



Highways  
Asset Planning Group  
Materials  
Building G  
Merrow Lane  
Guildford  
Surrey GU4 7BQ  
Tel 01483 517430  
Fax 01483 517445



# Proprietary Patching Material Trial Viafix (All Materials Comparison)

0/10 Viafix

0/6 Viafix

AC 10 close surf (0/10 CGSC/DBM)

BBA HAPAS Approved PCSM

**24 Month Report**



Project Title: Proprietary Patching Material Trial  
Viafix (All Materials Comparison)

Document Title/No: 24 Month, All Materials Comparison Report

Client Reference: 09 Via 01  
(Viatec UK Ltd)

Date: 24th July 2009  
Prepared By: Print RG Mayell  
Sign .....

Authorised By: Print S Isaacs  
Sign .....

Copies to 1 Mike Reynolds (Viatec)  
2 SCC (Materials)

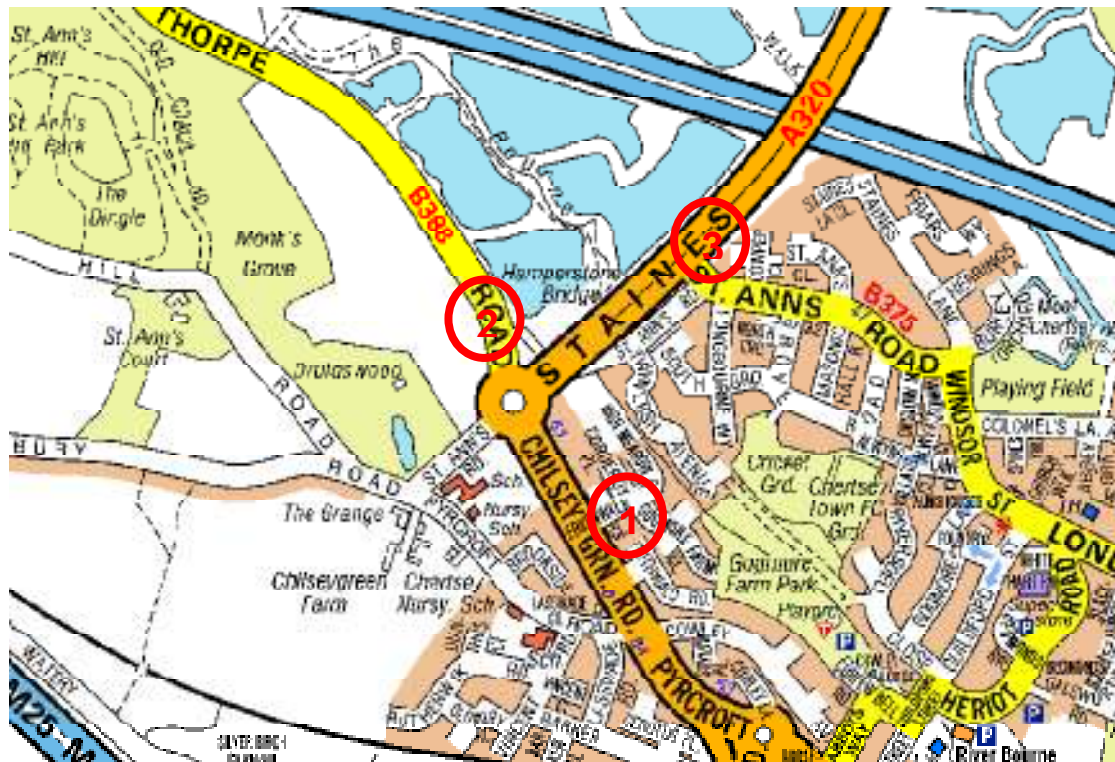
Amendment List

Iss. / Rev.	Iss. / Rev Date	Remove		Insert	
		Page	Iss. / Rev.	Page	Iss. / Rev.

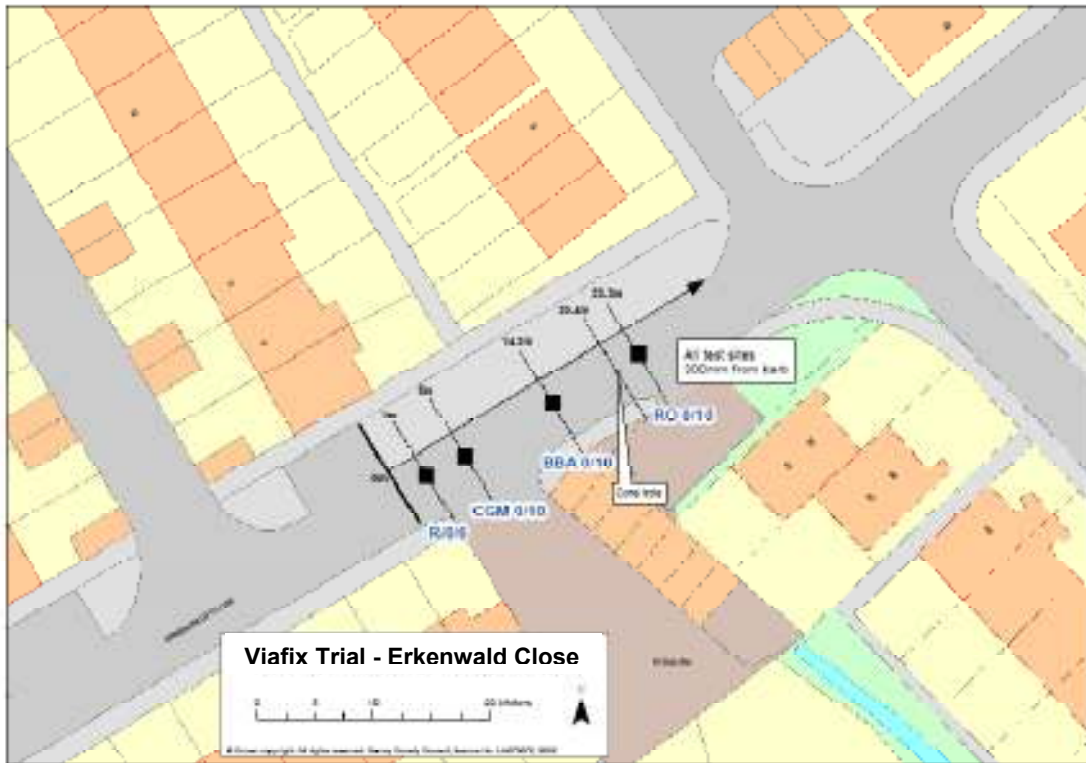
<b>Contents</b>	<b>Page</b>
Primary Sites; Chertsey, Location Map	4
D3009 Erkenwald Close, Plan	5
D3009 Erkenwald Close, Installation	6-7
B388 Thorpe Road, Plan	8
B388 Thorpe Road, Installation	9-10
A320 Staines Road, Plan	11
A320 Staines Road, Installation	12-13
Secondary Sites; Guildford, Location Map	14
B2234 Park Lane and D4036 Partridge Way, Location Plan	15
B2234 Park Lane and D4036 Partridge Way, Installation	16-17
Texture Depth (Sand Patch) Results Summary	18
3m Straight Edge, Results Summary	19
Hog and Sag, Results Summary	20
Visual Inspection (Primary Sites)	
D3009 Erkenwald Close	21-24
B388 Thorpe Road	25-28
A320 Staines Road	29-32
Visual Inspection (Secondary Sites)	
B2234 Park Lane and D4036 Partridge Way	33-36
Annex A (Coring)	39
Annex B (Laboratory Test Certificates)	
Skid Test	40
Wheeltrack Testing Summary	41

## Chertsey Locations

1. D3009 Erkenwald Close
2. B388 Thorpe Road
3. A320 Staines Road



## D3009 Erkenwald Close



Note; Schematic only

## D3009 Erkenwald Close

### Installation

Date 17/05/2007

### Weather

Temp	Hi	Low	Out	Wind	Total
Out (ave)	Temp	(ave)Temp	(ave)Hum	(ave)Speed	(ave) Rain mm
15.5	15.6	15.3	93.9	0.1	0.6

### Weather description

17th May 2007 (Chertsey sites)

Cloud cover Overcast all day,

Rain Occasional very light showers after overnight rain,

Wind Very light

Temperature Warm 15-C

Road condition Wet in the beginning, generally drying through the day

### 0/6 Viafix

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated 300mm from the kerb, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted the patch was ready for backfill. Due to the late arrival on site of the manufacturers representatives it was decided to follow the instructions on the tub and backfill in three layers. Water was sprinkled on each layer prior to compaction. This produced a, slightly "spongy" mobile fill but it soon hardened off. (The other 0/6 Viafix patches were constructed in two layers) The compaction of the two lower layers was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

### 0/10 Close Graded Macadam

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 300mm from the edge line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted the patch was then backfilled with two layers of hot 0/10 Close Graded Macadam supplied by Hansons West Drayton. (See laboratory certificate No 070776, note recovered binder stiffness.) The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 BBA/HAPAS approved PCSM

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 300mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of the 0/10 BBA/HAPAS approved material. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 Viafix

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 300mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/10 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

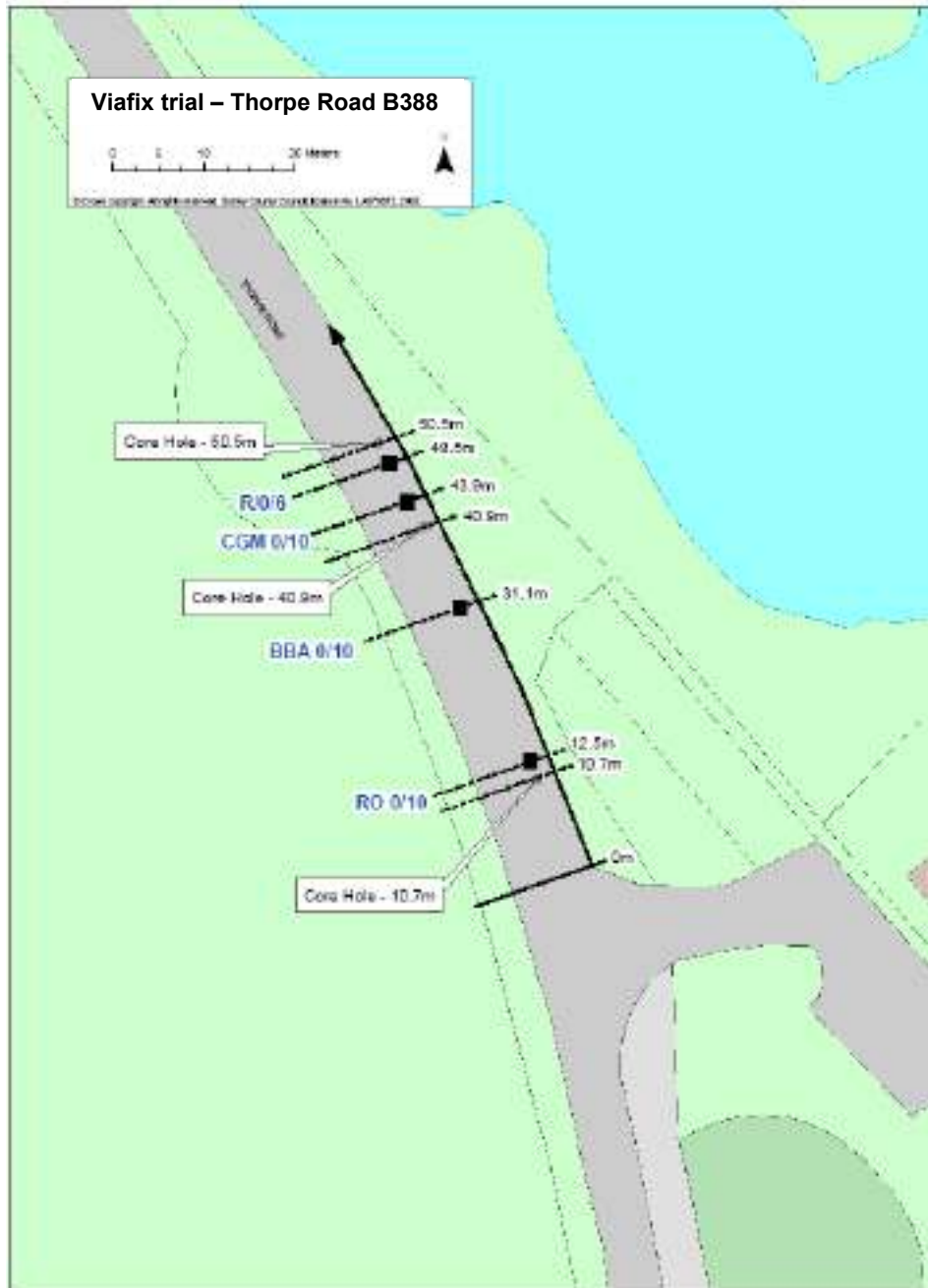
# D3009 Erkenwald Close (Site 1)

## Installation Photographs





## B388 Thorpe Road (Site 2) Location Plan



Note; Schematic only



## B388 Thorpe Road (Site 2)

Installation

Date 17/05/2007

### Weather

Temp	Hi	Low	Out	Wind	Total
Out	(ave) Temp	(ave)Temp	(ave)Hum	(ave)Speed	(ave) Rain mm
15.5	15.6	15.3	93.9	0.1	0.6

### Weather description

17th May 2007 (Chertsey sites)

Cloud cover Overcast all day,

Rain Occasional very light showers after overnight rain,

Wind Very light

Temperature Warm 15°C

Road condition Wet in the beginning, generally drying through the day

### 0/6 Viafix

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/6 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

### 0/10 Close Graded Macadam

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the edge line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted the patch was then backfilled with two layers of hot 0/10 Close Graded Macadam supplied by Hansons West Drayton. (See laboratory certificate No 070776, note recovered binder stiffness.) The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 BBA/HAPAS approved PCSM

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of the 0/10 BBA/HAPAS approved material. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 Viafix

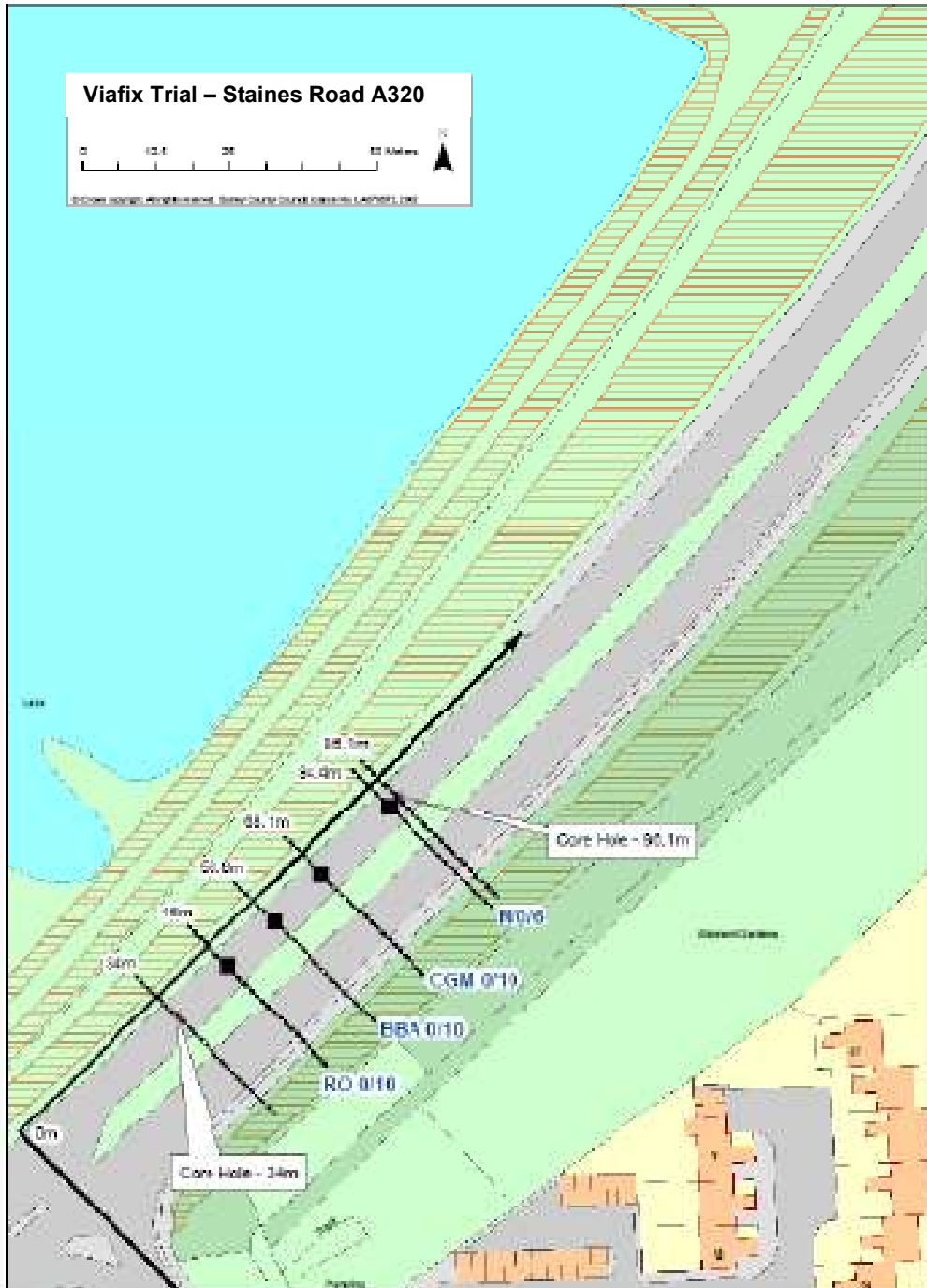
A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/10 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

# B388 Thorpe Road

## Photographs



# A320 Staines Road Location Plan



## A320 Staines Road

Installation

Date 17/05/2007

### Weather

Temp	Hi	Low	Out	Wind	Total
Out	(ave) Temp	(ave)Temp	(ave)Hum	(ave)Speed	(ave) Rainmm
15.5	15.6	15.3	93.9	0.1	0.6

### Weather description

17th May 2007 (Chertsey sites)

Cloud cover Overcast all day,

Rain Occasional very light showers after overnight rain,

Wind Very light

Temperature Warm 15°C

Road condition Wet in the beginning, generally drying through the day

### 0/6 Viafix

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/6 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

### 0/10 Close Graded Macadam

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the edge line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted the patch was then backfilled with two layers of hot 0/10 Close Graded Macadam supplied by Hansons West Drayton. (See laboratory certificate No 070776, note recovered binder stiffness.) The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 BBA/HAPAS approved PCSM

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of the 0/10 BBA/HAPAS approved material. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller. (See Appendix B)

### 0/10 Viafix

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/10 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

# A320 Staines Road

## Photographs



# ViafixTrial

Installation May 2007

Secondary Sites Guildford (B2234 Park Lane & D4036 Partridge Way)



## Weather

Temp	Hi	Low	Out	Wind	Total
Out (ave)	Temp (ave)	Temp (ave)	Hum	(ave)Speed	(ave) Rain mm
15.6	15.8	15.4	84.3	3.6	0.0

## Weather description

18th May 2007 (Guildford sites)

Cloud cover Clear skies with only occasional clouds

Rain Dry,

Wind Light

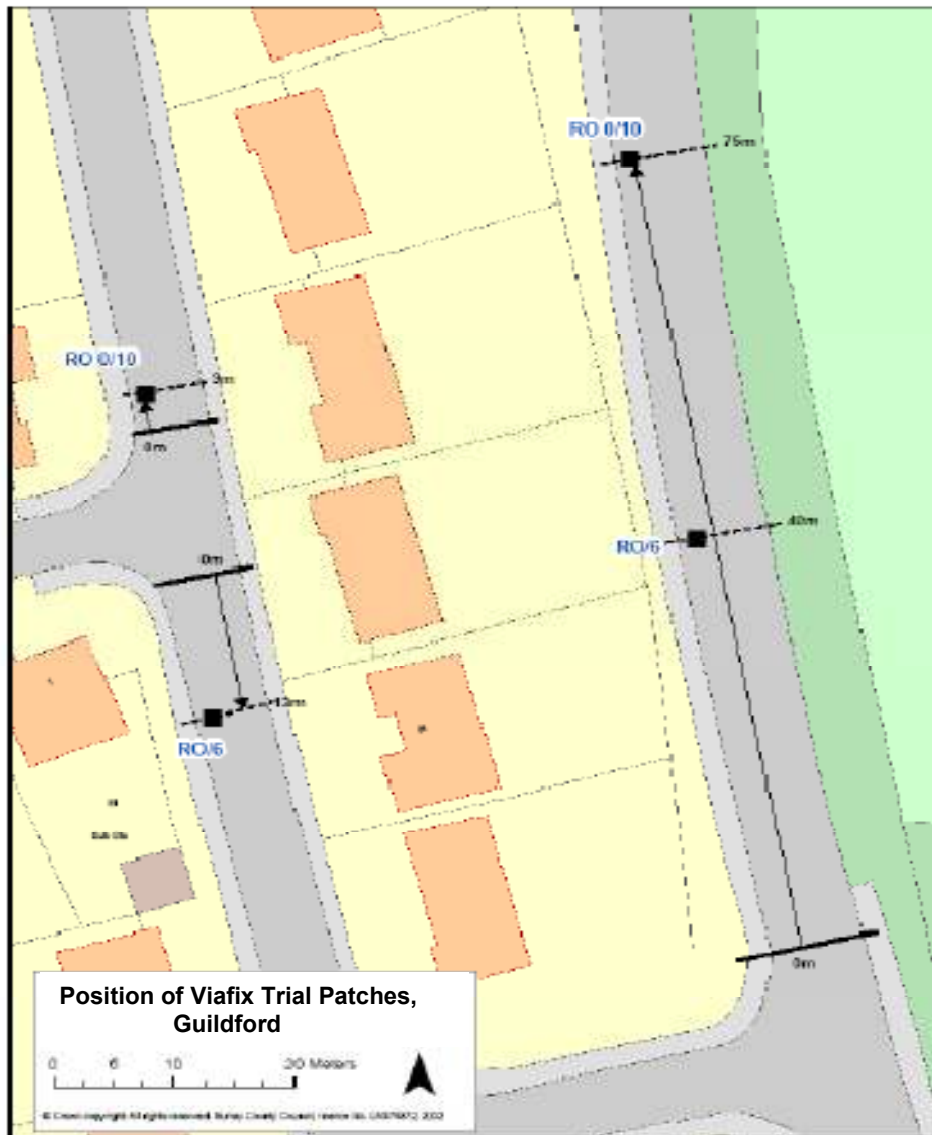
Temperature Warm 15°C

Road condition Dry and warm

- 14 -



# B2234 Park Lane & D4036 Partridge Way Location Plan





## **Installation; D4036 Partridge Way & B2234 Park Lane**

Date 18/05/2007

(Note; Only 0/6 & 0/10 Viafix patches installed in these secondary sites)

### **D4036 Partridge Way**

#### **0/6 Viafix**

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 300mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/6 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

#### **0/10 Viafix**

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 300mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/10 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating plate compactor the final layer was compacted by a vibrating tandem Bomag 135 AD roller.

### **B2234 Park Lane**

#### **0/6 Viafix**

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/6 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating tamper compactor (the vibrating plate compactor used up to this stage had broken down). The final layer was compacted by a vibrating tandem Bomag 135 AD roller.

#### **0/10 Viafix**

A patch, 2.0m by 1.0m by approx 100mm deep, was excavated approx 450mm from the kerb line, in the nearside wheeltrack. (See location plan) The patch was prepared, tack coated and with all joint faces painted, the patch was then backfilled with two layers of 0/10 Viafix. Water was sprinkled on the open tubs and on each layer prior to rolling. The compaction of the lower layer was carried out using a vibrating tamper compactor (the vibrating plate compactor used up to this stage had broken down). The final layer was compacted by a vibrating tandem Bomag 135 AD roller.

# B2234 Park Lane & D4036 Partridge Way Photographs



D4036, prep prior to 0/6 Viafix patch (note pavement core)



B2234, 0/10 Viafix 1<sup>st</sup> layer placement



D4036 0/6 Viafix 1<sup>st</sup> layer



B2234, 0/10 Viafix 1<sup>st</sup> layer compaction (note change of compactor)



D4036, 0/6 Viafix water added before compaction



B2234, 0/10 Viafix 2<sup>nd</sup> layer compaction



D4036, 0/6 Viafix 1<sup>st</sup> layer compaction



B2234, 0/10 Viafix Completed patch

# Sand Patch

## Site 1

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	D3009	Erkenwald Close	0.49	0.70	1.14	1.03
18	20/11/08	D3009	Erkenwald Close	0.44	0.73	1.24	1.06
12	29/05/08	D3009	Erkenwald Close	0.38	0.71	1.24	Unable to test
6	19&20/11/07	D3009	Erkenwald Close	*	*	*	*
New	24/05/07	D3009	Erkenwald Close	0.42	0.62	0.87	Unable to test

\*Sand Patch Testing due to wet weather conditions

## Site 2

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	B388	Thorpe Road	0.78	0.68	1.18	Unable to test
18	20/11/08	B388	Thorpe Road	0.66	0.73	1.11	Unable to test
12	29/05/08	B388	Thorpe Road	0.63	0.65	1.11	0.56
6	19&20/11/07	B388	Thorpe Road	*	*	*	*
New	24/05/07	B388	Thorpe Road	0.63	0.69	1.04	1.02

\*Sand Patch Testing due to wet weather conditions

## Site 3

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	A320	Staines Road	0.86	0.79	1.00	Unable to test
18	20/11/08	A320	Staines Road	**	**	**	**
12	29/05/08	A320	Staines Road	0.67	0.88	0.93	0.37
6	19&20/11/07	A320	Staines Road	**	**	**	**
New	24/05/07	A320	Staines Road	0.60	0.87	0.73	0.91

\*Sand Patch Testing due to wet weather conditions

\*\* Site not inspected due to traffic management issues

## Site 4

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	D4036	Partridge Way	0.68	1.14
18	20/11/08	D4036	Partridge Way	0.60	1.16
12	30/05/08	D4036	Partridge Way	0.61	1.20

## Site 5

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	B2234	Park Lane	0.78	1.03
18	20/11/08	B2234	Park Lane	0.67	0.93
12	30/05/08	B2234	Park Lane	0.71	1.20

## 3m Straight Edge

### Site 1

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	D3009	Erkenwald Close	+8	+5	+5	-5
18	20/11/08	D3009	Erkenwald Close	+9	+6	+8	-9
12	29/05/08	D3009	Erkenwald Close	+7	+7	+4	-6
6	19&20/11/07	D3009	Erkenwald Close	+6	+6	+3	-6**
New	24/05/07	D3009	Erkenwald Close	NK	NK	NK	N/K

### Site 2

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	B388	Thorpe Road	+10	+3	+4	Too deformed
18	20/11/08	B388	Thorpe Road	+8	+4	+6	Too deformed
12	29/05/08	B388	Thorpe Road	+6	+6	+5	Too deformed
6	19&20/11/07	B388	Thorpe Road	+6	+3	+3	Too deformed
New	24/05/07	B388	Thorpe Road	+10	+3	+4	-3

### Site 3

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	A320	Staines Road	+3	+3	+6	Too deformed
18	20/11/08	A320	Staines Road	**	**	**	**
12	29/05/08	A320	Staines Road	+3	+3	+6	Too deformed
6	19&20/11/07	A320	Staines Road	**	**	**	**
New	24/05/07	A320	Staines Road	+3	+3	+6	+3

\*\* Site not inspected due to traffic management issues

### Site 4

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	D4036	Partridge Way	+7	+9
18	20/11/08	D4036	Partridge Way	+8	+9
12	30/05/08	D4036	Partridge Way	+9	+7

### Site 5

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	B2234	Park Lane	+8	+12
18	20/11/08	B2234	Park Lane	+9	+12
12	30/05/08	B2234	Park Lane	+7	+9

# Hog and Sag

## Site 1

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	D3009	Erkenwald Close	+10	+5	+3	-4
18	20/11/08	D3009	Erkenwald Close	+8	+6	+6	-7
12	29/05/08	D3009	Erkenwald Close	+7	+6	+3	-6
6	19&20/11/07	D3009	Erkenwald Close	+6	+5	+1	-5
New	24/05/07	D3009	Erkenwald Close	+7	+5	+3	-4

## Site 2

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	B388	Thorpe Road	+10	+4	+5	-35
18	20/11/08	B388	Thorpe Road	+8	+4	+6	-30
12	29/05/08	B388	Thorpe Road	+8	+6	+5	-21
6	19&20/11/07	B388	Thorpe Road	+7	+3	+3	-17
New	24/05/07	B388	Thorpe Road	+7	+3	+3	-4

## Site 3

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10CGSC (DBM)	0/10 Viafix	0/10 BBA/HAPAS Approved material
24	29/05/09	A320	Staines Road	+4	+3	+5	Too deformed
18	20/11/08	A320	Staines Road	**	**	**	**
12	29/05/08	A320	Staines Road	+3	+4	+5	-18
6	19&20/11/07	A320	Staines Road	**	**	**	**
New	24/05/07	A320	Staines Road	+3	+1	+3	-3

\*\* Site not inspected due to traffic management issues

## Site 4

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	D4036	Partridge Way	+8	+9
18	20/11/08	D4036	Partridge Way	+8	+9
12	30/05/08	D4036	Partridge Way	+10	+7

## Site 5

Age (mths)	Date	Road no	Location	0/6 Viafix	0/10 Viafix
24	29/05/09	B2234	Park Lane	+8	+12
18	20/11/08	B2234	Park Lane	+9	+11
12	30/05/08	B2234	Park Lane	+8	+11

# Visual Inspections

## D3009 Erkenwald Close, Chertsey

### 0/6 Viafix

#### Texture

- No visual change to texture
- Aggregate exposed

#### Deformation

- No obvious visual deformation after installation (see note)



## D3009 Erkenwald Close, Chertsey

### 0/10 CGSC (DBM)

May 2009, Unable to move parked car but full test/inspection carried out.

#### Texture

- No visual change to texture
- Aggregate becoming exposed

#### Deformation

- No visual deformation





## D3009 Erkenwald Close, Chertsey

### 0/10 BBA HAPAS Approved PCSM

#### Texture

- No visual change to texture
- Aggregate gradually becoming more exposed

#### Deformation

- No obvious visual deformation



## D3009 Erkenwald Close, Chertsey

### 0/10 Viafix

#### Texture

No visual change to the texture  
Aggregate exposed

#### Deformation

No visual deformation



# B388 Thorpe Road, Chertsey

## 0/6 Vialix

### Texture

The surface texture appears to have slightly opened up under trafficking  
Aggregate exposed

### Deformation

No visual deformation



# B388 Thorpe Road, Chertsey

## 0/10 CGSC (DBM)

### Texture

- No visual change to texture
- Aggregate exposed

### Deformation

- No visual deformation



# B388 Thorpe Road, Chertsey

## 0/10 BBA Approved PCSM

### Texture

Serious "fattening up" resulting in loss of texture  
Excess binder flooding on surface

### Deformation

Serious deformation with material flowing out of the low side of the patch





# B388 Thorpe Road, Chertsey

## 0/10 Viafix

### Texture

No visual change to texture  
Aggregate exposed

### Deformation

No visual deformation.



## A320 Staines Road, Chertsey

### 0/6 Viafix

#### Texture

The surface texture appears to have slightly opened up under trafficking  
Aggregate exposed

#### Deformation

No visual deformation





# B388 Thorpe Road, Chertsey

## 0/10 CGSC (DBM)

### Texture

Little visual change, maybe just a slight opening of texture  
Aggregate exposed

### Deformation

No visual deformation



# B388 Thorpe Road, Chertsey

## 0/10 BBA Approved PCSM

### Texture

Serious "fattening up" resulting in loss of texture  
Excess binder flooding on surface

### Deformation

Serious deformation with material flowing out of the low side of the patch



# B388 Thorpe Road, Chertsey

## 0/10 Viafix

### Texture

The surface texture appears to have slightly opened up under trafficking  
Aggregate exposed

### Deformation

No visual deformation



# D4036 Partridge Way, Guildford, 30/05/08

## 0/6 Viafix

### Texture

No visual change to texture

Aggregate exposed

### Deformation

No visual deformation



# D4036 Partridge Way, Guildford, 30/05/08

0/10 Viafix

## Texture

No visual change to texture  
Aggregate exposed

## Deformation

No visual deformation





## B2234 Park Lane, Guildford, 30/05/08

### 0/6 Viafix

#### Texture

The surface texture appears to have slightly opened up under trafficking  
Aggregate exposed

#### Deformation

No visual deformation



## B2234 Park Lane, Guildford, 30/05/08

### 0/10 Viafix

#### Texture

The surface texture appears to have slightly opened up under trafficking  
The texture appears consistent over the patch other than in a small area, which appears to have “fatted up” very slightly. (See circled area in photographs)  
Aggregate exposed

#### Deformation

No visual deformation. The 3m straight edge indicated a degree of “hog” or swelling, but visually no noticeable change





# Coring

A programme of coring was carried out soon after installation of all the patches for wheel tracker and skid resistance testing. The coring team were unable to extract cores suitable for testing from the 0/10 BBA /HAPAS Approved PCSM. (see photographs below and laboratory test result).





Highways  
Asset Planning Group  
Materials  
Building 0  
Merrill Lane  
Ockford  
Surrey GU24 7BQ  
Tel: 01483 337430  
Fax: 01483 317445



<b>Certificate Number</b>	081575
<b>Site Ref</b>	1-3
<b>Project Code</b>	08 VIATEC 01

**INDIRECT TENSILE STIFFNESS MODULUS TEST**

Test Method: • BS DD 216 and BSI DD 99/107458:1999

Client:	Viatec UK	
Location:	Erkenwald Close, Chertsey	
Material Type:	BBA HAPAS 50 pen equivalent PCSM	
Material Spec :	Manufacturers specification	
Supplier / Source:	<i>Available on request</i>	
Road No:	D3009	
Mean dia:	148mm	Date tested: 24/11/08
Poission's ratio:	0.35	Date received: 20/11/08
Store temp:	5°C	Time tested: am
Sample age:	16 months	Operator: P.Parker

**Pre-testing remarks.**

The samples were cored according to BS 598:100:2004 and prepared for testing to the requirements of DD: 216 and BSI DD 99/107458:1999.

The samples were conditioned at 20°C for 12 hours prior to testing.

**Observations during attempted tests.**


During the conditioning pulses, the material failed to maintain the target deformation (7microns) and was exceeded in all cases.

The material was deemed to be too soft to test and further testing was aborted

**Distribution**

**File**

Mr M. Reynolds  
Viatec UK Ltd  
Westfield Business Park  
Radstock  
Bath  
BA3 4BH

  
Digitally signed by  
Phil Parker  
DN: CN = Phil Parker,  
C = GB, O = Surrey  
County Council, OU =  
Highways  
Date: 2008.12.18  
07:37:30 Z

**Signed**  
**Materials Engineer**  
**Date of report 17/12/2008**

Authorised signatories

S.J.Nicholls	Laboratory Manger
P.Parker	Materials Engineer

# Coring

Viafix 6mm core sample, cored 24 hours following compaction.



# Laboratory Test Certificates



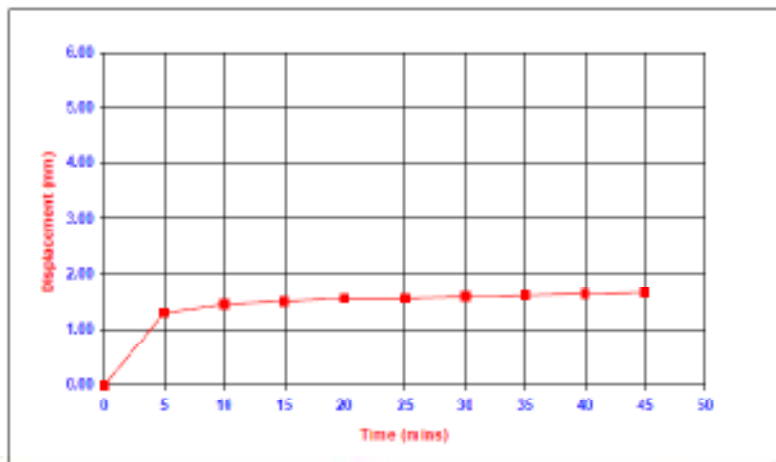
Surrey Environment  
 Transport & High  
 Roads  
 Home Use  
 Confidant  
 Surrey CCL TPO  
 Tel: 01435 51992  
 Fax: 01435 51745



Cert. No.	096451-H
Site Ref.	H
Project	09 VIATEC 01

## The Determination of Wheel Tracking Rate of Bituminous Materials

Client	Viatec UK		
Location	Partridge Way Merrow		
Material Type	0/10mm Vifafix		
Source	Viatic UK	Date Received	01/06/2009
Date/Time Sampled	18/05/2007	Time Received	
Specimen Thickness (mm)	58	Date/Time Tested	05/06/2009
Specimen Size (mm)	200	Test Temperature	45 (°C)
Sample Preparation	Sawn/Plastered	Specimen Density (Mg/m <sup>3</sup> )	2.312
Sample Type	Site Core	Max Rut Depth	1.7 mm
Test Method	BS598 - 110: 1998 (Automatic Deflection Measurement)		



Mean Rate of Increase of Specimen (mm/hr) **0.3**

Operator **J. Nicholls**

Remarks (1)

Remarks (2)

Distribution: Mr M. Reynolds, Viatic UK Ltd  
 Westfield Business Centre  
 Radstock  
 Bath

Signed: *J. Nicholls*  
 Engineer Laboratory  
 Date: 10/06/2009

Digitally signed by J. Nicholls  
 DN: cn = J. Nicholls, o = Surrey County Council, ou = Highway, email = j.nicholls@sccl.gov.uk, c = GB

Page 1 of 1 **BA34BH**

Authorised Signatories:  
 J. M. Paine, E. O. Mervin  
 J. Nicholls, P. Paine

This certificate when taken with the data recorded may serve as proof of origin for full number written authority from the Materials Group Engineer. Opinions and interpretations expressed herein are within the scope of UKAS accreditation. If required, a sample certificate, where available, can be provided.



Highways  
Asset Planning Group  
Materials  
Building G  
Merrow Lane  
Guildford  
Surrey GU4 7BQ  
Tel 01483 517430  
Fax 01483 517445



Laboratory No:	081535
Project Code:	08 VIATEC 01
Site Reference:	1

**SKID RESISTANCE CERTIFICATE**  
BS 7976-02:2002

<b>Client:</b>	Viatec UK	<b>Road Name &amp; No:</b>	N/A
<b>Location:</b>	Laboratory compacted slab	<b>Test Type (wet / dry):</b>	Wet
<b>Material:</b>	Viafix 0/10 mm	<b>Slider Type:</b>	TRL
<b>Surface details:</b>	New	<b>General Appearance:</b>	Small to medium surface voids
<b>Date of test:</b>	13/11/08	<b>Operator:</b>	P Parker
<b>Slider Condition Check:</b>	Width >4mm Y	<b>Worn slide re-prepared:</b>	No

**Ensure slider is pre-wetted (if applicable) and Pendulum is level**

**Test Result**

Site Ref	Test Position	Location of Test	Surface Temp °C	Pendulum Test Data (PTV)								PTV* Mean	Rubber Type	
				1	2	3	4	5	6	7	8			
				Slider wet at start (if applicable)				Equipment level check at start						Y
1	N/A	Edge	18.7	65	67	62	65	62	65	65	65	65	65	TRL

**TRL Rubber Validation (Wet surface)**

1	Float Glass	Validation blocks											5-10
2	3M 261X L/film		18.7	60	65	65	62	60	59	60	59	62	Y <sup>±5</sup>
													Specification Table 2*

**4S Rubber Validation (Wet surface)**

3	Float Glass	Validation blocks											5-10
4	3M 261X L/film												X <sup>±5</sup>
													Specification Table 2*

Remarks: • BS 7976 Table 1 TRL Rubber corrections applied if applicable.  
• No corrections applied for 4S rubber.

Current X<sup>±5</sup> = 59 Y<sup>±5</sup> = 55  
(Babbie Batch 1 May 06)

Client Name Viatec UK Ltd  
F.A.O. Mr M. Reynolds  
Viatec UK Ltd  
Westfield Business Park  
Radstock  
Bath  
BA3 4BH

Signed:   
Date: 14/11/2008

Authorised Signatories:

S. Nicholls Materials Manager  
P Parker Materials Engineer  
B. O Mayell Engineer Construction

Digitally signed by Phil Parker  
DN: CN = Phil Parker,  
C = GB, O = Surrey  
County Council, OU =  
Highways  
Date: 2008.11.19  
14:09:32 Z



## **Conclusions**

### **0/10 Viafix**

Excellent performance when compared to the control material, a standard hot mix (0/10CGSC) AC10 close surf. The 0/10 Viafix performed better than the control material with regard to retained surface texture and RLAT (Repeated Load Axial Test) but slightly less well with regard to ITSM (Indirect Tensile Stiffness Modulus)

The 0/10 Viafix material when installed correctly can perform very well and although not as stiff as the control material it is less likely to deform. Visually neither material appeared to deform to any degree.

### **0/6 Viafix**

Good performance for a 6mm material with similar RLAT figures to the control AC10 close surf material, but with less stiffness. The 0/6 Viafix performed as well as the control material with regard to RLAT (Repeated Load Axial Test) but slightly less well with regard to retained surface texture and ITSM (Indirect Tensile Stiffness Modulus).

The 0/6 Viafix material when installed correctly can perform well and although it is not as stiff as the control material it is similarly unlikely to deform. Visually neither material appeared to deform to any noticeable degree.

### **0/10 BBA/HAPAS approved PCSM**

This materials performance was surprisingly poor. Only on the least trafficked site did the material retain its integrity. With the higher traffic volumes the material on the two other sites very quickly fattened up and deformed to such an extent that it could have become a danger and require replacement before the end of the trial. Fortunately the patches just retained enough material not to reach the replacement criteria. Throughout the duration of the trial several attempts were made to core the material, it was not possible to extract any core suitable for testing.

### **AC10 close surf (10CGSC)**

This well proven tried and tested control material performed consistently well throughout the trial.