

# Roads & Lighting

## Carriageway condition

While it is the intention to adopt the standard UK Road Condition Indicator (RCI), it is possible that the Indicator stipulated by Audit Scotland may differ, in which event the Audit Scotland definition would take precedence.

Each year the Contractor is therefore required to accept the definition, or modifications to the definition, for the RCI calculation in Scotland, including the Intervention levels for the various road surface attributes that are to be collected under the Contract, to develop and document his algorithm for calculating the RCI and to submit it in an agreed format for validation by independent auditors employed by the *Employer*. The processing software must be able to process the condition data and produce reports of the distribution of the RCI at network level and at Council level as defined below.

- RCI for all roads by Council and for Scotland.
- RCI for each road class by Council and for Scotland.
- RCI for all roads by rural and built-up, by Council and for Scotland.
- RCI for each road class by rural and built-up, by Council and for Scotland.

The RCI for each road class shall be the combined value of the urban and rural networks weighted by their relative lengths, based on the returns made each year by Councils to the Scottish Executive. (This information will be provided by the Employer).

Similarly the RCI for any combination of road class at Council, regional or national level shall be the average value, weighted by their relative lengths.

The Current RCI requirements as defined by Audit Scotland are consistent with those for England and are detailed below.

<b>RL 1: The percentage of the road network that should be considered for maintenance treatment.</b>
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### 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.ukroadsliasongroup.org/roads/scanner\\_specification.htm](http://www.ukroadsliasongroup.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 40 and 100 points) requiring further investigation and/or monitoring
- 'Green' lengths (scoring less than 40 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 3<sup>rd</sup> and 4<sup>th</sup> 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 One Direction	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