

# ROAD2000

## LONDON'S PRINCIPAL ROAD MILLENNIUM CONDITION SURVEY

### ROAD 2000 - UPDATE

The first London-wide principal road condition survey has now been completed and the Executive Report is now ready for delivery to the Mayor. The full report should be ready by the autumn.

The initial survey data was supplied for consultation to the boroughs in April 2000 together with the Best Value Performance Indicator BVPI 96 for the principal road networks pre- and post formation of the Greater London Road Network (GRN). The

response from the boroughs on the results has been varied, with some boroughs analysing the data and comparing it with their own surveys whilst others have been happy for the project team to undertake the analysis work. This consultation has thrown up some interesting correlation problems and the project team have devoted much time to ensuring that the boroughs have confidence in the survey procedure and accuracy. The process is ongoing and will be detailed in the full report.

### BOROUGH DATA

The boroughs will be provided with further data from the ROAD 2000 survey including:

- \* An updated BVPI 96 PR and residual PR indicator
- \* Further condition indicators produced from UKPMS
- \* Costed treatments

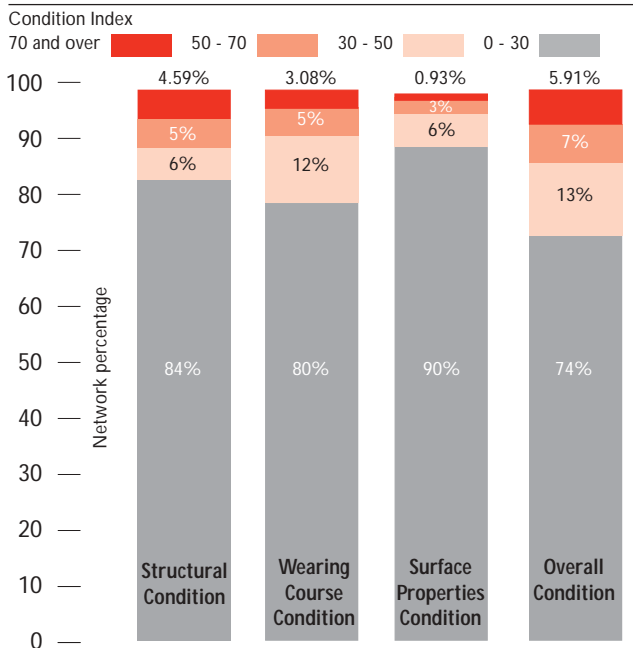
- \* A map showing the structural condition index
- \* A map showing recommended treatments.

The data will enable maintenance engineers to match the results to the condition of their networks, and will aid maintenance planning and LTP bids.

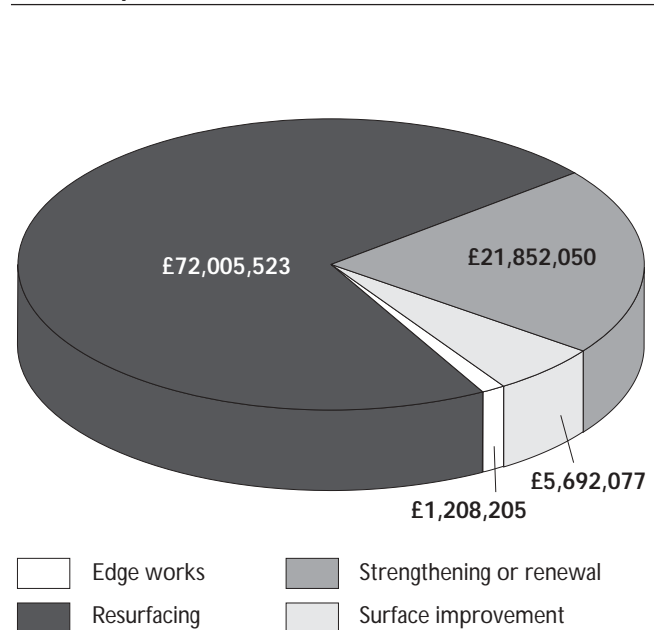
### RESULTS

Figures 1 and 2 below summarise the findings of the survey London-wide.

**Figure 1: Principal Road Performance Indicators (London wide)**



**Figure 2: Structural Treatment Costs All Principal Roads (London wide)**



## *UKPMS STANDARDS, OUTPUTS & ACCURACY*

Because of concern with the interpretation of the output results a partnership was established with all the survey participants to look at the results in detail. The partnership which includes the survey companies, technical consultants, software and mapping suppliers and representatives from the boroughs, will carry through a detailed audit process taking in

issues such as survey methodology and repeatability, UKPMS Rules and Parameters issues and data translation. So far the study has not revealed gross errors but a series of scenarios where significant differences in the outputs might arise. The great concern with the project is that it is now available to not only to determine a short-list of roads for maintenance but also a

benchmark condition and therefore local resource need. In short the survey results can now affect the size of maintenance money allocated to the various parties competing for it. It is therefore important that all authorities are collecting this data using the same specification and quality assured surveyors. A brief summary of our findings so far is shown on the table below.

Survey Parameters	Reliability Analysis	Recommendation
UKPMS Design	To determine whether the results correlate relates to practical Engineering experience	<ol style="list-style-type: none"> <li>1. Low Priority</li> <li>2. Review at a later date</li> </ol>
UKPMS Software	Tested at Tranche 2 Accreditation	<ol style="list-style-type: none"> <li>1. Low Priority</li> <li>2. Already the subject of extensive testing</li> <li>3. Review at a later date</li> </ol>
Survey Specification	A wide range of survey options are currently available: ❖ Network Referencing      ❖ Cross-sectional positioning ❖ CVI/DVI                              ❖ Inventory details	<ol style="list-style-type: none"> <li>1. A preferred specification needs to be drafted</li> </ol>
Survey Practice	Audit requirements and quality checks	<ol style="list-style-type: none"> <li>1. Specification for Surveys</li> <li>2. Quality Assurance process to be agreed</li> </ol>
Operative Training	To use only accredited qualified survey operatives	<ol style="list-style-type: none"> <li>1. To set up an approved, accredited training requirement as part of the survey specification</li> </ol>

## *TRAINING AND PRESENTATION OF RESULTS*

The ROAD 2000 survey results will be presented to a meeting of LoTAG in the autumn. Responses already received from the boroughs have suggested that a UKPMS training seminar allied to the work carried out at Hammersmith would also be useful.

The private sector participants in the survey have already agreed to contribute to and have welcomed this proposal. Whilst a date has not been fixed for either of these presentations they are likely to be in October 2000.

## *ROAD 2001 - THE WAY AHEAD*

The ROAD 2000 surveys will continue into 2000/2001 when the first years visual surveys will be supplemented with machine surveys. Sufficient work will be carried out to ensure adequate network coverage is achieved and that data is collected for the relevant performance indicators.

To take the survey forward a brainstorming session

was held with the project partnership and LoTAG Steering Group teams. It was agreed that the way forward would be to undertake the next full DVI survey in 2001/2002 with 100% network coverage. This will meet the BVPI requirements as well as showing key trends over the two-year period. The interim year, ROAD 2001 will be used to carry out machine surveys.

## MACHINE SURVEY TENDERS

Surveys were tendered to a range of consultants with expertise in survey and machine based testing. Tenderers were informed that there could be a range of awards and for varying quantities depending on the prices and proposals submitted.

The DVI surveys have been awarded to Barretts Consultants (for audit of Road 2000 work); the SCRIM, Deflectograph, Falling Weight Deflectometer and RAV (Road Analysis Vehicle) surveys to WDM Ltd and the Coring and Ground Radar work to Aperio Ltd.

## SURVEY VEHICLES



Deflectograph



The Falling Weight Deflectometer



Ground Radar Vehicle



SCRIM Machine

## SURVEY STRATEGY

A summary of the objectives is set out below. The outputs will be used to determine network condition trends, needs analysis and resource allocation.

### ROAD 2000

- \* To carry out a full Detailed Visual Inspection (DVI) of the principal road network (PRN)
- \* To carry out a correlation exercise between CVI and DVI.

### ROAD 2001

- \* To carry out a full skidding resistance survey using SCRIM
- \* To carry out a full surface conditions survey using the High Speed RAV (Road Analysis Vehicle). This is the method used in the HAs TRACS project.
- \* To carry out a correlation exercise between the machine and visual surveys of surface condition
- \* To carry out a full ground radar survey supplemented with cores and borings data to provide a road construction classification database
- \* To identify road sections where residual life surveys are appropriate using the Falling Weight Deflectometer (FWD) and Deflectograph surveys
- \* To carry out limited FWD and Deflectograph surveys for correlation purposes

### ROAD 2002

- \* To carry out a full DVI to determine deterioration and improvement trends
- \* To carry out FWD and Deflectograph surveys to appropriate sites
- \* To develop a residual life machine survey testing programme
- \* To develop a future DVI survey programme in the light of RAV and residual life survey results.

### ROAD 2003, 2004, 2005

- \* To target surveys using DVI, RAV, FWD, Deflectograph on an ongoing annual basis.

## CONTACTS

	Role	Contact	Telephone number
The Government Office for London	Client	Bob Bruty	
London Technical Advisors Group	Steering Group	Gordon Prangnell	020 8576 5822
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Barrett Consultants	Survey Contractor	Nigel Barrett	0175 385 8892
Chris Britton Consultancy	Technical Consultant	Chris Britton	01483 304 364
Symology	UKPMS Software	Ken Hickson	01582 842 626
ESRI	Mapping Software	General Sales	01296 745 500
WDM	Machine Surveys	Chris Kennedy	0117 957 7233
Aperio	Ground Radar	Jon Baston-Pitt	0870 600 8050
Barnet Training Centre	Accredited survey training for CVI/DVI	Tim Bottoms	020 8359 5157

## SURVEY ACCREDITATION

The London Borough of Barnet are now running CVI/DVI survey accreditation courses to help improve surveying quality and consistency.

## BUREAU SERVICE

In the near future we shall be offering to all London Boroughs a UKPMS bureau service for data analysis and report running for the information in your borough. The need for this service has become increasingly apparent as requests for ever more detailed and time consuming data and reports are requested. The basis upon which the Service will run will be as follows:

\* The boroughs will up in be provided with a basic data set including raw survey data for their borough in HMDIF format, free of charge. The raw

data can be used to load into any UKPMS accredited system.

\* LBH&F will offer to run the data through the Road 2000 UKPMS system to produce various tabular and map based reports additional to the base data as specified by the Customer. There will be a standard charge per report based upon simple recovery of costs

\* The project team will also offer a consultancy and advise service as required to the boroughs, on a time charge basis.

### NEXT ISSUE.....

✓ Liaison with UKPMS on Highway Maintenance Best Value in London

✓ Presentation of result to LoTAG

✓ Frequently asked questions

✓ CVI/DVI correlation



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