

ROAD2000

IMPROVING LONDON'S ROADS IN THE NEW MILLENIUM



SCANNER vs DVI

Gordon Prangnell



2006 - 2007

- SCANNER introduced
- Road Condition Index (RCI)
- BV 223 replaces BV 96
- BV96 used TTS from 2004/05
- **“% requiring further investigation”**
- DVI not permitted on PRN for PI
- London reporting DVI for resources

2006 – 2007 R&P

	Threshold 2006/07		Importance	Reliability	Max Points
	Lower	Upper			
Rut Depth	10 mm	20 mm	0.9	1.0	90
3m Variance	4 mm ²	10 mm ²	0.8	1.0	80
10m Variance	21 mm ²	56 mm ²	0.6	1.0	60
Cracking	0.15 %	2 %	0.9	0.55	50
WT Crack	0.5 %	5 %	0.9	0.44	40
Texture builtup roads	0.6 mm ²	0.3 mm ²	0.5	1.0	50
Texture non-builtup roads	as above	as above			included
Maximum Points		For all roads	Max points		370
Red Threshold				Red >100	
Amber threshold				Amber > 20	

2006/07 Results

- Ranked by SCANNER/ DVI difference
- SCANNER identifying greater lengths of deterioration
- Inner London issues

Borough		DVI	SCANNER		Difference
KENSINGTON	INNER	4.00	24.74		-20.74
CITY	INNER	13.00	32.29		-19.29
CAMDEN	INNER	12.00	31.28		-19.28
WESTMINSTER	INNER	8.00	21.94		-13.94
HARINGEY	OUTER	8.00	21.03		-13.03
ISLINGTON	INNER	13.00	25.39		-12.39
HACKNEY	INNER	12.00	21.64		-9.64
BRENT	OUTER	12.00	21.44		-9.44
TOWER HAMLETS	INNER	13.00	21.80		-8.80
WANDSWORTH	INNER	5.00	13.22		-8.22
RICHMOND	OUTER	22.00	14.47		7.53
HOUNSLOW	OUTER	13.00	20.20		-7.20
CROYDON	OUTER	6.00	12.09		-6.09
HAMMERSMITH	INNER	11.00	16.94		-5.94
LEWISHAM	INNER	7.00	12.53		-5.53
KINGSTON	OUTER	3.00	7.77		-4.77
NEWHAM	OUTER	10.00	14.76		-4.76
MERTON	OUTER	13.00	16.74		-3.74
ENFIELD	OUTER	12.00	8.98		3.02
SUTTON	OUTER	7.00	9.77		-2.77
BROMLEY	OUTER	10.00	7.24		2.76
BARKING	OUTER	4.00	6.56		-2.56
BARNET	OUTER	6.00	8.50		-2.50
WALTHAM	OUTER	12.00	13.32		-1.32
LAMBETH	INNER	17.00	15.98		1.02
HILLINGDON	OUTER	7.00	7.87		-0.87
REDBRIDGE	OUTER	7.00	7.86		-0.86
EALING	OUTER	12.00	12.74		-0.74
SOUTHWARK	INNER	16.00	16.64		-0.64
HARROW	OUTER	10.00	9.51		0.49
BEXLEY	OUTER	8.00	8.40		-0.40
GREENWICH	INNER	8.00	8.31		-0.31
HAVERING	OUTER	6.00	6.02		-0.02

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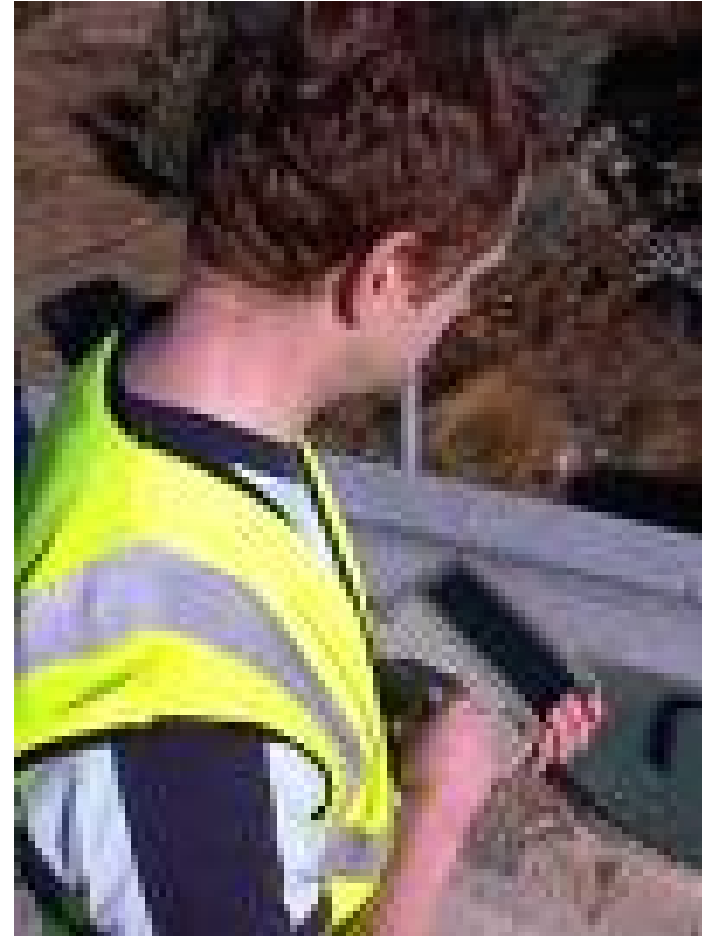


Borough		DVI	SCANNER		Difference
KENSINGTON	INNER	4.00	24.74		-20.74
CITY	INNER	13.00	32.29		-19.29
CAMDEN	INNER	12.00	31.28		-19.28
WESTMINSTER	INNER	8.00	21.94		-13.94
BROMLEY	OUTER	10.00	7.24		2.76
ENFIELD	OUTER	12.00	8.98		3.02
RICHMOND	OUTER	22.00	14.47		7.53
		= SCANNER improvements over DVI			
		= SCANNER deterioration over DVI			



DVI Accuracy

- DVI +/- 5%
- Reasonable tolerance?



2006 - 2007

Borough *		DVI	SCANNER	
CAMDEN	INNER	12.00	31.28	
CITY	INNER	13.00	32.29	
HACKNEY	INNER	12.00	21.64	
HAMMERSMITH	INNER	11.00	16.94	
ISLINGTON	INNER	13.00	25.39	
KENSINGTON	INNER	4.00	24.74	
LEWISHAM	INNER	7.00	12.53	
TOWER HAMLETS	INNER	13.00	21.80	
WANDSWORTH	INNER	5.00	13.22	
WESTMINSTER	INNER	8.00	21.94	
BRENT	OUTER	12.00	21.44	
CROYDON	OUTER	6.00	12.09	
HARINGEY	OUTER	8.00	21.03	
HOUNSLOW	OUTER	13.00	20.20	
RICHMOND	OUTER	22.00	14.47	
* All boroughs where SCANNER less DVI > +/- 5%				

2007 – 2008 R&P

	Threshold 2006/07		Importance	Reliability	Max Points	Threshold 2007/08		Max Points
	Lower	Upper				Lower	Upper	
Rut Depth	10 mm	20 mm	0.9	1.0	90	10 mm	20 mm	100
3m Variance	4 mm ²	10 mm ²	0.8	1.0	80	4 mm ²	10 mm ²	80*
10m Variance	21 mm ²	56 mm ²	0.6	1.0	60	21 mm ²	56 mm ²	60*
Cracking	0.15 %	2 %	0.9	0.55	50	0.15 %	2 %	60
WT Crack	0.5 %	5 %	0.9	0.44	40			
Texture builtup roads	0.6 mm ²	0.3 mm ²	0.5	1.0	50	0.7 mm ²	0.4 mm ²	50
Texture non-builtup roads	as above	as above			included	as above	as above	75
Maximum Points	For all roads		Max points		370	For built up roads		290
						For non-built up roads		315
Red Threshold					Red >100			Red > 100
Amber threshold					Amber > 20			Amber > 40

2007 – 2008 Scoring Changes

- Rutting + 10 points
- Variance > of 3m or 10m score
- Cracking + 10 points
- Texture
 - 50 points built-up roads
 - 75 points non built-up roads
- 290/315 Max scores
- Amber increased to 40 points

Red - Definitions

2006 - 2007

% requiring further investigation

2007 – 2008

Maintenance to be considered soon

2007/08 Results

- Ranked by SCANNER/ DVI difference
- SCANNER identifying less deterioration
- Problem solved?

Borough		DVI	SCANNER		Reduction PI Value
SOUTHWARK	INNER	15.30	5.00		10.30
RICHMOND	OUTER	16.40	9.00		7.40
ENFIELD	OUTER	9.90	4.00		5.90
BROMLEY	OUTER	7.60	2.00		5.60
WESTMINSTER	INNER	6.80	12.00		-5.20
EALING	OUTER	8.60	4.00		4.60
ISLINGTON	INNER	13.40	9.00		4.40
TOWER HAMLETS	INNER	13.40	9.00		4.40
CITY	INNER	12.30	8.00		4.30
BEXLEY	OUTER	7.20	3.00		4.20
HARROW	OUTER	7.70	4.00		3.70
LAMBETH	INNER	15.60	12.00		3.60
BARNET	OUTER	6.50	3.00		3.50
HILLINGDON	OUTER	6.30	3.00		3.30
WALTHAM	OUTER	8.90	6.00		2.90
CROYDON	OUTER	4.20	7.00		-2.80
GREENWICH	INNER	6.30	4.00		2.30
HAVERING	OUTER	4.10	2.00		2.10
KENSINGTON	INNER	4.00	6.00		-2.00
HOUNSLOW	OUTER	9.00	7.00		2.00
CAMDEN	INNER	12.80	11.00		1.80
REDBRIDGE	OUTER	4.80	3.00		1.80
LEWISHAM	INNER	6.40	8.00		-1.60
HARINGEY	OUTER	7.50	9.00		-1.50
KINGSTON	OUTER	2.50	4.00		-1.50
BARKING	OUTER	3.00	2.00		1.00
BRENT	OUTER	8.90	8.00		0.90
HACKNEY	INNER	6.80	6.00		0.80
NEWHAM	OUTER	6.80	6.00		0.80
MERTON	OUTER	9.70	9.00		0.70
HAMMERSMITH	INNER	8.60	8.00		0.60
SUTTON	OUTER	6.50	6.00		0.50
WANDSWORTH	INNER	5.20	5.00		0.20

2007 - 2008

Borough SCANNER and DVI 2007/08 BVPI PRN Results				
Borough *		DVI	SCANNER	
SOUTHWARK	INNER	15.30	5.00	
WESTMINSTER	INNER	6.80	12.00	
BROMLEY	OUTER	7.60	2.00	
ENFIELD	OUTER	9.90	4.00	
RICHMOND	OUTER	16.40	9.00	
* All boroughs where SCANNER less DVI > +/- 5%				