





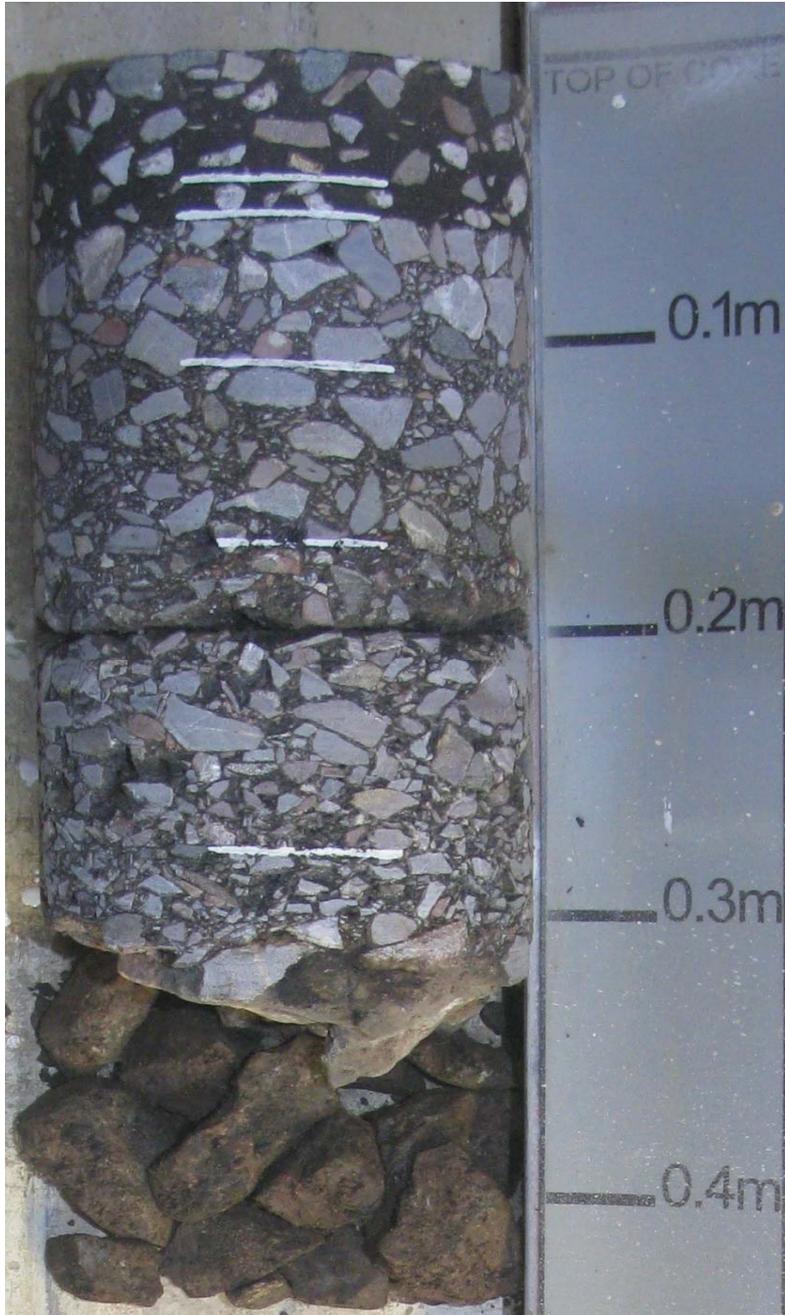


Job Number : 47072436  
 Sample Number : CR0738  
 Core Number : 2C  
 Cored / Logged By : MB / BT  
 Date Cored / Logged : 12-Nov-15 / 17-Nov-15  
 Nominal Diameter : 150

Location : Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation  
 Northbound, Lane 1 (CL1), Lane Centre, Offset from Nearside line 1.2m  
 Survey Ch. 418m  
 HAPMS Ch. 7025A30/47+88m  
 OSGR: ST 191611, 04560  
 Notes: Rutting

Layer	Depth		Thickness (mm)	Material description	Suitable for NAT/CS Testing (Yes/No)	PAK-Marker Result (+ve/-ve or n/a)	Binder	Aggregate	
	From	To						Size	Type
1	0	40	40	Hot Rolled Asphalt + PCC	Yes	-ve	Bitumen	14	Crushed Rock
2	40	51	11	Hot Rolled Asphalt	No	-ve	Bitumen	14	Crushed Rock
3	51	100	49	Asphalt Concrete	Yes	-ve	Bitumen	20	Crushed Rock
4	100	157	57	Asphalt Concrete	Yes	-ve	Bitumen	20	Crushed Rock
5	157	185	28	Asphalt Concrete (damage to face and voided)	No	-ve	Bitumen	14	Crushed Rock
				Layers 5 & 6 Not Bonded					
6	185	258	73	Asphalt Concrete (damage to face and voided)	No	+ve	Tar	20	Crushed Rock
7	258	300	42	Asphalt Concrete (broken @ base and damage to face)	No	+ve	Tar	20	Crushed Rock
				Loose Granular Material					

Notes : The scale is for guidance only. It does not necessarily reflect the actual thicknesses of individual layer(s).



**Material Description**

The material description given (such as hot rolled asphalt or asphalt concrete) is generic only and is based upon a visual assessment of the material. Similarly, use of additional descriptive (such as voided) is based on visual assessment only and the relationship between air voids visually to the naked eye and degree of compaction is complex and materials specific.

**PAK-Marker (PAH Spray)**

The Tar Spray Test is a rapid, qualitative indicator of the presence of polyaromatic compounds (PACs) typically found in tar. PACs also exist in other road construction materials (e.g. bitumen and cutbacks like kerosene), but at low concentrations. The probability of obtaining a false positive result in the tar spray test with such materials is low, and a positive result in the tar spray test is a strong (but not definitive) indicator of the presence of tar. For quantitative results, this test should be considered in conjunction with the results from other tests (i.e. Total Polynuclear Aromatic Hydrocarbons (PAH) by Gas Chromatography - Flame Ionisation Detection (GC-FID)).

**Binder**

The binder type is assessed based on visual and aromatic inspection. The PAK-Marker result is also considered.

**Aggregate Size**

The sizes indicated are given as the best estimate of the nominal size of the material.

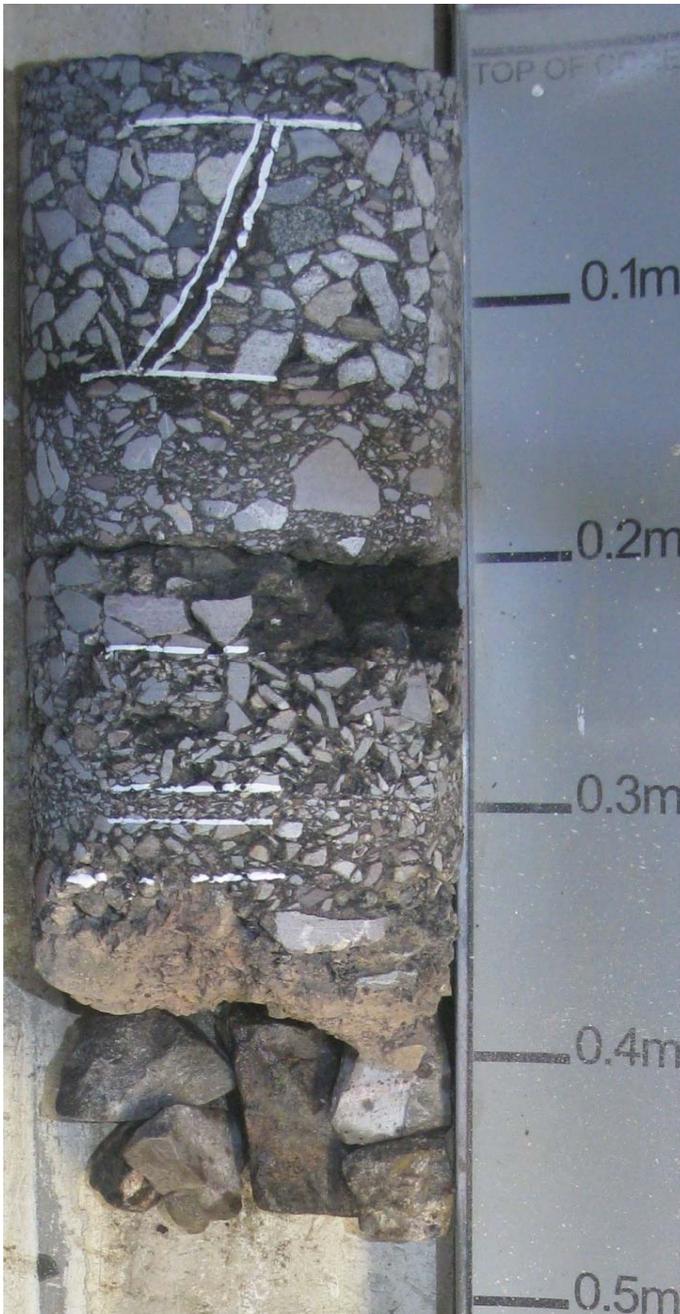


Job Number : 47072436  
 Sample Number : CR0738  
 Core Number : 04  
 Cored / Logged By : MB / BT  
 Date Cored / Logged : 12-Nov-15 / 17-Nov-15  
 Nominal Diameter : 150

Location : Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation  
 Southbound, Lane 1 (CR1), NSWP, Offset from Nearside line 0.8m  
 Survey Ch. 827m  
 HAPMS Ch. 7025A30/51+207m  
 OSGR: ST 19804, 04901  
 Notes: N/A

Layer	Depth		Thickness (mm)	Material description	Suitable for NAT/CS Testing (Yes/No)	PAK-Marker Result (+ve/-ve or n/a)	Binder	Aggregate	
	From	To						Size	Type
1	0	24	24	Asphalt Surfacing (voided)	No	-ve	Bitumen	14	Crushed Rock
2	24	116	92	Asphalt Concrete (full depth crack)	No	-ve	Bitumen	20	Crushed Rock
3	116	182	66	Asphalt Concrete	Yes	-ve	Bitumen	32	Crushed Rock
				Layers 3 & 4 Not Bonded					
4	182	218	36	Asphalt Concrete (damage to face and highly voided)	No	+ve	Tar	32	Crushed Rock
5	218	270	52	Asphalt Concrete (damage to face and highly voided)	No	+ve	Tar	14	Crushed Rock
6	270	282	12	Asphalt Concrete (voided)	No	-ve	Bitumen	10	Crushed Rock
7	282	302	20	Asphalt Concrete (damage to face and voided)	No	-ve	Bitumen	14	Crushed Rock
8	302	365	63	Asphalt Concrete (damage to face)	No	-ve	Bitumen	32	Crushed Rock
				Loose Granular Material					

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**Binder**

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**Aggregate Size**

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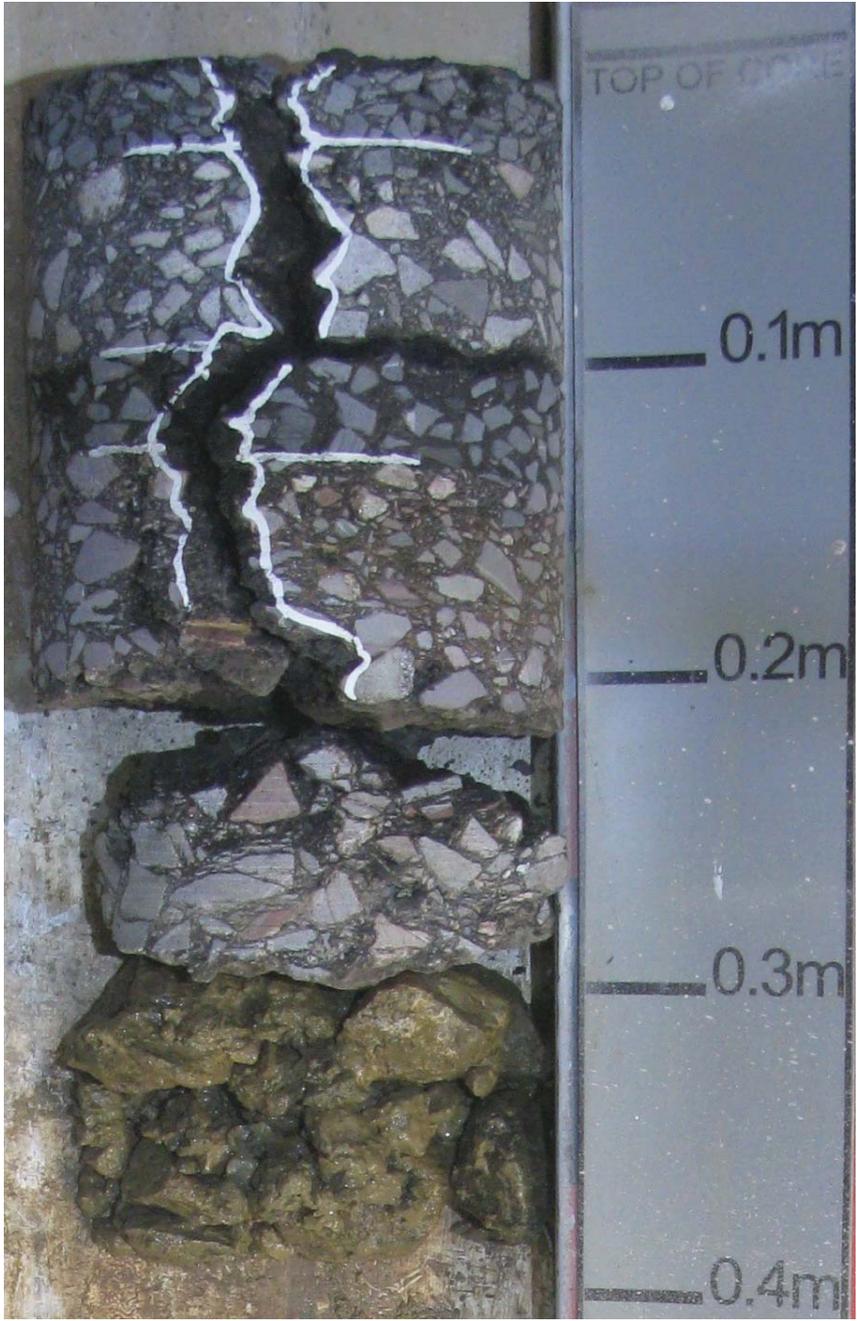


Job Number : 47072436  
 Sample Number : CR0738  
 Core Number : 06  
 Cored / Logged By : MB / BT  
 Date Cored / Logged : 12-Nov-15 / 17-Nov-15  
 Nominal Diameter : 150

Location : Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation  
 Northbound, Lane 1 (CL1), Lane Centre, Offset from Nearside line 1.45m  
 Survey Ch. 1886m  
 HAPMS Ch. 7025A30/51+1266m  
 OSGR: ST 20346, 05769  
 Notes: Longitudinal Crack

Layer	Depth		Thickness (mm)	Material description	Suitable for NAT/CS Testing (Yes/No)	PAK-Marker Result (+ve/-ve or n/a)	Binder	Aggregate	
	From	To						Size	Type
1	0	27	27	Asphalt Surfacing (in half and voided)	No	-ve	Bitumen	14	Crushed Rock
2	27	85	58	Asphalt Concrete (in half)	No	-ve	Bitumen	20	Crushed Rock
3	85	117	32	Hot Rolled Asphalt (in half)	No	-ve	Bitumen	14	Crushed Rock
4	117	200	83	Asphalt Concrete (broken @ base and in half)	No	-ve	Bitumen	20	Crushed Rock
				Layers 4 & 5 Not Bonded					
5	200	265	65	Asphalt Concrete (broken up)	No	-ve	Bitumen	20	Crushed Rock
				Loose Granular Material					

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**Binder**  
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**Aggregate Size**  
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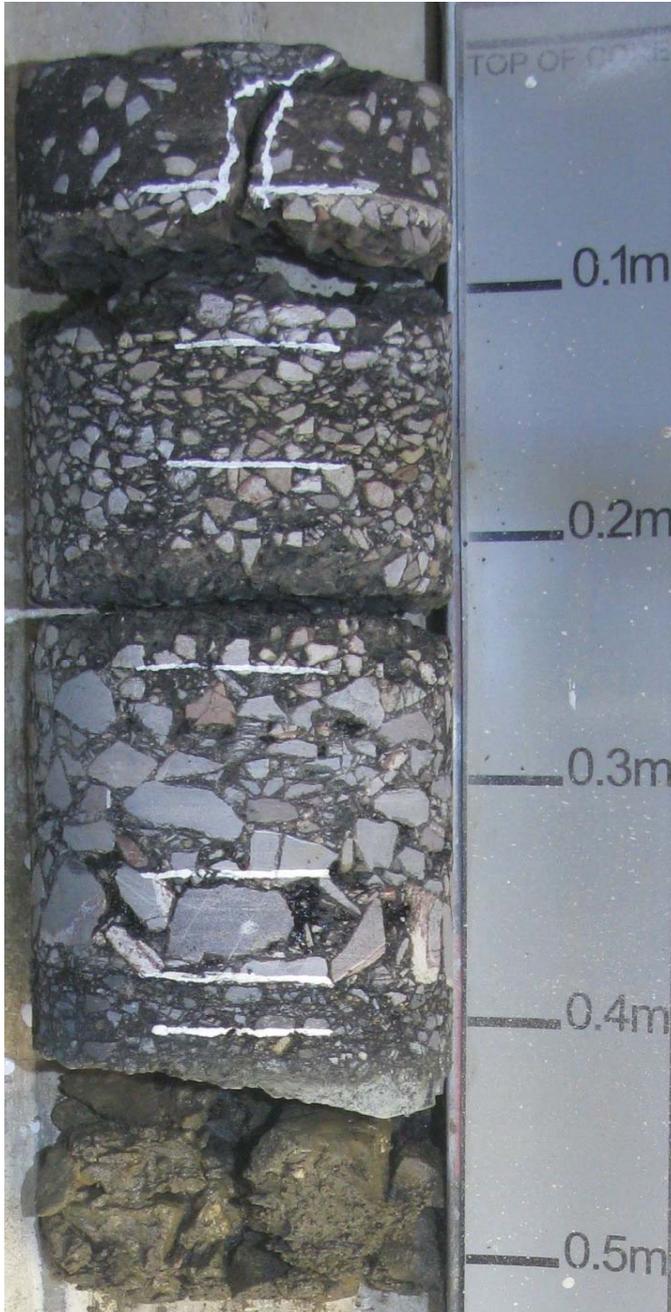


Job Number : 47072436  
 Sample Number : CR0738  
 Core Number : 09  
 Cored / Logged By : MB / BT  
 Date Cored / Logged : 12-Nov-15 / 17-Nov-15  
 Nominal Diameter : 150

Location : Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation  
 Southbound, Layby, Lane 1 (CL1), OSWP, Offset from Offside edge 1.1m  
 Markerpost 245/8  
 HAPMS Ch. 7025A30/98+40m  
 OSGR: ST 18216, 02567  
 Notes: Surface Deterioration

Layer	Depth		Thickness (mm)	Material description	Suitable for NAT/CS Testing (Yes/No)	PAK-Marker Result (+ve/-ve or n/a)	Binder	Aggregate	
	From	To						Size	Type
1	0	55	55	Hot Rolled Asphalt + Surface Dressing (in half)	No	-ve	Bitumen	14	Crushed Rock
2	55	80	25	Asphalt Concrete (damage to face and in half)	No	-ve	Bitumen	14	Crushed Rock
				Layers 2 & 3 Not Bonded					
3	80	112	32	Asphalt Concrete (broken @ top and voided)	No	-ve	Bitumen	14	Crushed Rock
4	112	157	45	Asphalt Concrete (voided)	Yes	-ve	Bitumen	14	Crushed Rock
5	157	210	53	Asphalt Concrete (broken @ base and damage to face)	No	-ve	Bitumen	14	Crushed Rock
				Layers 5 & 6 Not Bonded					
6	210	236	26	Asphalt Concrete (damage to face and voided)	No	-ve	Bitumen	14	Crushed Rock
7	236	315	79	Asphalt Concrete (voided)	Yes	+ve	Tar	32	Crushed Rock
8	315	356	41	Asphalt Concrete (voided)	Yes	+ve	Tar	32	Crushed Rock
9	356	376	20	Asphalt Concrete	No	-ve	Bitumen	10	Crushed Rock
10	376	405	29	Asphalt Concrete	No	+ve	Tar	10	Crushed Rock
				Loose Granular Material					

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**Binder**

The binder type is assessed based on visual and aromatic inspection. The PAK-Marker result is also considered.

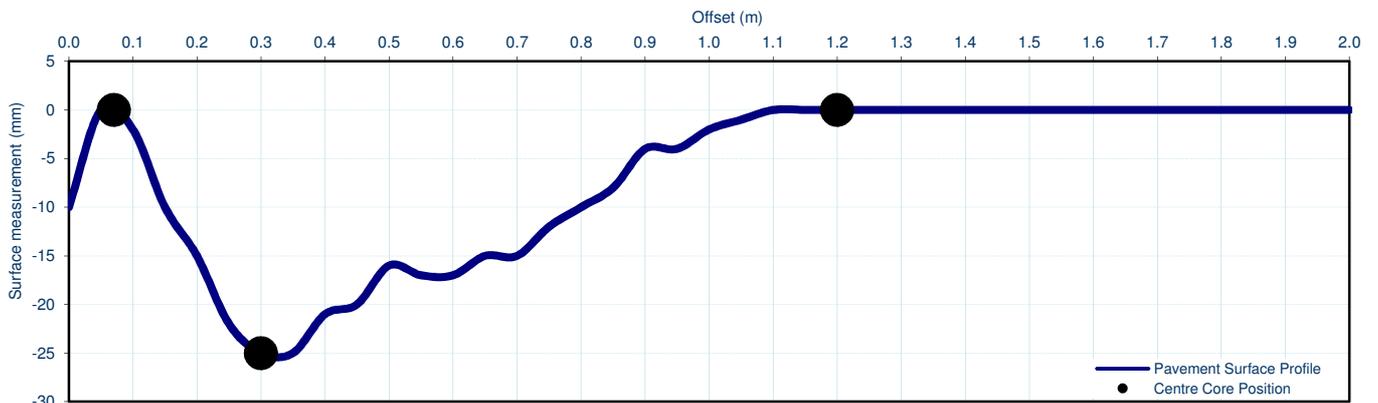
**Aggregate Size**

The sizes indicated are given as the best estimate of the nominal size of the material.

Job Number : 47072027  
 Sample Number : CR0738  
 Core Number : 2 (ABC)  
 Cored / Logged By : MB / BT  
 Date Cored / Logged : 11/11/15 - 17/11/15  
 Nominal Diameter : 150

Location : Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation  
 Northbound, Lane 1 (CL1), NSW, Offset from Nearside line 0.07, 0.3 and 1.2m  
 Survey Ch. 418m  
 HAPMS Ch. 7025A30/47+88m  
 OSGR: ST 191611, 04560  
 Notes: Rutting

Material Description	Layer	A			B			C		
		Cumulative Depth inc. Rut	Cumulative Thickness	Layer Thickness	Cumulative Depth inc. Rut	Cumulative Thickness	Layer Thickness	Cumulative Depth inc. Rut	Cumulative Thickness	Layer Thickness
		(mm)			(mm)			(mm)		
HRA	1	45	45	45				40	40	40
HRA	2	57	57	12	63	38	38	51	51	11
Asphalt Concrete	3	105	105	48	106	81	43	100	100	49
Asphalt Concrete	4	171	171	66	175	150	69	157	157	57
Asphalt Concrete	5	210	210	39	275	250	100	185	185	28
Asphalt Concrete	6							258	258	73
Asphalt Concrete	7							300	300	42

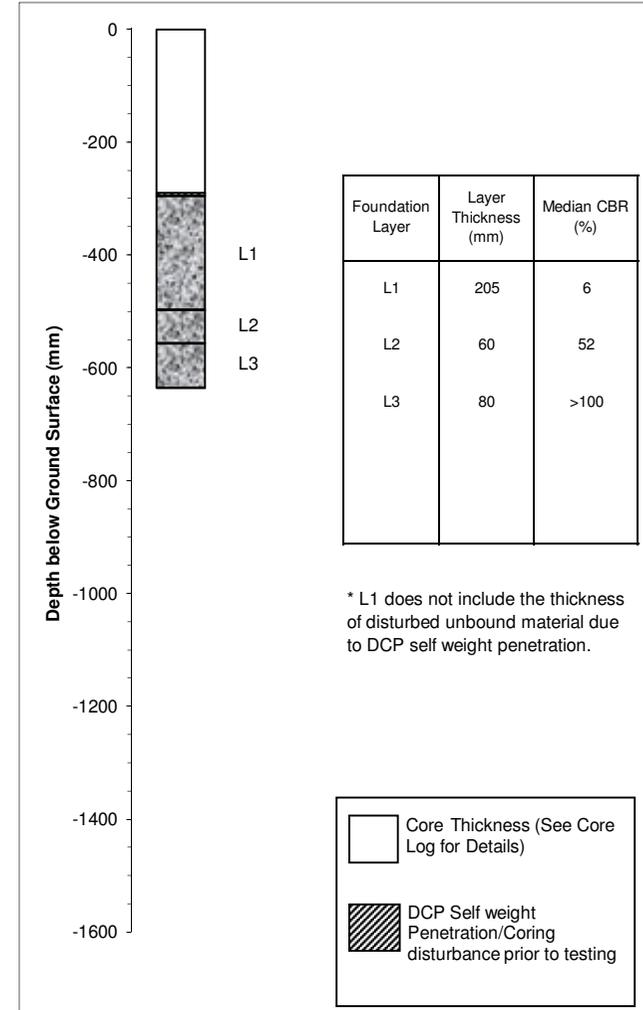
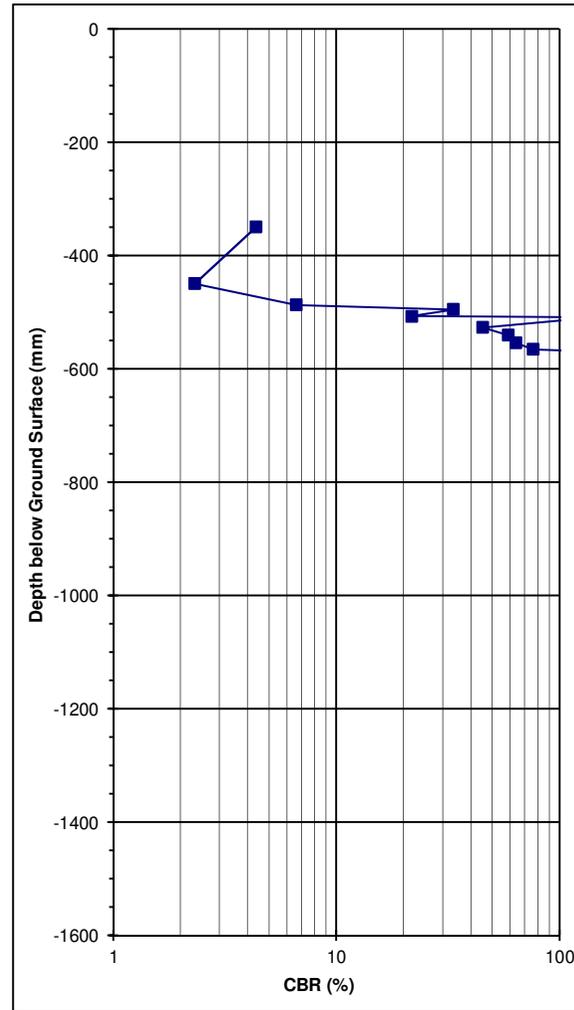
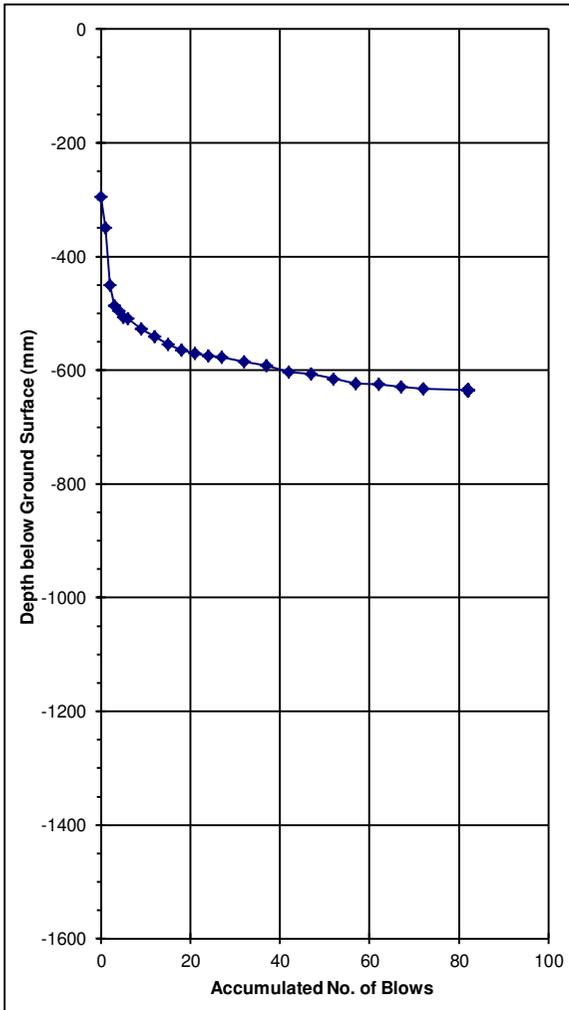


**Note:** For details refer to the individual core logs.  
 Scale for guidance only.

# DYNAMIC CONE PENETROMETER RESULTS



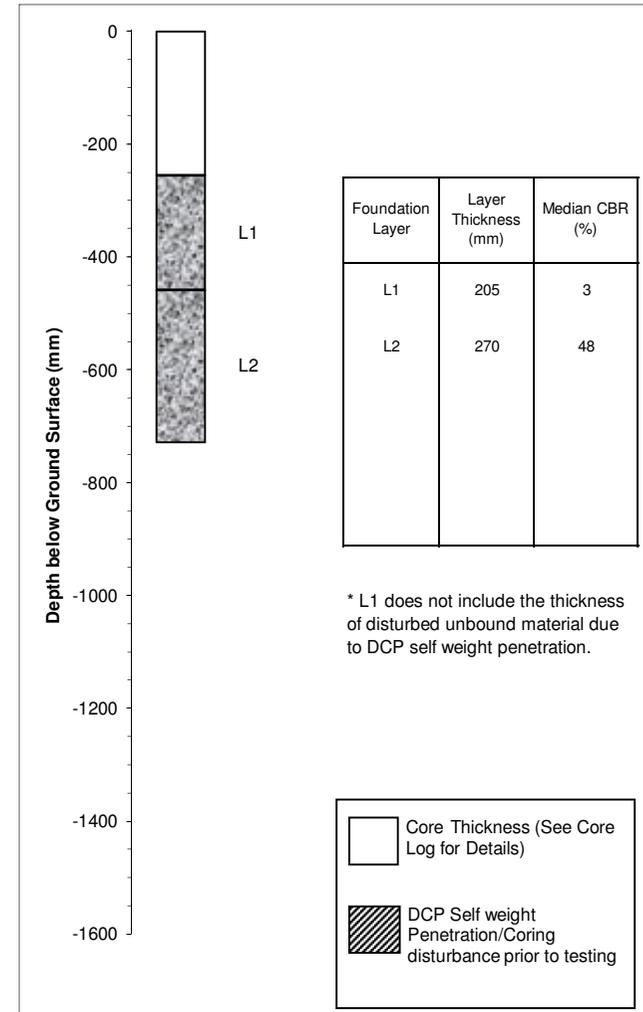
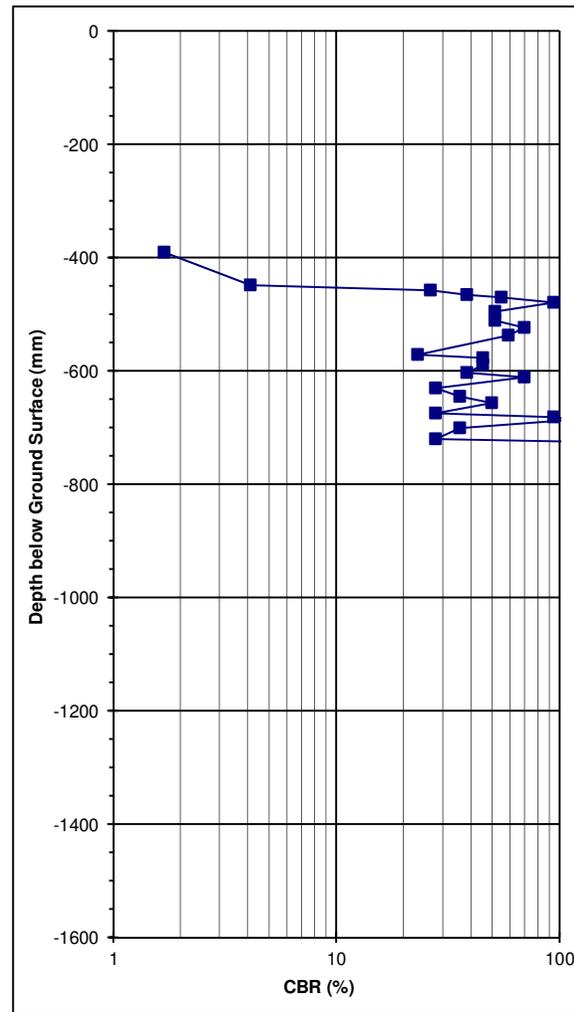
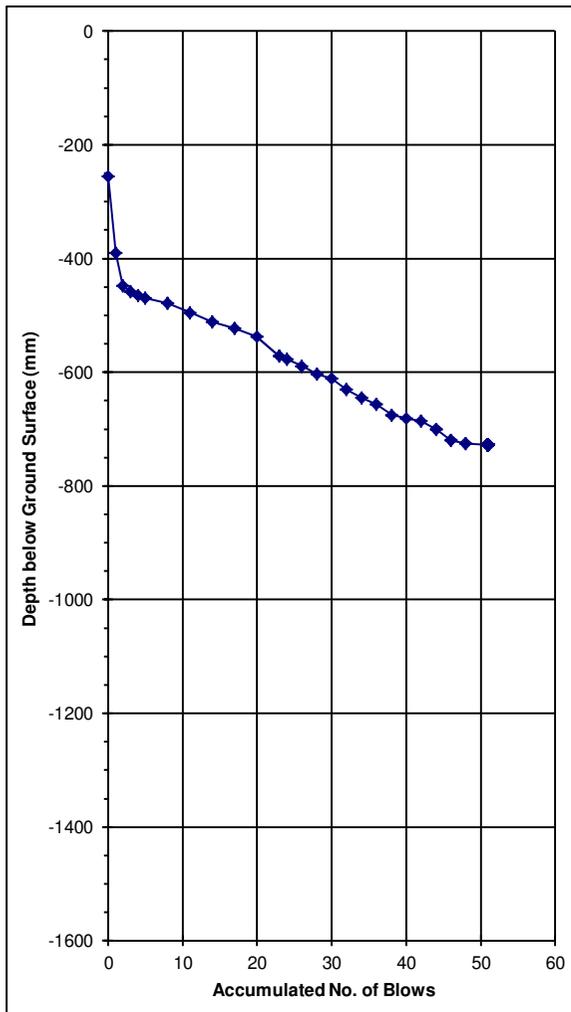
Job Number :	47072436	Location :	Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation
DCP/Core Number :	2B		Northbound, Lane 1 (CL1), NSWP, Offset from Nearside line 0.3m
DCP Operator :	MB/PM		Survey Ch. 418m
Date Tested :	11/11/15		HAPMS Ch. 7025A30/47+88m
Plot Prepared By :	JB		OSGR: ST 191611, 04560
Plot Checked By :	TJ		Notes: Rutting
Date Prepared :	24/11/15		



# DYNAMIC CONE PENETROMETER RESULTS



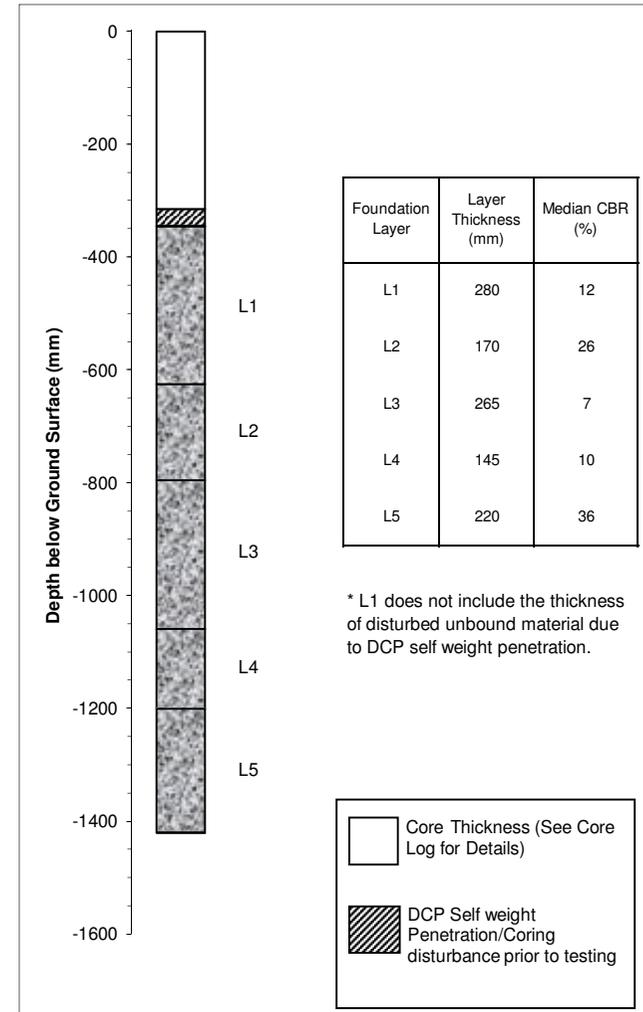
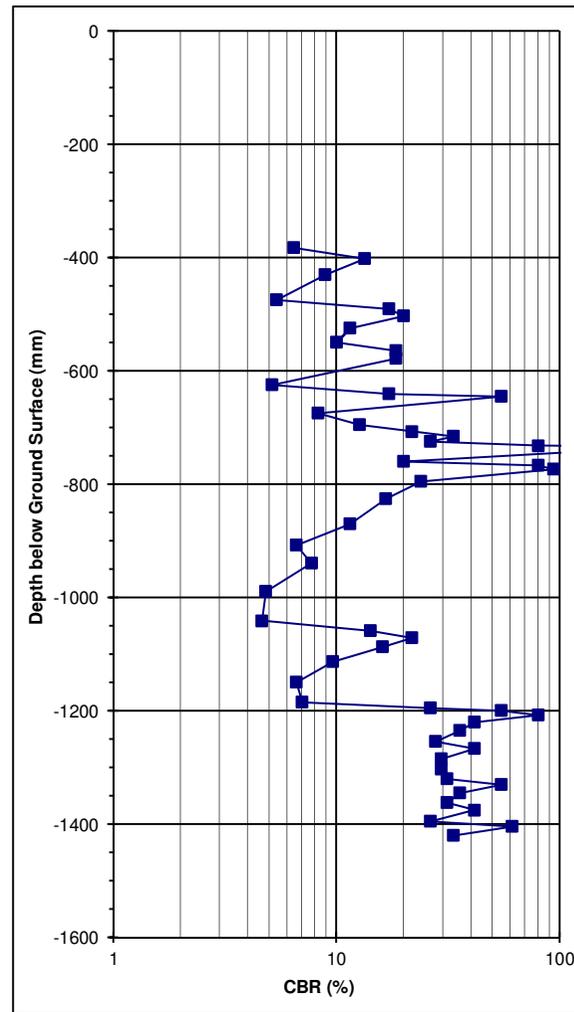
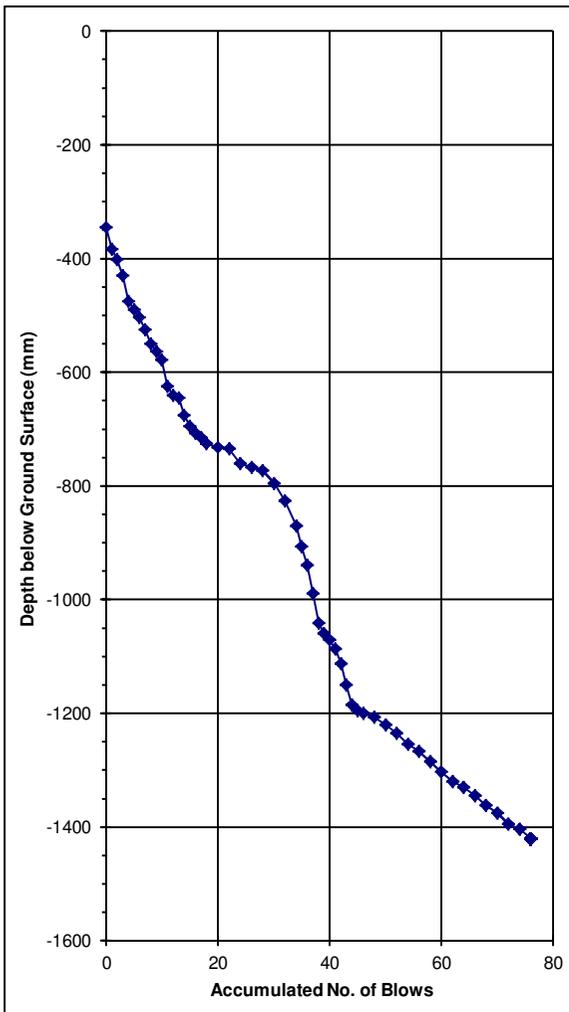
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DCP/Core Number :	3		Southbound, Lane 1 (CR1), NSW, Offset from Nearside line 0.56m
DCP Operator :	MB/PM		Survey Ch. 523m
Date Tested :	12/11/15		HAPMS Ch. 7025A30/47+193m
Plot Prepared By :	JB		OSGR: ST 19673, 04640
Plot Checked By :	TJ		Notes: Longitudinal Crack
Date Prepared :	24/11/15		



# DYNAMIC CONE PENETROMETER RESULTS



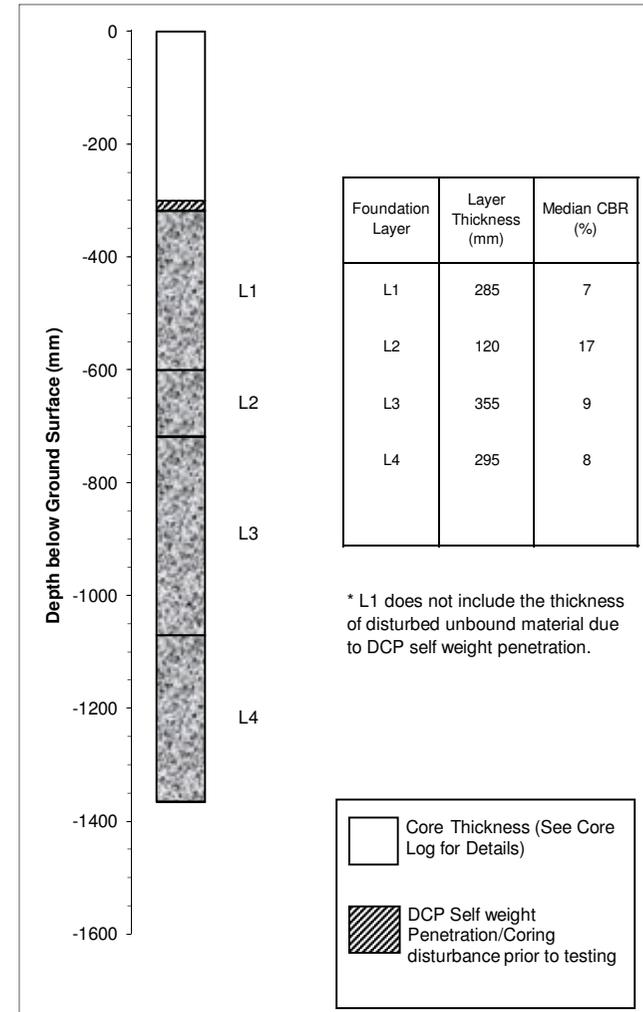
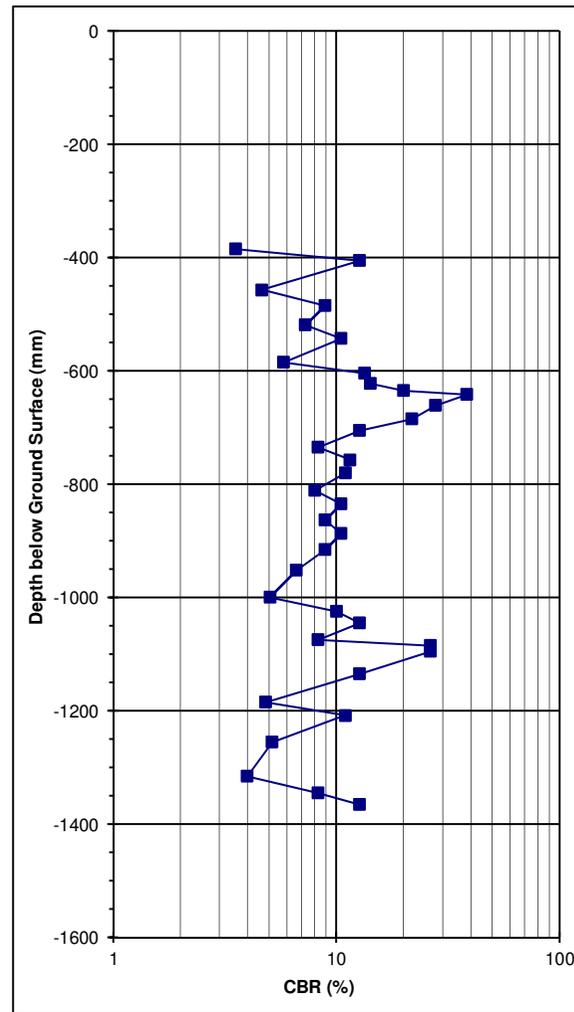
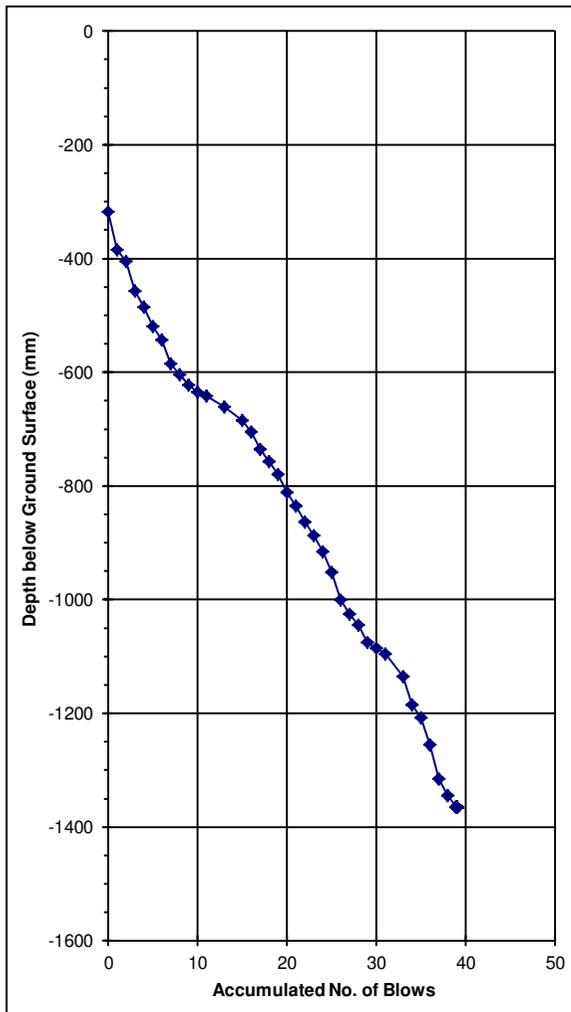
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DCP/Core Number :	5		Northbound, Lane 1 (CL1), NSWP, Offset from Nearside line 0.92m
DCP Operator :	MB/PM		Survey Ch. 1868m
Date Tested :	12/11/15		HAPMS Ch. 7025A30/51+1248m
Plot Prepared By :	JB		OSGR: ST 20337, 05753
Plot Checked By :	TJ		Notes: No crack identified on site
Date Prepared :	24/11/15		



# DYNAMIC CONE PENETROMETER RESULTS



Job Number :	47072436	Location :	Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation
DCP/Core Number :	6		Northbound, Lane 1 (CL1), Lane Centre, Offset from Nearside line 1.45m
DCP Operator :	MB/PM		Survey Ch. 1886m
Date Tested :	12/11/15		HAPMS Ch. 7025A30/51+1266m
Plot Prepared By :	JB		OSGR: ST 20346, 05769
Plot Checked By :	TJ		Notes: Longitudinal Crack
Date Prepared :	24/11/15		



# DYNAMIC CONE PENETROMETER RESULTS



Job Number :	47072436	Location :	Area 2 - A30 Rawridge MP 243.7 to 240.9 Pavement Investigation
DCP/Core Number :	9		Southbound, Layby, Lane 1 (CL1), OSWP, Offset from Offside edge 1.1m
DCP Operator :	MB/PM		Markerpost 245/8
Date Tested :	12/11/15		HAPMS Ch. 7025A30/98+40m
Plot Prepared By :	JB		OSGR: ST 18216, 02567
Plot Checked By :	TJ		Notes: Surface Deterioration
Date Prepared :	24/11/15		

