# Roads & Lighting

## Carriageway condition *(Reporting year 2007_2008)*

**RL 1: The percentage of the road network that should be considered for maintenance treatment.**

**Definition**

'Considered for maintenance treatment' means that there is likely to be some defect in the condition of the road, but councils will need to carry out further detailed investigation and plan their programme having considered other factors including the impact on spending provision, user delays and safety concerns. The proportion of the road network that should be considered for maintenance is set out below at point 3 and falls into the 'Red and Amber' bands.

Data will be collected by machine-based surveys in accordance with the surface condition assessment of the national network of roads (SCANNER) specification; a copy of the spec. is available on the UK Roads Liaison Group Web Site. www.ukroadsliaisongroup.org/roads/scanner_specification.htm

The UK Road Condition Indicator (RCI) will be adopted as the standard measurement of road condition and will also allow comparison with the Scottish Executive's single carriageway trunk road network and other UK countries.

The RCI works in three stages:

1. The first step is the scoring of key survey parameters, over each 10metre section, in relation to a lower and upper threshold, with a linear weighting applied to values between the thresholds.
2. The second step is to total the parameter scores for each sub section, applying further weighting factors to reflect the importance (or relevance) of the parameter and the reliability of the measurement
3. The third step is to allocate each sub-section to a condition band which reflects the extent to which maintenance is required
    - 'Red' lengths (scoring over 100 points) indicating that maintenance operations are likely to be required
    - 'Amber' lengths (scoring between 20 and 100 points) requiring further investigation and/or monitoring
    - 'Green' lengths (scoring less than 20 points), likely to be in a satisfactory condition although isolate defects may still exist

SCANNER surveys will be carried out in accordance with the requirements specified below, with the proviso that where the sample surveyed is less than 100%, it should be constructed as far as is practicable to be representative of the network as a whole, by ensuring for instance a reasonable geographic distribution of the routes selected. The contractor will randomly select the roads to be surveyed and it is envisaged that surveys will be undertaken between the months of February and October each year to reflect the most favourable climate conditions for surveying.

In regard to Table A below, the direction of survey on:

- 'A' roads should be reversed each alternate year.
- For other classified roads where 50% of the network is surveyed each year in one direction, the remaining 50% should be surveyed the following year, with the direction of survey being reversed in the 3rd and 4th years to complete the survey of the total network in both directions over 4 years.
- There is no requirement to reverse the direction of survey on unclassified roads. The sample must not include roads previously surveyed within the repeat interval stated.

Table A - Road surveys and intervals

| **Road Classification** | **Annual notional % survey in <u>One Direction</u>** | **Repeat Interval** |
|---|---|---|
| A | 100% of urban & 100% of rural | 12 months |
| B | 50% of urban & 50% of rural | 24 months |
| C | 50% of urban & 50% of rural | 24 months |
| Unclassified | 10% of urban & 10% of rural | 48 months * |

*The 48 month repeat interval is to ensure that the contractor does not survey the same roads during the period of the contract.

While the surveys will be undertaken on an annual basis, in order to minimise potential fluctuations due to sampling issues rather than true changes in road condition, the RCI in Scotland will be calculated as a rolling indicator, utilising data from the previous 2 years surveys.

**Source**

While it is envisaged that the surveys will continue to be undertaken through a single Scottish contract under the auspices of a Lead Authority, supported by the Society of Chief Officers of Transportation in Scotland (SCOTS), each council will be responsible for reporting the performance information for their roads.

**Interpretation**

This indicator shows the percentage of the road network that should be considered for maintenance treatment (the red band), together with the portion requiring further investigation and/or monitoring (the amber band). The condition of roads will be affected by:

- Budgetary constraints
- Traffic flows/usage
- Weather patterns

## Traffic Light Repairs

**RL 2: Traffic light failure: the percentage of repairs completed within 48 hours.**

**Definition**

'Elapsed time' is the total period between the time and date on which report of the failure was received by the council and completion of the repair. It is <u>not</u> just the period between notification by the council to any contractor and completion.

Failure may be notified by the public, the council's own staff or other persons.

'Failure' is where there is one or more aspects not working, regardless of cause. Therefore it includes lamp failure, controller failure, accident damage, vandalism, bare wires, shade damage, exposed boxes, dark lamps and supply failure. Faults/ failures to trunk roads are excluded.

'Repairs' means work carried out, directly or indirectly through contractors, to restore the signal to use and reinstate the service. Restoration of service can be by either temporary or permanent repairs.

**Source**

Council's own specification records; complaints and reports registers; work orders.

**Interpretation**

The indicator captures the full range of activity, from notification of the fault to the completion of the repair. The actual repair work is often carried out by a contractor or Regional Electricity Company, and in such cases it is the contractor's performance which is, in part, being measured. However, it is the council's responsibility, as the client, to ensure that the contractor's or REC performance is satisfactory.

Some councils operate a 24 hour fault notification centre and reported performance for such councils may show a lower performance level compared with other councils as repair time commences when the fault is notified to the council.

The Commission's national benchmark of 48 elapsed hours (rather than working or contract hours) is not intended to supersede councils' local targets, which continue to apply.

## Street Lighting

**RL 3:** Street lights failure: the percentage of repairs completed within 7 days.

**Definition**

'Elapsed time' is the total period between the date on which report of the failure was made to the council and completion of the repair expressed in calendar days. It is not just the period between notification by the council to any contractor or Regional Electricity Company (REC) and completion.

Where a council operates night inspections the reported date should be the date when the survey information is returned to the office for actioning.

Failure may be notified by the public, the council's own staff or other persons.

'Repairs' means work carried out, whether carried out directly by in-house teams, or indirectly through external contractors, to restore normal service. Restoration can be by either temporary or permanent repairs.

'Failure' is where there is a unit not working, regardless of cause. Therefore it includes lamp failure, group faults, control failure, accident damage, vandalism, shade damage, and supply failure on both the council's own networks or REC networks. Where road lights are on during the day, and this is not intended, this should also be included. If however the lights were on for operational reasons, eg testing, do not include. Do not include faults/ failures/ repairs to trunk roads or motorways.

Exclude illuminated road signs; illuminated bollards; accidental damage to columns if still working; and school patrol warnings.

**Sources**

As for indicator (2) above.

**Interpretation**

As for indicator (2). The Commission's national benchmark of 7 calendar days (rather than working or contract days) is not intended to supersede each council's local targets.

**RL 4:** The proportion of street lighting columns that are over 30 years old.

**Definitions:**

This indicator shows the proportion of a council's street lighting columns that are over 30 years old – the accepted industry-wide period over which columns, at present, need replaced.

Lighting columns mean all columns e.g. mild steel, aluminium, concrete and heritage or decorative. The indicator excludes wall mounted units and road sign poles. It is recognised that some columns have a life expectancy well beyond 30 years, but these should not materially distort the overall percentage.

Some councils may not have a completely accurate inventory of the age profile of all their columns. Until an inventory has been completed the basis of age profile assessment should be agreed with the external auditor. SCOTS street lighting group will be consulting on setting a target date of April 2005 for all councils to have completed the age profile of their lighting stock.

The measurement should take place at the end of the reporting year i.e. 31 March.

**Source:**

Council's own records

**Interpretation**

The indicator shows comparison across councils and also the extent to which councils are adequately funding the replacement of their lighting columns.

## Bridges - Road Network Restrictions

**RL 5: The number of council and private bridges not meeting the European standard of 40 tonnes and the number that have a weight or width restriction placed on them, each expressed as a percentage of the total number of assessed bridges.**

**Definitions**:

A bridge is defined as a structure carrying a public road with a span exceeding 1.8 metres. Both councils and private bridges (e.g railway or canal bridges) should be included. The indicator relates to bridges on 'A', 'B', 'C' and unclassified routes within a council's area.

Boundary bridges i.e. that that straddle two council areas should be counted once only – by the council that has primary responsibility for the bridge.

EC Directive 96/53EC implemented in the UK on 1 January 1999 permits the use of 40 tonne vehicles (44 tonnes for certain configurations) on public roads. The indicator shows the percentage of bridges that have failed to achieve this standard and the percentage of bridges that have a weight or width restriction placed on them.

Bridges that do not meet the European standard will not necessarily have restrictions placed on them. They may be managed in the short term by monitoring, propping etc which would not cause restrictions on the road network. However, a high percentage of bridges failing the standard can reflect the potential for under strength bridges to cause restrictions on the network in the future.

Bridges with a weight or width restriction placed on them exclude those bridges where the authority has secured a permanent satisfactory solution. A permanent satisfactory solution, usually a weight or width restriction which is acceptable to the community and to the local road network, represents traffic management rather than a forced constraint on the network. In the case of weight restrictions it will have been applied following a legal process involving local consultation resulting in a permanent restriction, enforced by a permanent traffic regulation order. Width restrictions do not normally require a regulation order.

'Assessed bridges' are those bridges which fall within the scope of the European standard criteria plus those constructed post 1975 which are deemed to have passed the assessment criteria.

Weight restrictions mean that the maximum gross weight of vehicles using the bridge is restricted to less than 40 tonnes (or the maximum axle load restricted to less than 11.5 tonnes) by a traffic regulation order (temporary or permanent) made under the Roads (Scotland) Act 1984.

Width restrictions mean that the width of the bridge has been restricted by temporary or permanent measures in order to allow bridges which would otherwise fail the European standard to carry 40/44 tonne vehicles.

The two parts of the indicator will be calculated as follows. (Bridges failing the European standard split by council and private)

$$\frac{\text{Number of bridges failing the European standard minus those bridges where the authority has secured a permanent satisfactory solution}}{\text{Total number of assessed bridges}} \times 100$$

(Bridges with a weight or width restriction placed on them split by council and private)

$$\frac{\text{Number of bridges with a weight or width restriction minus those bridges where the authority has secured a permanent satisfactory solution}}{\text{Total number of assessed bridges}} \times 100$$

The measurement should take place at the end of the reporting year i.e. 31 March.

**Source:**

The information will be sourced from whichever section of the Council is responsible for the statutory functions of Roads Authority

**Interpretation:**

The indicator shows the proportion of an authority's bridges that have failed to meet the European standard. Councils with a high percentage of bridges that fail the standard are likely to experience restrictions on their network in the future unless sufficient investment is made to bring them up to an acceptable standard. This part of the indicator is a measure of the Councils weak bridges. Reduction in the value of the indicator with time will be a measure of how well the Council has obtained funding for and progressed with bridge strengthening.

This indicator is also intended to show the proportion of bridges that have resulted in road network restrictions and therefore impinge on free traffic flow across the roads network. This part of the indicator is a measure of the Councils restricted bridges.

Reduction of the value of the first part of the indicator accompanied by an increase in the value of the second part will be a measure of the extent to which the Council has protected its weak bridges by weight or width restriction rather than bridge strengthening or securing permanent satisfactory solutions