

THE HIGHLAND COUNCIL

TRANSPORT, ENVIRONMENTAL AND COMMUNITY SERVICES COMMITTEE – 15 NOVEMBER 2007

Agenda Item	7.
Report No	TEC/76/07

Scottish Road Maintenance Condition Survey – 2006/07

Report by Director of Transport, Environmental and Community Services

SUMMARY

This report updates Members on the results of the Scottish Road Maintenance Condition Survey carried out in 2006/07 which supports the Administration's commitment to set out a programme detailing planned maintenance of local roads and bridges.

1. Introduction

- 1.1 The Scottish Road Maintenance Condition Survey (SRMCS) was first carried out in 2002 on a trial basis, and the results were used to develop a new Statutory Performance Indicator (SPI) which was introduced by Audit Scotland in 2003/04 in cooperation with all the Councils of Scotland.
- 1.2 The survey is currently in its 5th year and now includes all 32 Council's within Scotland.
- 1.3 Initial survey results were first reported to the TEC Services committee on 30 September 2004, with subsequent reports on 17 November 2005 and 17 August 2006.

2. Survey Details

- 2.1 WDM Ltd, an independent contractor, carries out the survey on a Scotland wide and their survey vehicle is equipped with technology which measures:-
 - Texture Depth (coarseness of the road surface)
 - Rutting (wheel tracking)
 - Longitudinal Profile (ride quality)
 - Cracking
- 2.2 Research by the TRL (Transport Research Laboratory) has produced a method, using the data collected by existing survey techniques, for the assessment of edge deterioration and transverse shape of the road. These aspects are introduced in the 2006/07 survey along with calculation of a new Road Condition Indicator (RCI). The RCI will be calculated in parallel with the current SPI for three years so that any change in measured road condition with the RCI can be related to the values derived from the current SPI.

2.3 During their first 4 year contract to deliver the SRMCS, WDM Ltd. had an annual requirement to survey:-

- 100% of A class roads
- 50% of B class roads
- 50% of C class roads
- 25% of Unclassified roads

In Highland's case these targets equate to approx 3,300km, i.e. just under 50% of our network.

2.4 Due to the extent of the Scottish road network there have been difficulties in achieving the target for the unclassified roads. As reported in August 2006 the target for unclassified roads has been reduced to a 10% sample per year with the agreement of Audit Scotland.

3. Statutory Performance Indicator

3.1 The Statutory Performance Indicator (SPI) is defined as:-

“The percentage of the road network that should be considered for maintenance treatment, derived from a combination of established condition parameters that are measured at a network level.”

3.2 The survey data is presented in a map form and the following colour coding has been adopted to describe the three main conditions.

Green	The road is in an acceptable condition
Amber	The road condition indicates that further investigation should be carried out to establish if treatment is required.
Red	The road has deteriorated to the point at which repairs to prolong the future life of the road should be considered.

3.3 The SPI identifies the percentage of the road that should be considered for maintenance treatment and is calculated as the sum of Red and Amber. The larger the number the greater the need for maintenance.

3.4 During the first 3 years of the survey the SPI was reported using data from a single year. As the survey has established itself, and due to the sampling regime, it has become evident that using a 2 year moving average demonstrates a more consistent result across the years. Variations in the SPI can to some extent be attributed to sampling different lengths and lanes of road and to different driving lines where the same road is involved.

4. Results from the SRMCS Survey
Based on a 2 year rolling average (2005/06 and 2006/07)

4.1 All Scottish Local Authorities

The results for the Scottish Local Authorities are shown in full in Appendix 1, and the Council's result is compared below against the range of best to worst and the average in Scotland. The Council is ranked 5th out of 32.

	Highland	Ranking	Range Best – Worst	Scottish Average
SPI (Red + Amber)	37.10%	5th	32.14% – 58.25%	44.41%

4.2 Local Authorities classed as RURAL.

Highland's ranking against the other "rural" authorities is tabulated below:-

Authority	SPI (Red + Amber)	Ranking
Angus	35.81%	Best
Aberdeenshire	35.82%	
Highland	37.10%	3rd
Perth & Kinross	44.39%	
Dumfries & Galloway	44.85%	
Moray	45.64%	
Argyll & Bute	49.59%	
Borders	53.31%	Worst
Rural Authority Average	41.90%	

4.2 Highland Roads – Individual classes

The SPI analysis aggregates survey results for the different classes of road, however we can disaggregate the SPI for each of our road classes. The table below shows the result of this analysis for the 2 year rolling average, the percentage SPI and equivalent length of road are shown.

	Total Length (km)	Red	Amber	Green	SPI
A Class	1388	3.8% (53 km)	22.5% (313 km)	73.7% (1023 km)	26.3% (366 km)
B Class	980	7.7% (76 km)	29.2% (285 km)	63.4% (620 km)	36.9% (361 km)
C Class	1438	4.1% (59 km)	16.5% (237 km)	79.3% (1141 km)	20.6% (296 km)
U Class	2888	13.6% (393 km)	35.9% (1033 km)	52.0% (1497 km)	49.5% (1426 km)
Overall	6694	9 % (580 km)	28 % (1867 km)	64 % (4280 km)	37 % (2448 km)

5. Comparison with previous years

- 5.1 The 2 year rolling average SPI values for Highland over the last four years are shown below:-

Years	SPI (2yr rolling average)
2003/04	39.59%
2004/05	34.21%
2005/06	34.12%
2006/07	37.10%

- 5.2 On first analysis the condition of the road would appear to have improved by around 5% between 2003/04 and 2004/05, remained constant through 2004/05 and 2005/06 and deteriorated by 3% between 2005/06 and 2006/07.
- 5.3 The fluctuations during 2003/04 and 2004/05 are clearly unrealistic, and need to be considered within the context of the sampling regime during the initial years of the survey. Depending on their geographical location it is entirely reasonable to expect a variation in the relative SPI values because the roads being surveyed are different.
- 5.4 The 3% deterioration indicated between 2005/06 and 2006/07 is in the context of an overall Scottish Average result which shows a deterioration of 2.4% over the same period. We know that the technology used in the survey is improving all the time and this probably explains the majority of this change.

6. Conclusions

- 6.1 Although there are some moderate fluctuations in the SPI over the years of the survey, it has to be considered within the parameters of the sampling technique being used. Results are always likely to vary when different roads are being sampled, and on the same roads the driven line will vary year on year. This situation is not unique to Highland.
- 6.2 In the future we can look forward to new Road Condition Indicator (RCI) incorporating new defect parameters which will more accurately address the problems encountered by a rural authority such as Highland. Parameters such as "edge condition", "drop off" and "transverse profile" will give a better perspective on the overall condition of our road network.

7. Future Trends

- 7.1 As survey techniques improve and new parameters are introduced it is expected that the overall condition of the road network will appear to deteriorate further. Members should differentiate here between deterioration in the condition of the road network and more accurate reporting of specific Highland issues such as edge deterioration.

8. Resource Implications

8.1 There are no resource implications arising directly from this report.

9. RECOMMENDATION

9.1 Members are asked to NOTE the results of the Scottish Road Maintenance Condition Survey for 2006/07.

Signature:

Designation: Director of Transport, Environmental and Community Services

Date: 2 November 2007

Ref: Richard Evans and John MacLennan

Background Papers Transport, Environmental and Community Services papers
17 November 2005 (TEC 80/05) and 17 August 2006 (TEC 66/06)

SRMCS - Network 2006_2007 2 year Rolling Average SPI (Red + Amber)

