directly or via Customer First or RALF. The call centre operators are trained to obtain and process accurate information about the defect and should be used as the preferred route for defect reporting.

6.6 In cases where defects present an immediate and critical hazard to road users Inspectors should take immediate action to make safe irrespective of the cause. If they have reason to suspect defective reinstatement by a utility they should then advise the appropriate utility who should initiate repair within two hours if necessary. This should be also be confirmed by entering the defect into the Scottish Road Works Register (SRWR).

6.7 In cases where the risk to road users is less immediate and Inspectors have reason to suspect defective reinstatement or apparatus they should notify the appropriate utility via the Scottish Road Works Register.

6.7 A Performance Indicator (PI) has been developed within the Reactive Repairs system for the inspection process to monitor the time from inspection to completing repair.

7 Network hierarchy and inspection frequency

7.1 The foundation of the safety inspection regime is the definition of a road network hierarchy. The Council has adopted hierarchy definitions based upon the Code of Practice with a safety inspection frequency as follows :-

Feature	Description	Category	Frequency *
Carriageway	Strategic route	2	One month
	Main distributor	3(a)	One month
	Secondary distributor	3(b)	One month
	Link road	4(a)	Twelve months
	Local access	4(b)	Twelve months
Footways	Primary walking route	1	One month
	Secondary walking route	2	Twelve Months
	Link footway/path	3	Twelve months
	Local access footway/path	4	Twelve months
Cycleways	Part of carriageway	A	As for c/way
	Remote from carriageway	B	As for c/way
Car Parks			Twelve months

* See section 9.1

** Fenwick Road and Rouken Glen Road have a one per six months walked kerb inspection.

7.2 More detailed descriptions of the carriageway, footway, cycleway and car park categories from the Code of Practice are included in Appendix A.

7.3 The carriageway at a controlled pedestrian crossing points such as pelicans, zebras, etc., or refuges and studded areas at junctions should be considered as part of the footway network for inspection purposes, and should be inspected at the same time, frequency and intervention level as the adjacent footway.

7.4 The category within the hierarchy, in combination with traffic use, will generally determine inspection frequency, but other factors should be taken into account in deciding whether consideration should be given to increasing or reducing the frequency. These should be taken into account and an on-site risk assessment undertaken where there is any uncertainty about the category to be applied.

For example:-

- The traffic volumes might be higher than those generally expected for the category or have higher than normal levels of growth. Extensive development may be taking place or planned
- The section might have a record of accidents or related incidents which would suggest unusually high levels of risk
- Although traffic flows on the carriageway might be low, there might be high levels of pedestrians or cyclists

- The route might be the subject of promotion by the authority as a 'Safer Streets' initiative or access to a railway station. A cycling route may be part of the National Cycle Route Network

7.5 Having taken all these issues into account including the road hierarchy and associated inspection frequency, a further assessment is required regarding the need for inspection in both directions. If a carriageway is six metres or less in width it is considered that a single pass in one direction would allow proper inspection. Carriageways greater than six metres average width will generally require to be inspected from both directions of travel. One-way streets in this category will require two passes to allow inspection from the inner and outer lanes. An assessment of the average width of each section of carriageway being inspected shall be made – up to six metres wide inspected in a single pass or greater than six metres wide inspected in both directions. If the inspector is in any doubt regarding the average width of the carriageway, he must refer the sections in doubt to the Roads Area Manager for guidance.

7.6 Requests for further changes may be initiated by Inspectors at any time and the hierarchy will also be subject to review. Changes will need to be approved collectively before the network definition is updated. Any revisions will be circulated to all Inspectors.

7.7 Although the defined inspection frequencies should be maintained wherever possible, some flexibility will enable the effects of weather and resource availability to be managed more effectively. The following flexibilities are acceptable for one inspection cycle, subject to the programme being recovered by the following cycle. Reference to 'day' means 'normal working day' and excludes weekends and public holidays.

Standard Frequency Flexibility (plus or minus)

Inspection Frequency	Flexibility
One month	Plus or minus 5 working days
12 months	Plus or minus 20 working days

7.8 It may be desirable on occasion to undertake inspections of the higher carriageway categories at night, especially if there is evidence of road accidents. Street lighting will be subject to specialist night time 'scouting' but deteriorated non-illuminated signs and other misleading or confusing circumstances resulting from deteriorating carriageway condition would not be picked up by such inspections. It is desirable to undertake a night inspection on carriageway categories 3a and 3b once per year during the October to April period. Such inspection would be to check the conspicuity of road markings and signs. Night inspections for other than street lighting will not usually be required for footways or cycleways.

7.9 Car parks can be inspected during their normal operation with the inspection concentrating on defects for pedestrians going from and to their vehicles. Car parks should be inspected at the same frequency as the most important adjoining footway servicing them. Footway defect thresholds should be used when assessing defects within car parks.

8 Safe working practices

8.1 Inspectors are responsible for their personal safety and the safety of others affected by their work. All Inspectors should receive safety training prior to undertaking inspections and must be familiar with the Council's health and safety guidance relating to safe working practices. This can be found on the Council's intranet site.

8.2 These safe working practices deal with inspections both from vehicles and on foot and cover such matters as:-

- Personal conspicuity including requirements for wearing high visibility clothing when considered appropriate
- Vehicle conspicuity including requirements for provision and operation of signing and beacons
- Preparing for and undertaking surveys, including checking and operation of vehicles
- Dealing with debris on the carriageway encountered during inspections

It should be noted that for some walked inspections it is possible that high visibility clothing could be counter-productive in certain circumstances by drawing unwanted attention to an inspector and in such cases ordinary street clothing should be considered.

8.3 Inspections can normally be undertaken at any time except during periods of very poor visibility and high traffic flows. If the visibility deteriorates to such an extent that the person in charge of the operation considers that it is unsafe to continue, the operation shall be suspended immediately.

8.4 When working alone it is important that the line manager is aware of general work location and that regular contact with base is maintained. This must be in line with the lone working procedures adopted by the Council.

9 Inspection procedure

9.1 Safety inspections for the monthly inspections should normally be undertaken from a slow moving vehicle, proceeding as close to the left hand side of the carriageway as possible. The speed of the inspection must be appropriate to allow defects to be recorded but also allow for the safety of the inspection team, other road users and weather conditions. The exception to this is that one of the 12 annual safety inspections for a road with a one month inspection frequency in urban areas should be a walked inspection. The safety inspection method for roads with an inspection frequency of once per 12 months shall be walked if an urban route and driven if a rural route. If conditions are unsuitable to inspect safely and effectively, then inspection shall be rescheduled.

9.2 Carriageway inspections for all routes using a vehicle will be carried out by two persons, i.e. an Inspector and driver. Inspection of footways and cycleways requiring a separate inspection from the carriageway inspection will be identified. Identified footway and cycleway inspections can be carried out from a single manned slow moving vehicle but inspection on foot should be undertaken wherever appropriate.

9.3 If required, as part of an inspection, the vehicle should be stopped in a safe location whenever possible prior to recording information on the nature and location of defects. If this is impractical then the information will need to be noted using voice recording. As all inspections have a dedicated driver, the Inspector may use manually operated technology.

9.5 On pedestrian areas and car parks exceeding six metres wide more than one pass will be necessary to ensure effective inspection of the complete area. In such cases it will be necessary to inspect the area in separate passes at six metre widths.

10 Items for inspection

10.1 The following defects should be noted by Inspectors during safety inspections.

Note that the term running surface includes carriageway, footway or cycleway

- Debris or spillage on running surfaces or hard shoulders
- Displaced road studs lying in the carriageway
- Overhead wires, trees, signs or structures in a dangerous condition
- Vandalism, particularly if electrical consequences
- Abrupt level differences in the running surface
- Potholes, cracks or gaps in the running surface
- Edge deterioration of the running surface
- Defective joints
- Rocking or otherwise defective modular paving
- Defective trench reinstatement
- Missing, broken or lowered ironwork (gullies, manholes etc)
- Standing water, water discharging onto or overflowing across running surfaces
- Blocked offlets, drains, channels or grips
- Damaged, defective, displaced, missing or misleading traffic signs, signals, or lighting columns
- Missing, badly worn or otherwise misleading road markings
- Dirty or otherwise obscured traffic signals and signs
- Damaged safety fencing, parapet fencing, handrail, and other barriers
- Sight-lines obscured by trees, unauthorised signs or other features
- Damaged or deteriorated walls and structures

11 Degree of deficiency

11.1 The relative severity of these defects and consequent priority for attention will depend upon the potential risk of injury to road users, which will be influenced by:-

- Risk probability – very low / low / medium / high.
- The location of the defect relative to road features such as junctions and bends
- The location of the defect relative to potentially vulnerable users, such as schools, residential care homes or hospitals.
- The depth, and surface area of defects in running surfaces
- The location of defects in running surfaces relative to road users positioning such as traffic lanes, cycle lanes and wheel tracks
- The nature and extent of interaction with other defects
- The potential for defects to rapidly deteriorate

11.2 Inspectors will need to use their best judgement in such cases based upon their assessment of potential risk to users, including the size and location of the defect, but the following are likely to require early attention:-

- Unstable trees, wires, signs or structures likely to fall
- Isolated standing water on carriageway
- Missing or seriously defective ironwork
- Missing or seriously damaged safety or pedestrian fencing
- Missing or obscured stop and give way signs
- Missing or badly worn stop and give way markings
- Missing, obscured or 'red light out' traffic signals
- Missing or obscured warning signs
- Pothole, trench or other abrupt level difference in carriageway greater than 40 mm in all road categories
- Edge deterioration with abrupt level difference at carriageway edge greater than 100 mm in all road categories
- Trip or other abrupt level difference in footway or kerb greater than 20 mm in all footway categories, but excluding such level differences between adjoining kerbs
- Gap wider and deeper than 25 mm in all footway categories
- Pothole, trench or other abrupt level difference greater than 20 mm in a cycleway.

11.3 Controlled pedestrian crossing points such as puffins, pelicans, zebras, refuges and studded areas at junctions are to be considered as part of the footway network for inspection purposes. Within these areas the 20 mm abrupt level difference footway standard will apply and not the 40mm carriageway standard.

12 Speed and nature of response

12.1 Although it is essential that the most dangerous defects are dealt with urgently there are benefits in providing flexibility for roads depots to schedule less urgent work for maximum programme efficiency. This flexibility however will still require the work to be completed within an agreed maximum period and Inspectors to be advised by the roads depot when their work is likely to be completed.

12.2 The response priority categories have been agreed, as follows:-

Emergency

Defects presenting an immediate and critical hazard to road users. Make safe or repair as soon as possible (If we acting in response to the notification of an emergency from the police or public, attend the site within 2 hours). The Inspector, in certain instances where they consider that the risk is at a very high level must not leave site until the defect has been made safe, or arrangements made to warn road users. Such defects will include:-

- Major debris or spillage
- Critically unstable wires, trees or structures
- Exposed live electrical wiring
- Carriageway collapse or comparable severe surface defect with very high probability of loss of control
- Isolated standing water of a depth and location with very high probability of loss of control
- Missing or seriously defective ironwork with very high probability of injury to user
- Pothole, trench or other abrupt carriageway level difference exceeding 40 mm in all road categories of a size and location likely to cause loss of control

- Footway or cycleway collapse or comparable severe surface defect with very high probability of injury to user.

Category 1

Defects presenting a safety hazard or potential safety hazard – placed on Reactive Repairs schedule with target repair time average of 8 days: (Street Lighting and Traffic Signal faults have their own repair protocol as per term contracts)

- Rapid deterioration in unstable wires, trees and structures
- Seriously damaged or defective traffic signals
- Missing or obscured or 'red light out' traffic signals
- Missing stop markings
- Missing stop signs
- Missing or seriously defective ironwork
- Missing or seriously damaged safety or pedestrian fencing
- Pothole, trench or other abrupt carriageway level difference exceeding 40 mm in all road categories.
- Ironwork – covers, gratings, frames and boxes located in cycleways or footways more than 20 mm lower than the surrounding surface.
- Edge deterioration with abrupt level difference at carriageway edge exceeding 100 mm in all road categories .
- Pothole, trench or other abrupt level difference exceeding 20 mm in cycleway categories A and B of a size and location likely to cause injury to users
- Trip or other abrupt level difference in footway or kerb exceeding 25 mm in all footway categories, of a size and location likely to cause injury to users, but excluding such level differences between adjoining kerbs.
- Gap wider and deeper than 20 mm in all footway categories of a size and location likely to cause injury to users
- Gap wider and deeper than 25 mm in all footway categories in any location.

12.3 Performance Indicators will be recorded for Category E and Category1 defects.

13 Recording and ordering works

13.1 The recording of defects during an inspection should be undertaken either by maintaining a written record or utilising an electronic recording device. The record should include;

In the heading:-

Inspectors name:

Drivers name if appropriate:

Date:

Inspection Route:

Frequency:

Weather conditions:

Defects should be recorded against specific street name.

If no defects are noted in a street this should be noted.

13.2 If an emergency situation is noted during the inspection the inspector should firstly try to make safe if possible (by coning for example). Thereafter the defect should be phoned to the depot and noted on the inspection sheet along with the other noted safety defects. On return to the office a unique RD should be completed regarding the emergency and a copy faxed to the depot for completion by RCU. Details should be entered onto the schedule noting the work type as Emergency and the RD passed to the Admin section for inputting to Lagan.

13.3 For other recorded safety defects on return to the office the inspector should allocate the next RD number in his book as a reference for the safety inspection. He should note on the RD the basic information relating to the inspection i.e. Street(s) inspected, date of inspection, inspection frequency and inspectors name. This should be passed to Admin for input to the RD database.

13.4 The individual defects noted during the Safety Inspection should be input into the Schedule utilising the RD number as reference plus the suffix 1,2 3 etc for each defect noting the Repair Type as Pothole (Includes patching), Gulley, Ironwork, Kerbing or Other.

Remember in the Repair Type column the only the terms which should be used are Emergency, Pothole, Gulley, Ironwork, Kerbing or Other

NOTES

Individual/isolated Safety Defects which have a nominal area of 1m² or less should be entered on to the Reactive Repairs Schedule for repair by Roads Contracting Unit.

Individual/isolated Safety Defects which have an area between 1m² and 2m², should be noted on the Schedule.

For more numerous Safety Defects which may have an area between 1m² and 2m², the Roads Contracting Unit should be contacted and advised of the situation and the resources for the repair discussed.

If the Roads Contracting Unit has the resources to carry out the repair, details should be entered on the Reactive Repairs Schedule as normal.

If the Roads Contracting Unit do not have the resources to carry out the repair, details should be entered on the Reactive Repairs Schedule of what work is required to be carried out to make the defect safe, i.e. ramping the edges of the defect or infilling deep areas to make the defect safe.

Details of the defect should then be passed to the Project Co-ordinator and the relevant area's Engineer or Technical Officer to allow them to assess the situation with a view to future patching / resurfacing programmes.

Safety Defects which have an area of over 2m² should be entered on to the Reactive Repairs Schedule, detailing what work is required to be carried out to make the defect safe, i.e. ramping the edges of the defect or infilling deep areas to make the defect safe.

The Roads Contracting Unit should be contacted and advised of the situation and the resources for the repair discussed.

Details of the defect should then be passed to the Project Co-ordinator and the relevant area's Engineer or Technical Officer to allow them

14 Works completion and confirmation

14.1 Immediately work is completed on any identified defect the roads depot should confirm this by completing the appropriate return within the reactive repairs schedule. This process is crucial for 'closing the loop' in case of any subsequent legal issue and to reconcile payment for work undertaken. This is also required to enable the originator, if requested, to inspect the completed work although this should not normally be necessary.

15 Monitoring and review

15.1 Regular monitoring and review of hierarchy, standards, procedures and records is an essential aspect of the system, for a number of reasons:-

- To enable changes in risk to be identified and reflected, if necessary, in new standards or procedures
 - To enable any uncertainties or problems in responsibilities, procedures, or treatments to be discussed and resolved
 - To enable actual or potential claims to be reviewed and strategy for defence agreed where appropriate.
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- To review inspection and response performance and enable any possible improvements or efficiencies to be discussed and introduced.

15.2 Regular discussion should take place as necessary between all staff involved in the process. This will encourage joint planning co-operation and communication at all levels.

Appendix A
Code of Practice for
Maintenance Management
Detailed description of road categories

Categories**Code of practice for maintenance management****Detailed description of road categories**

This appendix comprises detailed descriptions of carriageway, footway and cycleway categories extracted from the National Code of Practice but adapted to comply with the particular requirements of East Renfrewshire Council.

Carriageway hierarchy Cat	Hierarchy	Description	Examples
2	Strategic route	Provides for traffic movement between centres of population and economic activity on a national level	A736 Lochlibo Road A727 Eastwoodmains Road
3a	Main distributor	Provides for traffic movement between centres of population and economic activity on a regional level	A77 Fenwick Road B767 Glasgow Road
3b	Secondary distributor	Provides for traffic movement within towns or districts and links residential and commercial districts	Crookfur Road Aurs Road Stewarton Road
4a	Industrial road/link	Links industrial/commercial premises to local and district distributor roads	Blackbyres Road
4b	General access road (Residential road)	Loop roads (preferred) serving up to 400 dwellings. Can serve up to 300 dwellings from a single access point. Direct frontage access acceptable.	Westacres Road Firwood Road Aurs Drive
4b	Housing road (Residential road)	Serves up to 150 dwellings. Direct frontage access acceptable. Loop road or cul-de-sac	Stamperland Avenue Sundale Avenue Newton Avenue Stobs Drive
4b	Shared surface road (Residential road)	Cul-de-sac serves up to 20 dwellings. Loop road serves up to 40 dwellings. Maximum length 150 metres.	Birkwood Place