

ROAD2000

LONDON'S PRINCIPAL ROAD MILLENNIUM CONDITION SURVEY

ROAD 2000 - UPDATE

The ROAD 2000 Seminar held at Fulham Palace in November 2000 presented the results of London's principal road survey carried out in December 1999. This was a UKPMS Detailed Visual Inspection survey of all of London's principal or A class roads, including those transferring to Transport for London (TfL) in June 2000.

The presentations provided the London boroughs and TfL with their structural, wearing course, surface properties and overall condition indices in addition to strengthening, resurfacing, surface improvement and edge works costs. The data was provided in text as well as map based format on a borough by borough basis. It also included residual principal road Performance Indicator data for those principal roads remaining with the boroughs after the formation of the GLA.

The seminar was generally well received. Much of the data needed further validation and the team invited the boroughs to

respond to the accuracy of the data. In addition the boroughs requested the ROAD 2000 team review the network referencing as some boroughs had not been able to align their existing historical data with the ROAD 2000 information. Co-incidentally the network referencing needed to be reviewed for the proposed ROAD 2001 machine surveys.

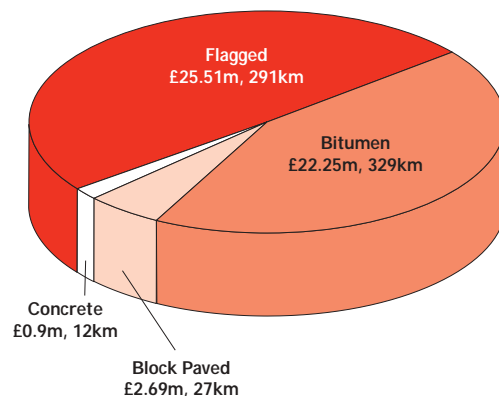
The ROAD 2001 surveys were to carry out visual audits to validate the ROAD 2000 data and also to start a wide range of machine surveys. This including full network coverage for SCRIM and RAV (the Road Assessment Vehicle, the equipment used for the TRACS survey) with targeted network coverage for Ground Radar (with coring), Deflectograph and FWD.

The full scope of DVI surveys are to be repeated in the ROAD 2002. These visual surveys will provide the same data to the ROAD 2000 survey for the residual principal road network for trend purposes.

FOOTWAY REPORT AND COSTS

The ROAD 2000 survey, whilst undertaken in support of ITP bids for carriageway funding took the opportunity to collect footway defects during the survey. There were two reasons for doing this. Firstly to recognise, as part of any integrated transport system, the importance of walking and secondly to provide TfL with a comprehensive data set for the transferring principal roads. The analysis of this footway data, whilst having taken second place to the primary purpose of our survey, is now available and details will be published shortly in a London-wide report.

LENGTH & COST OF PRINCIPAL ROAD FOOTWAY REPAIRS
January 2000 (£51.35m, 659km)



Reference	Start Node	OSGR Easting (Start Node)	OSGR Northing (Start Node)	End Node	OSGR Easting (End Node)	OSGR Northing (End Node)	Direction
21000103/05	00020	00025	578123	178888	EB		

PROGRESS WITH ROAD 2001

Tenders were offered and Contracts awarded on a pick and mix basis on a schedule covering DVI Surveys, RAV, Deflectograph, FWD, Ground Radar and Coring. However it was quickly discovered that the network used for visual survey purposes was not robust enough to enable map based machine survey data to be accurately driven and recorded.

As a number of boroughs and the machine survey contractors had concerns with the network the ROAD 2000 team offered to review the network and the following approach was adopted.

1. To carry out a full survey of a single borough, on a trial basis, to determine how the machine surveys would fit
2. At the same time all the remaining boroughs would be invited to submit details of their own networks in a standard format. The format of the network data is set out at the map of this brochure.
3. The ROAD 2000 team could use the network format provided by the boroughs, where this was available, subject to minor validation. These could then be offered for machine survey. Elsewhere formatted networks would have to be drawn up by the appointed survey consultant on behalf of the individual borough for the ROAD 2000 team.

4. Once the networks have been drawn up the boroughs would again be consulted on the accuracy and suitability of their networks. The importance of picking up sections with one way streets or several lane was not always apparent from a map. Additionally the Ordnance Survey OSCAR data, whilst an invaluable tool for hanging and plotting data on the A class roads, was not always 100% accurate.
5. A programme for machine surveys would then be let on a borough by borough basis. The provisional programme for this is set out below:



EFFECTS OF THE DELAY IN COMPLETION OF THE MACHINE SURVEYS

Owing to the network problems the comprehensive machine surveys were not completed in 2000/2001, the ROAD 2001 window. All tenderers who priced the survey schedules were asked whether they would hold their rates for 2001/2002, the ROAD 2002 year. The ground radar and coring contractor was not able to hold their rates and as a consequence this section of the surveys is being retendered. All other tenderers, including the DVI survey contractor were prepared to hold their rates. This has given

the team some chance to recover the time lost. The programme for surveys is set out on page 4. Specific attention will be paid to audit work on the second DVI survey and comparisons will be made between the DVI and RAV results. It is hoped that the boroughs will participate more in the validation of the results, in addition to the survey contractor's own audit proposals.

Description	Road Type	Length(M)	Road Name	Road Number
Hammersmith Broadway to Glenthorne Road	S2	246	Beadon Road	A315

CVI/DVI CORRELATION EXERCISE

The choice of using Detailed Visual Inspections DVI for carrying out the London surveys for the Best Value Performance Indicator BVPI 96 has been permitted under the DETR rules and guidance. However part of the ongoing research and development to support the ROAD 2000 work of using different survey method to the normal CVI surveys led to this correlation exercise being undertaken. Work carried out by the MARCH group showed that there was a better correlation between the two survey types when the Variable Merge method was used to analyse the CVI data. This has been supported by investigations, using

ROAD 2000 data, carried out by the team’s specialist consultants, Chris Britton Consultancy.

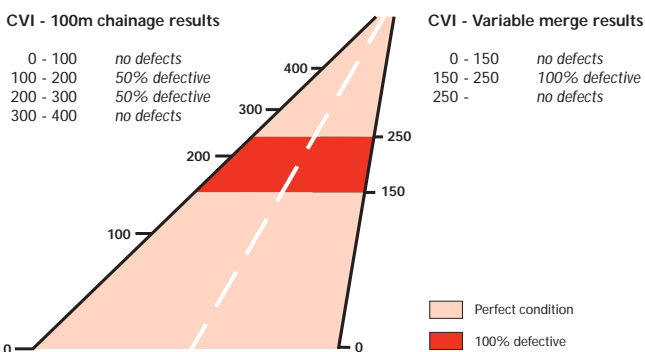
In figure 1, using the present rules and parameters, the area of defectiveness is split between the first two hundred metre sections. Therefore the area that is effectively 100% defective is only recorded as 50% defective, but in both the first two sections.

What the “variable merge” option does is to restart the chainage at 150 so that each 100m length of 100% defectiveness is more accurately reflected. Variable merge is a standard option on the UKPMS analysis software although it does not currently form part of the standard DETR rules and parameters for measuring BVPI 96.

This problem does not arise with DVI because the defects are measured within 20m sections.

The correlation exercise also showed that the less defective the road the greater the correlation between the CVI & DVI survey method. CVI is inherently different to DVI and it was not expected that there would be a simple relationship between the two surveys but it has shown that CVI can be more reliable in comparison to the more detailed and expensive survey using the variable merge option.

FIGURE 1
CVI - Methods using fixed 100m chainage & variable merge



INDICATORS FOR CLASSIFIED NON-PRINCIPAL ROADS & LOCAL ROADS

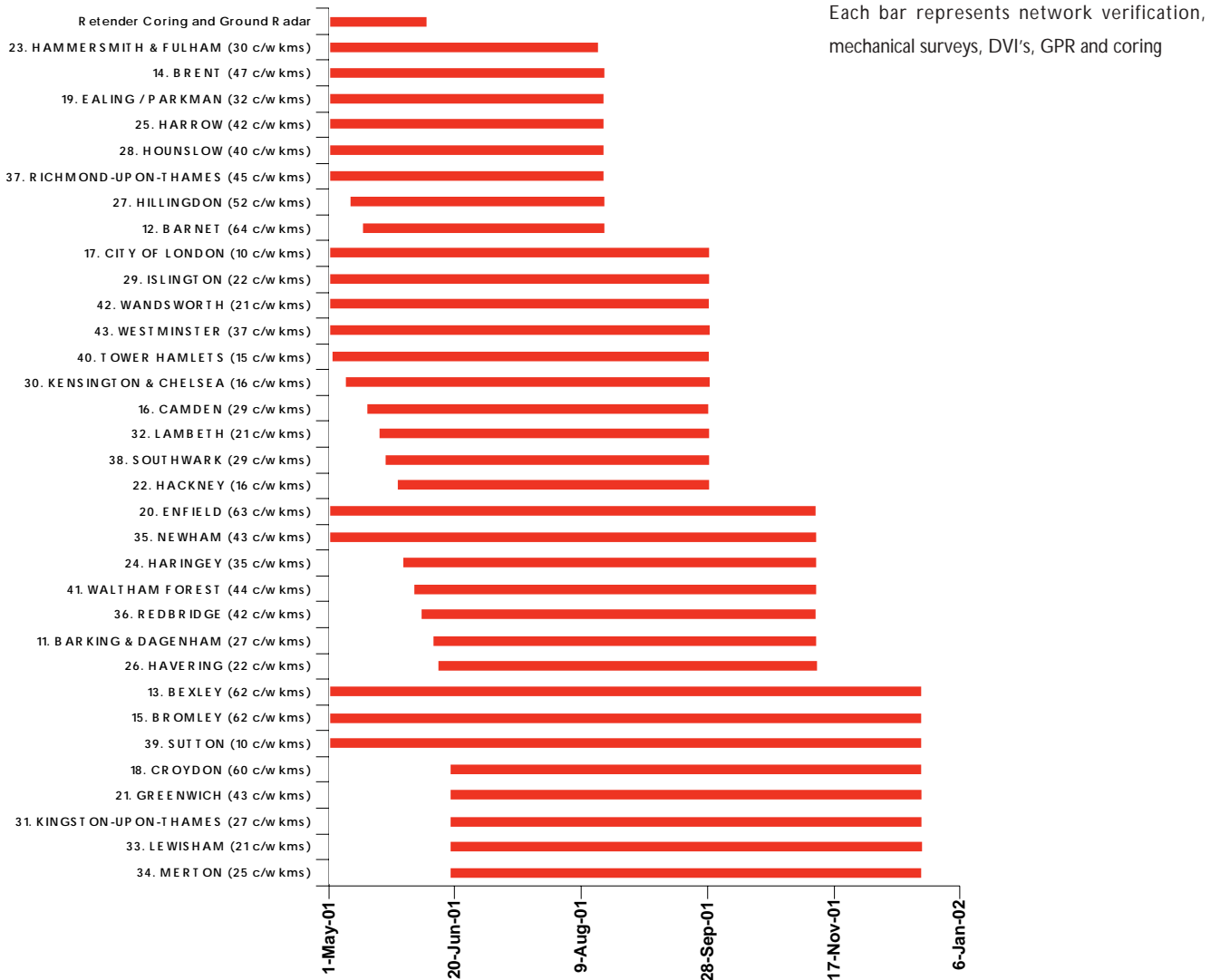
In view of the DETR’s announcement that they intend to increase BVPI’s using of UKPMS surveys to the unclassified local roads, the ROAD 2000 team felt that they could not practically become involved in such a broad range of surveys. A policy decision was therefore taken to do A class roads only. The boroughs will be expected to survey their classified non principal roads (B and C class roads) as well as their unclassified local roads when the DETR give their next announcement.

(Garry Warner - Bexley) and on the Management Board (Gordon Prangnell).

London has been well represented on both the UKPMS Owners Forum with 17 London boroughs subscribing. Additionally London has representatives on both the technical subgroup

The National Road Maintenance Condition Survey NRMCS, that has been going since 1977, has been under review. NRMCS is funded by the DETR and is run by an Executive Committee and Technical Steering Group. NRMCS has been consulting over new proposals to take the survey into the new millennium embracing best value and UKPMS. ROAD 2000 hope to have an influence on the future direction of the survey to ensure that the lessons learned in London are passed on to the NRMCS to make London’s participation worthwhile.

ROAD 2001 DRAFT VISUAL AND MACHINE SURVEY PROGRAMME - MAY 2001



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INVESTOR IN PEOPLE



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