

UK Pavement Management System



Technical Note 44

Data Topic 130-01 guidance notes for UKPMS Developers

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Document Information

Title (Sub Title)	Technical Note 44 Data Topic 130-01 guidance notes for UKPMS Developers
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Description	This Technical Note provides guidance for UKPMS Developers to allow them to produce Data Topic 130-01 for the England Single Data List.

Document History

Version No	Status	Author	Date	Changes from Previous Version
0.01	Draft	JMG	19.06.13	First draft based on 2012/13 version but revised to remove date specific references so that the Technical Note applies to any year from 2013/14 onwards until further notice.
0.02	Draft	RAC	04.07.13	Transferred to new template.
0.03	Draft	RAC	15.07.13	Reviewed by JMG
1.00	Issue	RAC	31.07.13	Ratified by Paul Hersey for DfT
1.01	Draft	RAC	14.01.19	The website references have been updated
1.02	Draft	RAC	18.01.19	Reviewed by CCS
2.00	Issue	RAC	26.02.19	Ratified by Sarah Lasher for DfT
2.01	Draft	RAC	02.02.21	Draft based on version 2.00 but revised as follows: <ul style="list-style-type: none">Website references updated
2.02	Draft	RAC	10.02.21	Reviewed by CCS
3.00	Issue	RAC	24.02.21	Ratified by Ashley Singh for DfT

Document Owner

The owner of this document is the Department for Transport.

Document Support

Support for this document is provided by Linhay Consultancy Ltd and Hyperion Infrastructure Consultancy Ltd who can be contacted via ukpms@hyperion-uk.com. These organisations have been appointed as the UKPMS system accreditors by the UK Roads Board.

This document can be found online on the [RCMG website](#).



Introduction

This Technical Note provides guidance for UKPMS Developers to allow them to produce Data Topic 130-01, (principal roads where maintenance should be considered), for the England Single Data List. It provides:

- **Changes since the last version**
- **Background Information** on survey coverage
- **Processing & Reporting Requirements** including an example report

Changes since last version

The website references have been updated.

Background Information

Data Topic 130-01, principal roads where maintenance should be considered, is based on SCANNER data collected as follows:

- **Principal (A) Roads:** 100% of the network in both directions. For any given length of road, data from either the current financial year or the previous financial year may be used.

130-01 is based on the local authority's A road and principal M-road carriageways. To facilitate the calculation of this figure, it is recommended that principal M-roads should be assigned a DfT Classification of 3.

Processing & Reporting Requirements

The data are processed using the SCANNER Road Condition Indicator (RCI) with a user-specified weighting set. The RCI should use data collected over the last two financial years, eg 1 Apr 11 to 31 Mar 13 for the 2012/13 results.

The formula used to calculate the national indicators is:

$$\frac{\text{Numerator} \times 100}{\text{Denominator}}$$

For 130-01:

Numerator: the total length of A roads greater than or equal to the Red threshold.

Denominator: the total surveyed length of A roads.

All lengths shown on the reports are given in km to 3 decimal places and all percentages except the 130-01 result are given to 1 decimal place. The 130-01 result is given to the nearest whole number.

Confidence limits are not specified for 130-01.



Notes:

- *The road classification is fundamental to this report. It is important that this section attribute is populated accurately.*
- *The report excludes roundabouts. In general SCANNER data are not collected on roundabouts, but if such data are present, they should not be included in any of the figures on the report. Roundabouts are defined using the 'Road Type' section attribute.*
- *All road surface types are included.*
- *On occasion some of the SCANNER parameters used in the RCI calculation may be missing from individual subsections. Such subsections are excluded from the report. That is, the report is based only on those subsections where all the SCANNER parameters used by the weighting set have been recorded.*
- *If the data are not provided on coincident subsections then the SCANNER RCI is not valid and it is not possible to produce the PI. [The RCI calculation is based on the premise that all data for a section within a particular survey are provided using the same subsection breakdown. So suppose Survey 123 on Section A345 uses subsections 0-7, 7-17, 17-27 etc for rutting data (say). All other measured parameters for that survey on that section must use the same subsections. In the past there have been problems due to cracking data using a different set of subsections from the other measured parameters.]*



Content of the Reports

Other than that the reports should be presented in the three parts given below, the following is not intended to give guidance on the layout or format of the report merely to show what content should be included and how that content should be derived.

Part 1 – Run Details & Data Selected

This part of the report contains the details and identifiers for the run.

Ref	Description	Example
1.1	Authority	Oldshire CC
1.2	UKPMS System	Bloggs PMS
1.3	UKPMS System Version	2.45
1.4	Run Identifier	ABC01
1.5	Run Date	05/04/2013
1.6	Weighting Set Identifier	WSPrinv0201
1.7	Rule Set Identifier	RP10.01
1.8	From Date	01/04/2011
1.9	To Date	31/03/2013
1.10	Combination method	Sum
1.11	Threshold type	Bin

Users of the report are encouraged to check the UKPMS System and Version on the [RCMG website](#) to ensure that the version of the UKPMS system being used to produce the results is accredited to produce valid results for 130-01 for the relevant year.

Note:

- For those Developers who choose to implement the RCI as a type of Automatic Pass, the Run Identifier is simply the Automatic Pass identifier.

This is then followed by the criteria used to select the sections and surveys. Generally, for 130-01, this will simply be to select all sections with a DfT Classification Code of 3¹. However, it may be necessary for an authority to specify particular surveys; for example if multiple SCANNER surveys have been carried out within the date range for 130-01 and not all of these were intended for 130-01. The report must give the type of criteria (e.g. survey number, or a specified section attribute) and the values included for that attribute.

Ref	Description	Example
1.12	Criteria Type	DfT Classification Code
1.13	Criteria Value	3

¹ For 130-01 principal motorways are included so DfT Classification 3 should be used for both principal A roads and principal motorways.



Note that currently the Road Condition Indicator algorithm and weighting sets only apply to SCANNER data. If, in the future, they are extended to other survey types then there will be a requirement to select the 'TTS' survey type for 130-01.

Part 2 – Surveyed Network

This part of the report gives the possible survey lane length together with the length which has actually been surveyed.

Ref	Symbol	Description	Example
2.1		Selected network sections	91
2.2		Selected network length	75.838
2.3		Possible survey lane length	127.113
2.4		Actual survey lane length	120.030
2.5		Percentage of selected network surveyed in survey period	94.4%
2.6	N	Number of subsections surveyed	12082

The selected network sections figure is the number of sections in the selected network (i.e. with DfT classification 3).

The selected network length is the sum of the *Section Length Number* for the selected network.

Note:

- *Any sections which are roundabouts are, of course, excluded from these figures (Ref 2.1 and Ref 2.2) and from all other figures on the report.*

The possible survey lane length is calculated as:

$\Sigma(\text{Section Length Number multiplied by Nearside Multiplier for the section Road Type}),$

for the selected network.

The actual survey lane length is the sum of all subsection lengths with eligible data. (The definition of 'eligible' here is that the data satisfy the date criteria, plus any survey and section criteria; and only those subsections with all SCANNER parameters for the weighting set are eligible).

The percentage (Ref 2.5) is calculated as actual survey lane length (Ref 2.4) divided by possible survey lane length (Ref 2.3) expressed as a percentage.

Note:

- *For principal roads this indicates whether the authority has achieved the coverage requirements (as principal roads are surveyed in both directions).*

The number of subsections surveyed (Ref 2.6) is the number of subsections with eligible data.



In addition to providing the above statistics a breakdown of the network on the basis of Rural/Urban/Undefined is also required.

Ref	Description	Example
2.7	Rural surveyed network	82.321
2.8	Urban surveyed network	36.674
2.9	Undefined surveyed network	1.035
2.10	Total surveyed network percentage	158.3%

The rural surveyed network is the sum of all rural subsection lengths with eligible data; similarly the urban surveyed network is the sum of the urban subsection lengths with eligible data. The undefined network length is the sum of all those subsections with eligible data but which are neither urban nor rural. Together the rural, urban and undefined figures should add to give the actual survey lane length (Ref 2.4).

The total surveyed network percentage is the actual survey lane length (Ref 2.4) expressed as a percentage of the selected network length (Ref 2.2).

Note:

- *As principal roads are surveyed in both directions this figure is normally greater than 100%.*

Part 3 – 130-01 Results

This part of the report contains the 130-01 result.

As the weighting set uses a Bin type threshold, the length and percentage in each bin is given.

Ref	Description	Example
3.1	Bin description	Red
3.2	Bin threshold	≥ 100
3.3	Length (km) in bin	33.020
3.4	Percentage in bin	27.5%

Note that the sum of the length in all bins should total to give the actual survey lane length (Ref 2.4) for that road class, and the sum of the percentages should be 100% (subject to rounding errors).

The final figure in the report is the 130-01 value.

Ref	Description	Example
3.5	130-01	28%

130-01 is the percentage in the Red bin, expressed to the nearest whole number.



Example Report: 130-01

Run Details & Data Selected			
Authority:	Oldshire CC		
UKPMS:	Bloggs PMS v2.45		
Run Identifier:	ABC01		
Run Date:	05/04/2013		
Weighting Set ID:	WSPrinv0201		
Rule Set ID:	RP10.01		
Dates:	From 01/04/2011 to 31/03/2013		
Combination method:	Sum		
Threshold type:	Bin		
Criteria:			
	DfT classification	3	
Surveyed Network			
Selected network sections:		91	
Selected network length:		75.838 km	
Possible survey lane length:		127.113 km	
Actual survey lane length:		120.030 km	94.4%
Number of subsections:		12082	
Rural surveyed network:		82.321 km	
Urban surveyed network:		36.674 km	
Undefined surveyed network:		1.035 km	
Total surveyed network:		120.030 km	158.3%
PI results			
Green	(<40)	44.669 km	37.2%
Amber	(>=40)	42.341km	35.3%
Red	(>=100)	33.020km	27.5%
130-01		28%	