

APPROVED SUPPLIERS

INFORMATION BOOKLET

14/02/2024

Introduction

Lincolnshire County Council requires materials used in the construction and maintenance of highways to be from sources that have been approved by the County for such use.

This applies to existing highways that are maintained by the County, new highways constructed by the County and those proposed for adoption by the County.

Lincolnshire County Council's Approved Suppliers Information Booklet "The Approved Suppliers List" details the sources of materials commonly used in highway works in the County.

Suppliers promoting materials for inclusion on the list can contact Lincs Laboratory's Principal Materials Advisor for advice. The Principal Materials Advisor can be contacted at Lincs Laboratory on Lincoln (01522) 530355 and email lincslab@lincolnshire.gov.uk

Contractors wishing to propose a source of material for approval are also advised to make initial contact with Lincs Laboratory's Principal Material Advisor.

Approval for project specific materials is granted by the individuals identified below:

Term Maintenance Works	The Service Manager
Major Maintenance Works	The Lead Design Engineer
County New Build Works	The Project's Materials Manager
Adoptable Works (Development Roads etc.)	The Development Management Officer

August 2021: Based on data gathered over more than 50 years of local sources, we have found that stone solely from the Lincolnshire Limestone formation can rarely be classed as non-frost susceptible. Although, on occasion small quantities of this Oolitic Limestone from the hardest strata are capable of achieving compliance to non-frost susceptible sub-base standards, this is likely to be the exception to the rule. Even with strict Factory Production Control, it is unlikely that on-going compliance can be achieved due to the geological properties of the material. Although we have periodically accepted Lincolnshire Limestone sources as non-frost susceptible in the past, the increased scrutiny we apply to these sources due to their known variability often leads to sources being removed from the Approved List after routine monitoring tests. There remains the possibility of the sources being approved as frost susceptible Type 1 sub-base or as 6F5 capping.

December 2021: Sub-base and capping materials under review.

January to March 2022: Revisions to Hot Rolled Asphalt listings following Supplier updates. Warm mix asphalt approvals added to AC 20 Dense Binder Course listings.

May 2022: GS Hughes, Great Ponton 6F5 removed from list due to ongoing issues with meeting the grading specification.

July 2022: Doran's Rock reinstated to Approved List as 63PSV based on investigations of in-situ performance.

Feb 2024: Breedon Group, High Force/Middleton PSV is now 55. Heidelberg Materials, Ingleton added with a PSV of 60.

**LINCS LABORATORY INFORMATION
APPROVED SUPPLIERS**

		<u>Page No:</u>
High PSV Aggregates for Surface Treatments	66 and over PSV	5
	65 PSV	5
	61 to 64 PSV	6
	60 PSV	6
	55 to 59 PSV	6
	50 to 54 PSV	6
Asphalt Concretes Mixes and Plants	AC 20 Dense Bin	7
	AC 10 Close Surf	10
	AC 6 Dense Surf	12
Design Asphalt Mixes and Plants	LCC High Stiffness Mixes 30/14 Designation	13
	LCC Special Mixes 30/14 Designation	14
	LCC Standard Mix 30/14 Designation	15
	LCC 55% Stone 55/10 Designation ("Hot Box Material")	16
Stone Mastic Asphalt Surface Courses		17
Surface Dressing Chippings	≥60 PSV	18
	55 to 59 PSV	18
	50 to 54 PSV	19
	<50 PSV	19
Non-Frost Susceptible Type 1 Sub-Base	Supplier A – M	20
	Supplier N – Z	21
Frost Susceptible Type 1 Sub-Base		22
Capping Layer Materials for Development Roads	6F5	23
Geosynthetics		24
Block paving Bedding Sand for Conventional Pavements		25

FURTHER INFORMATION MAY BE OBTAINED BY CONTACTING THE PRINCIPAL MATERIALS ADVISOR AT LINCS LABORATORY ON (01522) 530355 AND E-MAIL LINCSLAB@LINCOLNSHIRE.GOV.UK.

**LINCS LABORATORY INFORMATION
APPROVED SUPPLIERS**

	<u>Page No:</u>
Surface Dressing Binders	26
HAPAS Certified HAUC Permanent Cold Lay Surfacing Materials	27
6mm Asphalt Concrete Surface Course	27
10mm Asphalt Concrete Surface Course	28
Permanent Cold Lay Surfacing Materials for Clause 946 Minor Carriageway Repair	28
6mm Asphalt Concrete Surface Course	28
10mm Asphalt Concrete Surface Course	29
HAPAS Certified High Friction Surface Systems	29
Type 1	29
Type 2	29
Type 3	30
Permeable Paving Aggregates for Development Roads	31-32
Drainage Aggregates	

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HIGH PSV AGGREGATES FOR SURFACE TREATMENTS

Polished Stone Value (PSV), Aggregate Abrasion Value (AAV).

PSV VALUES OF 66 AND OVER

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Aggregate Industries	Cwm Nant Lleici	Gritstone	69	11	12-14
Aggregate Industries	Ghyll Scaur	Tuff	66	6	1-16
Breedon Group	Gilfach	Gritstone	69	9	3-15
Breedon Group	Tan-Y-Foel	Gritstone	68	6	2-15
Bryn Group	Bryn	Gritstone	68	tbc	7-22
Heidelberg Materials	Craig-Yr-Hesg	Gritstone	69	7	3-15
Tarmac Ltd	Hafod	Gritstone	69	11	2-12
White Mountain Aggregates	Ballystockart	Gritstone	66	7	1-15

Aggregates denoted as having a PSV of 66 and over meet Lincolnshire County Council's requirements for sites required to have PSVs of: 65+, >65 and over 65

PSV VALUES OF 65

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE

Aggregates denoted as having a PSV of 65 are only approved for sites where a PSV of 65 or less is specified

HIGH PSV AGGREGATES FOR SURFACE TREATMENTS

Polished Stone Value (PSV), Aggregate Abrasion Value (AAV).

PSV VALUES OF 61 TO 64

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Aggregate Industries	Haughmond Hill	Gritstone	63	4	6-15
Breedon Group	Roan Edge Quarry	Gritstone	62	6	2-17
Breedon Group	Barbae Quarry	Gritstone	64	10	2-19
Conexpo	Doran's Rock	Gritstone	63	11	7-22
Hull Asphalt	NSE Frøysjøvegen	Greywacke	61	4	9-21
Steelphalt, Rotherham	Ickles Rotherham	EAF Carbon Steel Slag	62	4	1-18
Tarmac Ltd	Arcow Quarry	Gritstone	62	6	1-20
Tarmac Ltd	Bayston Hill Quarry	Gritstone	63	4	2-19
Tarmac Ltd	Dolyhir Quarry	Gritstone	62	6	1-16
Tarmac Ltd	Dry Rigg Quarry	Gritstone	62	7	1-20
Tarmac Ltd	Mancetter Quarry	Basalt	61	7	2-20
White Mountain Aggregates Ltd	Temple Quarry	Gritstone	64	8	9-05

PSV VALUES OF 60

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Heidelberg Materials	Ingleton	Gritstone	60	4	01 - 24

Aggregates denoted as having a PSV of 60 are only approved for sites where a PSV of 60 or less is specified.

PSV VALUES OF 55 – 59

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Aggregate Industries	Bardon Hill	Granite	56	3	9-18
Aggregate Industries	Croft	Granite	56	3	9-18
Breedon Group	High Force/ Middleton	Granite	55	6	02 - 24
Breedon Group	Leaton	Dolerite	59	3	9-15
MQP	Cliffe Hill	Granite	55	4	11-18
Steelphalt	Jelsa – Norway	Granite	55	10	4-21
Tarmac Ltd	Santon	Steel Slag	57	2	2-20

PSV VALUES OF 50 – 54

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Steelphalt	Rotherham	EAFS Steel Slag	50	3	3-18
Tarmac Ltd	Mountsorrel	Granite	52	3	2-20

RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1

20mm DENSE BINDER COURSE (AC 20 DENSE BIN)

SUPPLIER – BATCHING PLANT	COARSE AGG SOURCE / TYPE ²	FINE AGG SOURCE / TYPE	BINDER GRADE ⁽¹⁾	PSV	AAV	Warm Mix Available	DATE
Aggregate Industries – Bardon Hill	Bardon Hill – Granite	Bardon Hill – Granite	40/60	56	2	✓	2-21
Aggregate Industries – Bardon Hill	Bardon Hill – Granite	Bardon Hill – Granite	100/150	56	2	✓	2-21
Aggregate Industries – Newark	Bardon Hill – Granite	Bardon Hill – Granite Woodhall Spa – Sand	40/60	56	2	✓	2-21
Aggregate Industries – Newark	Bardon Hill – Granite	Bardon Hill – Granite Woodhall Spa – Sand	100/150	56	2	✓	2-21
Aggregate Industries – Peterborough	Bardon Hill – Granite	Haughmond Hill – Greywacke Pode Hole – Sand	40/60	56	2	✓	2-21
Aggregate Industries – Peterborough	Bardon Hill – Granite	Haughmond Hill – Greywacke Pode Hole – Sand	100/150	56	2	✓	2-21
Aggregate Industries – Sheffield	Bardon Hill – Granite	Bardon Hill – Granite	40/60	56	2	✓	3-23
Breedon Group – Grimsby	Dove Holes – Limestone	Tattershall – Sand Middleton – Basalt	40/60	39 ³	13	✓	9-21
Breedon Group – Grimsby	Dove Holes – Limestone	Tattershall – Sand Middleton – Basalt	100/150	39 ³	13	✓	9-21
Breedon Group – Grimsby	Roan Edge – Gritstone	Tattershall – Sand Middleton – Basalt	40/60	62	6	✓	3-22
Breedon Group – Grimsby	Roan Edge – Gritstone	Tattershall – Sand Middleton – Basalt	100/150	62	6	✓	3-22
Breedon Group – Mansfield, Corby, Cloud Hill	Cloud Hill – Limestone	Cloud Hill – Limestone	40/60	48 ³	12	✓	2-21
Breedon Group – Mansfield, Corby, Cloud Hill	Cloud Hill – Limestone	Cloud Hill – Limestone	100/150	48 ³	12	✓	2-21
Breedon Group – Mansfield, Corby, Cloud Hill	Leaton – Dolerite	Leaton – Dolerite	40/60	59	3	✓	2-21
Breedon Group – Mansfield, Corby, Cloud Hill	Leaton – Dolerite	Leaton – Dolerite	100/150	59	3	✓	2-21

1. 100/150 pen AC 20 Dense Bin is not suitable for use on the carriageway.
2. All mixes have permission to use up to 20% Recycled Asphalt Planings (RAP).
3. Sources with PSV <50 shall not be used for carriageway surfacing.

RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1
20mm DENSE BINDER COURSE (AC 20 DENSE BIN) continued

SUPPLIER – BATCHING PLANT	COARSE AGG SOURCE / TYPE ²	FINE AGG SOURCE / TYPE	BINDER GRADE ⁽¹⁾	PSV	AAV	Warm Mix Available	DATE
Cemex – Lincoln	Roan Edge – Gritstone & Cliffe Hill – Granite	Roan Edge – Gritstone	40/60	55	4		3-23
Cemex – Lincoln	Dove Holes – Limestone	Dove Holes – Limestone	40/60	39 ³	13	✓	2-21
Cemex – Lincoln	Dove Holes – Limestone	Dove Holes – Limestone	PMB	39 ³	13		2-21
Cemex – Lincoln	Dove Holes – Limestone	Swinderby – Sand	40/60	39 ³	13	✓	2-21
Cemex – Lincoln	Dove Holes – Limestone	Swinderby – Sand	100/150	39 ³	13	✓	2-21
Cemex – Lincoln	Dove Holes – Limestone	Swinderby – Sand	PMB	39 ³	13		2-21
Cemex – Lincoln	Roan Edge – Gritstone & Cliffe Hill – Granite	Swinderby – Sand	40/60	62	6	✓	3-23
Cemex – Lincoln	Roan Edge – Gritstone & Cliffe Hill – Granite	Swinderby – Sand	100/150	62	6	✓	3-23
Cemex – Nottingham	Cliff Hill – Granite	Swinderby – Sand & Cliff Hill – Granite	100/150	55	4		2-22
Cemex – Selby	Dove Holes – Limestone	Dove Holes – Limestone	40/60	39 ³	13		2-21
Cemex – Selby	Dove Holes – Limestone	Dove Holes – Limestone	100/150	39 ³	13		2-21
Cemex – Selby	High Force – Granite	Dove Holes – Limestone	40/60	53	6		2-21
Cemex – Selby	High Force – Granite	Dove Holes – Limestone	100/150	53	6		2-21
Hull Asphalt – Hull	NSE Frøysjøvegen – Greywacke	NSE Frøysjøvegen – Greywacke	40/60	61	4		9-21
Hull Asphalt – Hull	NSE Frøysjøvegen – Greywacke	NSE Frøysjøvegen – Greywacke	100/150	61	4		9-21

1. 100/150 pen AC 20 Dense Bin is not suitable for use on the carriageway.
2. All mixes have permission to use up to 20% Recycled Asphalt Planings (RAP).
3. Sources with PSV <50 shall not be used for carriageway surfacing.

RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1
20mm DENSE BINDER COURSE (AC 20 DENSE BIN) continued

SUPPLIER – BATCHING PLANT	COARSE AGG SOURCE / TYPE ²	FINE AGG SOURCE / TYPE	BINDER GRADE ⁽¹⁾	PSV	AAV	Warm Mix Available	DATE
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Baston Fen – Sand	40/60	55	4		2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Baston Fen – Sand	100/150	55	4		2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Cliffe Hill – Granite	40/60	55	4		2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Cliffe Hill – Granite	100/150	55	4		2-21
Steelphalt – Rotherham	Dove Holes – Limestone	Dove Holes – Limestone	40/60	39 ³	13	✓	2-21
Steelphalt – Rotherham	Dove Holes – Limestone	Dove Holes – Limestone	100/150	39 ³	13	✓	2-21
Tarmac – Elstow	Tunstead – Limestone	Potton – Sand	40/60	42	5	✓	8-23
Tarmac – Hull	Swinden – Limestone	Swinden – Limestone	40/60	47 ³	12	✓	2-21
Tarmac – Hull	Swinden – Limestone	Swinden – Limestone	100/150	47 ³	12	✓	2-21
Tarmac – Mountsorrel (Standard Haven)	Mountsorrel – Granite	Mountsorrel – Granite	40/60	52	3	✓	3-21
Tarmac – Mountsorrel (KVM)	Mountsorrel – Granite	Mountsorrel – Granite	40/60	52	3	✓	3-21
Tarmac – Mountsorrel (KVM)	Mountsorrel – Granite	Mountsorrel – Granite	100/150	52	3	✓	3-21
Tarmac – Santon	Arcow – Gritstone Santon – Steel Slag	Santon – Blended Slag	40/60	62	6	✓	2-21
Tarmac – Santon	Swinden – Limestone	Santon – Blended Slag	40/60	47 ³	12	✓	2-21
Tarmac – Santon	Swinden – Limestone	Santon – Blended Slag	100/150	47 ³	12	✓	2-21
Tillicoultry Quarries – Ely	Dowlow – Limestone	Dowlow – Limestone	40/60	41	12		7-22

1. 100/150 pen AC 20 Dense Bin is not suitable for use on the carriageway.
2. All mixes have permission to use up to 20% Recycled Asphalt Planings (RAP).
3. Sources with PSV <50 shall not be used for carriageway surfacing.

**RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1
10mm CLOSE GRADED SURFACE COURSE (AC 10 CLOSE SURF)**

SUPPLIER – BATCHING PLANT (Product code if supplied)	COARSE AGG SOURCE / TYPE	FINE AGG SOURCE / TYPE	BINDER GRADE	PSV	AAV	DATE
Aggregate Industries – Bardon Hill	Bardon Hill – Granite	Bardon Hill – Granite	100/150	56	2	2-21
Aggregate Industries – Newark	Bardon Hill – Granite	Bardon Hill – Granite Woodhall Spa – Sand	100/150	56	2	2-21
Aggregate Industries – Peterborough	Bardon Hill – Granite	Haughmond Hill – Greywacke	100/150	56	2	2-21
Breedon Group – Grimsby	Roan Edge – Gritstone	Tattershall – Sand	100/150	62	6	6-21
Breedon Group – Mansfield, Corby, Cloud Hill	Leaton – Dolerite	Leaton – Dolerite	100/150	59	3	2-21
Cemex – Lincoln	Gilfach or Ballystockart – Gritstone & Roan Edge – Gritstone	Swinderby – Sand	100/150	66	7	3-23
Cemex – Lincoln	Roan Edge – Gritstone	Swinderby – Sand	100/150	62	6	3-23
Cemex – Selby	Gilfach – Gritstone	High Force – Granite	100/150	66	7	2-21
Hull Asphalt – Hull	NSE Frøysjøvegen – Greywacke	NSE Frøysjøvegen – Greywacke	100/150	61	4	9-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Baston Fen – Sand	100/150	55	4	2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Baston Fen – Sand	70/100	55	4	2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Cliffe Hill – Granite	100/150	55	4	2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Cliffe Hill – Granite	70/100	55	4	2-21

RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1 continued
10mm CLOSE GRADED SURFACE COURSE (AC 10 CLOSE SURF)

SUPPLIER – BATCHING PLANT (Product code if supplied)	COARSE AGG SOURCE / TYPE	FINE AGG SOURCE / TYPE	BINDER GRADE	PSV	AAV	DATE
Steelphalt – Rotherham	Jelsa, Norway – Granite	Jelsa, Norway-Granite	70/100	55	10	4-21
Steelphalt – Rotherham	Jelsa, Norway – Granite	Jelsa, Norway-Granite	100/150	55	10	4-21
Steelphalt – Rotherham	Roan Edge – Gritstone	Roan Edge – Gritstone	70/100	62	6	2-21
Steelphalt – Rotherham	Roan Edge – Gritstone	Roan Edge – Gritstone	100/150	62	6	2-21
Steelphalt – Rotherham	Roan Edge – Gritstone	Rotherham – EAF C Steel Slag	70/100	62	6	2-21
Steelphalt – Rotherham	Roan Edge – Gritstone	Rotherham – EAF C Steel Slag	100/150	62	6	2-21
Steelphalt – Rotherham	Scunthorpe – BOS Steel Slag	Rotherham – EAF C Steel Slag	70/100	57	2	2-21
Steelphalt – Rotherham	Scunthorpe – BOS Steel Slag	Rotherham – EAF C Steel Slag	100/150	57	2	2-21
Steelphalt – Rotherham	Rotherham – EAF C Steel Slag	Rotherham – EAF C Steel Slag	70/100	62	4	2-21
Steelphalt – Rotherham	Rotherham – EAF C Steel Slag	Rotherham – EAF C Steel Slag	100/150	62	4	2-21
Steelphalt – Rotherham	Mountsorrel / Bardon Hill - Granite	Mountsorrel / Bardon Hill - Granite	70/100	52	3	10-22
Steelphalt – Rotherham	Mountsorrel / Bardon Hill - Granite	Mountsorrel / Bardon Hill - Granite	100/150	52	3	10-22
Tarmac – Hull	Santon – Steel Slag	Santon – Blended Slag	100/150	57	2	2-21
Tarmac – Mountsorrel (KVM)	Bayston Hill – Gritstone	Mountsorrel – Granite	100/150	63	4	3-21
Tarmac – Mountsorrel (KVM)	Mountsorrel – Granite	Mountsorrel – Granite	100/150	52	3	5-21
Tarmac – Santon	Santon – Steel Slag	Santon – Blended Slag	100/150	57	2	2-21

RECIPE MIX ASPHALT CONCRETE IN ACCORDANCE WITH BS EN 13108-1
6mm DENSE SURFACE COURSE (AC 6 DENSE SURF)

SUPPLIER – BATCHING PLANT (Product code if supplied)	COARSE AGG SOURCE / TYPE	FINE AGG SOURCE / TYPE	BINDER GRADE	PSV	AAV	DATE
Aggregate Industries – Bardon Hill	Bardon Hill – Granite	Bardon Hill – Granite	100/150	56	2	2-21
Aggregate Industries – Newark	Bardon Hill – Granite	Bardon Hill – Granite Woodhall Spa – Sand	100/150	56	2	2-21
Aggregate Industries – Peterborough	Bardon Hill – Granite	Bardon Hill – Granite Pode Hole – Sand	100/150	56	2	2-21
Breedon Group – Grimsby	Roan Edge – Gritstone	Tattershall – Asphalt Sand Middlestone – Dust	100/150	62	6	11-21
Breedon Group – Mansfield, Corby, Cloud Hill	Leaton – Dolerite	Leaton – Dolerite	100/150	59	3	2-21
Cemex – Lincoln	Roan Edge – Gritstone	Swinderby – Sand	100/150	55	4	3-23
Cemex – Nottingham	Cliffe Hill – Granite	Swinderby – Sand & Cliffe Hill – Granite	100/150	55	4	12-22
Cemex – Selby	High Force – Granite	Dove Holes – Limestone	100/150	53	6	2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Baston Fen – Sand	100/150	55	4	2-21
MQP – Baston Fen, St Ives, Northampton, Cliffe Hill	Cliffe Hill – Granite	Cliffe Hill – Granite	100/150	55	4	2-21
Steelphalt – Rotherham	Jelsa, Norway – Granite	Jelsa, Norway – Granite	70/100	55	10	4-21
Steelphalt – Rotherham	Jelsa, Norway – Granite	Jelsa, Norway – Granite	100/150	55	10	4-21
Steelphalt – Rotherham	Rotherham – EAF C Steel Slag	Rotherham – EAF C Steel Slag	70/100	62	4	2-21
Steelphalt – Rotherham	Rotherham – EAF C Steel Slag	Rotherham – EAF C Steel Slag	100/150	62	4	2-21
Steelphalt – Rotherham	Mountsorrel / Bardon Hill - Granite	Mountsorrel / Bardon Hill - Granite	70/100	52	3	10-22
Steelphalt – Rotherham	Mountsorrel / Bardon Hill - Granite	Mountsorrel / Bardon Hill - Granite	100/150	52	3	10-22
Tarmac – Hull	Santon – Steel Slag	Santon – Blended Slag	100/150	57	2	2-21
Tarmac – Mountsorrel (KVM)	Mountsorrel – Granite	Mountsorrel – Granite	100/150	52	3	3-21
Tarmac – Santon	Santon – Steel Slag	Santon – Blended Slag	100/150	57	2	2-21

DESIGN ASPHALT IN ACCORDANCE WITH BS EN 13108-4
LCC HIGH STIFFNESS MIXES 30% 14mm Designation (HRA 30/14 F Surf PMB des)

Mixes meeting Wheel Tracking Class 2 when tested in accordance with BS EN 12697-22 small device procedure A at 60°C shall have a maximum wheel tracking rate WTR_{AIR} 12.5 and a maximum rut depth of RD_{AIR} 7.0. These requirements apply over the permitted binder and filler contents tolerance range.

Mixes meeting LCC High Stiffness Mix requirements can also be considered suitable LCC Special Mixes and LCC Standard Mixes.

PLANT	FINE AGGREGATE	COARSE AGGREGATE	ADDITIVE / MODIFIER	WHEEL TRACKING COMPLIANCE CLASSIFICATION	TEST DATE
Aggregate Industries – Peterborough	Two Oaks – Sand	Bardon Hill - Granite	pmb	2	01-22
Breedon Group – Cloud Hill	Two Oaks – Sand	Leaton – Dolerite	pmb	2	02-22
Breedon Group – Corby	Two Oaks – Sand	Leaton – Dolerite	pmb	2	02-22
Breedon Group – Mansfield	Two Oaks – Sand	Leaton – Dolerite	pmb	2	02-22
CEMEX – Lincoln	Two Oaks – Sand	Cliffe Hill – Granite	pmb	2	02-22
CEMEX – Selby	75% Austerfield 25% High Force Granite	High Force – Granite	pmb	2	02-22
HARSCO Metals Group Limited/ Steelphalt – Rotherham	Austerfield – Sand	Steelphalt – EAF C Steel Slag	pmb	2	01-22
MQP – Baston Fen	Two Oaks – Sand	Cliffe Hill – Granite	pmb	2	02-22
MQP – Cliffe Hill	Two Oaks – Sand	Cliffe Hill – Granite	pmb	2	02-22
MQP – St Ives	Two Oaks – Sand	Cliffe Hill – Granite	pmb	2	02-22
Tarmac Ltd – Mountsorrel	75% Bestwood Sand 25% Mountsorrel Granite	Mountsorrel – Granite	pmb	2	01-22
Tarmac Ltd – Santon	Thrislington	Arcow	pmb	2	09-20
Tarmac Ltd – Santon	Thrislington	Santon – Steel Slag	pmb	2	09-21

DESIGN ASPHALT IN ACCORDANCE WITH BS EN 13108-4

LCC SPECIAL MIXES 30% 14mm Designation (HRA 30/14 F Surf 40/60 des)

The mix shall have a minimum stability of 8kN at the design binder content and a stability greater than 6kN at any point (BS 594987 Annex H), or a maximum wheel tracking rate of 5,0 μm / cycle (WTR_{Air 5,0}) and a maximum rut depth of 3,0mm (Rd_{Air 3,0}) when tested at 45°C to BS EN 12697-22 small device procedure A, and a stability greater than 6kN at any point. These requirements apply over the permitted binder and filler contents tolerance range.

The maximum permitted flow is 5mm except where stability exceeds 8kN when the maximum permitted flow becomes 7mm. Mixes meeting LCC Special Mix requirements can also be considered suitable LCC standard mixes.

PLANT	FINE AGGREGATE	COARSE AGGREGATE	ADDITIVE / MODIFIER	WHEEL TRACKING COMPLIANCE CLASSIFICATION ⁽¹⁾	TEST DATE
Aggregate Industries – Bardon Hill	Two Oaks – Sand	Bardon Hill – Granite	-	-	01-22
Breedon Group – Cloud Hill	Two Oaks – Sand	Leaton – Dolerite	-	1	02-22
Breedon Group – Corby	Two Oaks – Sand	Leaton – Dolerite	-	1	02-22
Breedon Group – Mansfield	Two Oaks – Sand	Leaton – Dolerite	-	1	02-22
CEMEX – Lincoln	Two Oaks – Sand	Roan Edge – Gritstone	-	1	02-22
CEMEX – Lincoln	Two Oaks – Sand	Cliffe Hill – Granite	-	1	02-22
CEMEX – Selby	75% Austerfield 25% High Force Granite	High Force – Granite	-	1	02-22
HARSCO Metals Group Limited/ Steelphalt – Rotherham	Austerfield – Sand	Steelphalt – Steel Slag	-	1	01-22
MQP – Baston Fen	Two Oaks – Sand	Cliffe Hill – Granite	-	1	02-22
MQP – Cliffe Hill	Two Oaks – Sand	Cliffe Hill – Granite	-	1	02-22
MQP – St Ives	Two Oaks – Sand	Cliffe Hill – Granite	-	1	02-22
Tarmac Ltd – Mountsorrel	75% Bestwood 25% Mountsorrel Granite	Mountsorrel – Granite	-	1	01-22
Tarmac Ltd – Santon/Cross Green/Hull/Ackworth	Thrislington	Arcow/Dry Rigg	-	1	06-20
Tarmac Ltd – Santon	Thrislington	Santon – Steel Slag	-	1	09-21

- (1) Mixes meeting the Special Mix wheel tracking requirements are identified by the number 1 in the Wheel Tracking Compliance Classification Column.

DESIGN ASPHALT IN ACCORDANCE WITH BS EN 13108-4

LCC STANDARD MIX 30% 14mm Designation (HRA 30/14 F surf 40/60 des)

The mix must have a minimum stability of 6kN at the design binder content (BS 594987 Annex H) and a stability greater than 4kN at any point over the permitted binder and filler tolerance content ranges.

The maximum permitted flow is 5mm.

PLANT	FINE AGGREGATE	COARSE AGGREGATE	ADDITIVE/MODIFIER	TEST DATE
Aggregate Industries – Bardon	Bardon Hill – Granite	Woodhall Spa – Sand	-	03-23
Aggregate Industries – Peterborough	Bardon Hill – Granite	Woodhall Spa – Sand	-	03-23
Breedon Group – Corby	Potton Quarry – Sand	Leaton – Dolerite	-	05-22
MQP – Baston Fen	Two Oaks – Sand	Cliffe Hill – Granite	-	02-22
MQP – Cliffe Hill	Two Oaks – Sand	Cliffe Hill – Granite	-	02-22
MQP – St Ives	Two Oaks – Sand	Cliffe Hill – Granite	-	02-22

DESIGN ASPHALT IN ACCORDANCE WITH BS EN 13108-4

LCC 55% STONE CONTENT SURFACE COURSE 55% 10 Type F or C Designation (HRA 55/10 F or C surf 40/60 des)

For use only as the substrate for High Friction Surface treatments or as a “Hot Box” Patching or Pothole Repair Material

The mix shall have a minimum stability of 10kN at the design binder content (BS 594987 Annex H), or a maximum wheel tracking rate when tested to BS EN 12697-22 small device procedure A at 60°C, of $WTR_{AIR} 12,5$ and a maximum Rut Depth $RD_{AIR} 7,0$ and have a stability greater than 8kN at any point and have a maximum permitted flow of 5mm. The above performance requirements shall be met over the permitted binder and filler contents tolerance range.

PLANT	FINE AGGREGATE	COARSE AGGREGATE	DATE
Aggregate Industries – Bardon Hill	Two Oaks – Sand	Bardon Hill – Porphyry	1-22
Breedon Group – Cloud Hill	Two Oaks – Sand	Tan-Y-Foel, Gritstone	2-22
Breedon Group – Corby	Two Oaks – Sand	Tan-Y-Foel, Gritstone	2-22
Breedon Group – Mansfield	Two Oaks – Sand	Tan-Y-Foel, Gritstone	2-22
Breedon Group – Cloud Hill	Two Oaks – Sand	Leaton – Dolerite	2-22
Breedon Group – Corby	Two Oaks – Sand	Leaton – Dolerite	2-22
Breedon Group – Mansfield	Two Oaks – Sand	Leaton – Dolerite	2-22
Cemex – Lincoln	Two Oaks – Sand	Cliff Hill – Granite	2-22
Cemex – Lincoln	High Force – Granite	Roan Edge – Gritstone	2-22
Cemex – Selby	Austerfield – Sand	Gilfach – Gritstone	2-22
Cemex – Selby	High Force – Granite	Gilfach – Gritstone	2-22
Tarmac Ltd – Mountsorrel	Bestwood – Sand Mountsorrel – Granite	Mountsorrel – Granite	1-22

Note: 55% Stone content 10mm Hot Rolled Asphalt Surface Course when used as patching or pothole repair material shall only be used when transported in and discharged from a hot box asphalt transport and storage facility.

The plants listed above are approved for the production of design surface course asphalt. Approved Suppliers List, pages 7 to 10, gives details of those plants approved for the production of asphalt concretes.

STONE MASTIC ASPHALT SURFACE COURSES

‘Lincolnshire has moved to specifying Stone Mastic Asphalt (SMA) Surface Course instead of proprietary Thin Surface Course Systems. Advice on suitable SMA’s shall be obtained from Lincs Laboratory prior to their use.

SURFACE DRESSING CHIPPINGS

Polished Stone Value (PSV), Aggregate Abrasion Value (AAV)

PSV VALUES OF 60 AND OVER

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Aggregate Industries	Ghyll Scaur	Tuff	66	6	1-16
Aggregate Industries	Haughmond	Gritstone	63	4	6-15
Colliers	Goat Hill	Dolerite	65	7	9-21
Heidelberg Materials	Ingleton	Gritstone	60	4	01 - 24
Tarmac Ltd	Bayston Hill	Gritstone	63	5	2-19
Tarmac Ltd	Dolyhir	Gritstone	62	-	1-16
Tarmac Ltd	Arcow Quarry	Gritstone	62	7	1-20

PSV VALUES OF 55 TO 59

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	DATE
Aggregate Industries	Bardon Hill	Porphry	56	2	9-18
Aggregate Industries	Croft	Granite	56	6	11-15
Breedon Group	Leaton	Dolerite	59	3	8-13
Heidelberg Materials	Criggion	Gritstone	58	4	8-02
Heidelberg Materials	Ingleton	Gritstone	59	4	11-96
Midland Quarry Products	Cliffe Hill	Granite	55	3	2-15
Tarmac Ltd	Santon Works	* Steel Slag	55		2-15

* 2.8/6.3mm or 6.3/10mm Steel Slag only

(1) Due to its relative softness, blast furnace slag from Santon is not an appropriate surface dressing aggregate to use on more heavily trafficked roads.

See LCC Code of Practice for Highway Works or contact Lincs Laboratory.

NB: This list is not definitive. If any further sources are known/wish to be used, please contact the Laboratory.

14 February 2024

SURFACE DRESSING CHIPPINGS CONTINUED

Polished Stone Value (PSV), Aggregate Abrasion Value (AAV)

PSV VALUES OF 50 TO 54

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	TEST DATE
-	-	-	-	-	-

PSV VALUES BELOW 50

SUPPLIER	AGGREGATE SOURCE	AGGREGATE	PSV	AAV	TEST DATE
Tarmac Ltd	Earith	Pt Crushed Gravel	40	-	5-04
Tarmac Ltd	Langford	Pt Crushed Gravel	44	-	9-15
Tarmac Ltd	Longham	Pt Crushed Gravel	40	-	-

NON FROST SUSCEPTIBLE TYPE 1 SUB-BASE (SUPPLIERS A – M)

SUPPLIER	AGGREGATE TYPE	QUARRY/SOURCE	TYPE 3 ⁽¹⁾ SUB-BASE (OPEN GRADED)	DATE
Aggregate Industries	Granite	Bardon Hill	✓	07 – 23
Aggregate Industries – Pode Hole Quarry	Limestone	Ex Caudon Low	-	7-20
Aggregate Industries – Woodhall Spa	Bardon Hill Granite 70%/ Gravel 20%/ Sand (Tattershall) 10%	Woodhall Spa Sand & Gravel	-	9-19
Aggregate Industries – Woodhall Spa	70% Bardon Hill Granite / 30% Manufactured Limestone	Woodhall Spa Quarry		01 - 24
Aggregate Industries – Woodhall Spa	80% Bardon Hill Granite / 20% IBAA	Woodhall Spa Quarry	-	5-22
Aggregate Industries – Woodhall Spa	80% Bardon Hill Granite / 20% IBAA	Croft Quarry	-	10-22
Brauncewell Quarries	Crushed Concrete/Brick	Brauncewell	-	10-18
Brauncewell Quarries	Limestone/Limestone	Ex Holme Hall 67%/Ex Brauncewell 33%	-	7-19
Brauncewell Quarries	Granite / Recycled	Brauncewell	-	4-21
Breedon Group	Limestone	Cloud Hill	-	7-20
Breedon Group	Limestone	Holme Hall Stainton	-	9-19
Breedon Group	Limestone	Ashwood Dale ⁵	-	3-21
Breedon Group	Limestone	Dowlow ⁵	-	3-21
CEMEX Materials UK Ltd	Limestone	Doveholes	-	5 - 23
Fox Plant Ltd	Rail Ballast (Granite)	Sandiacre Railhead	-	9-17
Fox Plant Ltd	Rail Ballast (Granite)	Doncaster Railhead	-	10-18
G S Hughes	Crushed Concrete	Harmston	-	10-18
Johnsons Aggregates	70% IBAA ⁽²⁾ ⁽³⁾ / 30% Limestone	Ilkeston	-	01-24
Longwoods Quarry Ltd	Crushed Concrete	Blankney	-	11-20
Midland Quarry Products	Granite	Cliffe Hill	✓	9-23
Minster Surfacing Ltd	Crushed Concrete	Minster HQ	-	12-21

Note:

- (1) Non Frost Susceptible Type 1 Sub-Base Approved Source Extended to Include Type 3 Sub-Base (Open Graded) for use in Development Road Permeable Pavements Only.
- (2) Use of IBAA as Non-frost susceptible is subject to advice and restrictions from Environment Agency RPS 247. Using unbound incinerator bottom ash aggregate (IBAA) in construction activities: RPS 247 - GOV.UK (www.gov.uk)
- (3) Aggregate unsuitable for use within 500mm of structural metallic elements forming part of permanent works.
- (4) Based on data gathered over more than 50 years of local sources, we have found that stone solely from the Lincolnshire Limestone formation can rarely be classed as non-frost susceptible. Although, on occasion small quantities of this Oolitic Limestone from the hardest strata are capable of achieving compliance to non-frost susceptible sub-base standards, this is likely to be the exception to the rule. Even with strict Factory Production Control, it is unlikely that on-going compliance can be achieved due to the geological properties of the material. Although we have periodically accepted Lincolnshire Limestone sources as non-frost susceptible in the past, the increased scrutiny we apply to these sources due to their known variability often leads to sources being removed from the Approved List after routine monitoring tests. There remains the possibility of the sources being approved as frost susceptible Type 1 sub-base or as 6F5 capping.
- (5) This is also available from Total Aggregates (Boston Railhead)

NON FROST SUSCEPTIBLE TYPE 1 SUB-BASE (SUPPLIERS N – Z)

SUPPLIER	AGGREGATE TYPE	QUARRY/SOURCE	TYPE 3 ⁽¹⁾ SUB-BASE (OPEN GRADED)	DATE
P J Thory Ltd	Crushed Concrete (Hoveringham)	Coates, Peterborough	-	3-20
Tarmac Ltd	Limestone	Whitwell	✓	05-23
Tarmac Ltd	Granite	Mountsorrel	-	7-20
Tarmac Ltd	Blast Furnace Slag	Santon Works, Scunthorpe	✓	6-22
Tarmac Ltd	Limestone	Tunstead	-	5-23
Tarmac Ltd	Limestone	Swinden	-	1-17
Tarmac Ltd	Limestone	Hindlow	-	6-21
Total Aggregates (Boston Railhead)	100% Granite Rail Ballast	Ex Carlisle	-	12-20
Total Aggregates (Boston Railhead)	ReCO ₂ Type 1 Carb Limestone/M-LS	Dowlow/Boston Railhead	-	10-23
UDCS Demolition Ltd	Crushed Concrete/Brick	Former RAF Hangar, Swinderby	-	5-18
Welton Aggregates	Limestone (Grey)	Slate House Quarry, Hibaldstow	-	7-19
Willowcroft Aggregates	Granite Rail Ballast	Ex-March Railhead	-	11-20

Note:

- (1) Non Frost Susceptible Type 1 Sub-Base Approved Source Extended to Include Type 3 Sub-Base (Open Graded) for use in Development Road Permeable Pavements Only.
- (2) Use of IBAA as Non-frost susceptible is subject to advice and restrictions from Environment Agency RPS 247. Using unbound incinerator bottom ash aggregate (IBAA) in construction activities: RPS 247 - GOV.UK (www.gov.uk)
- (3) Aggregate unsuitable for use within 500mm of structural metallic elements forming part of permanent works.
- (4) Based on data gathered over more than 50 years of local sources, we have found that stone solely from the Lincolnshire Limestone formation can rarely be classed as non-frost susceptible. Although, on occasion small quantities of this Oolitic Limestone from the hardest strata are capable of achieving compliance to non-frost susceptible sub-base standards, this is likely to be the exception to the rule. Even with strict Factory Production Control, it is unlikely that on-going compliance can be achieved due to the geological properties of the material. Although we have periodically accepted Lincolnshire Limestone sources as non-frost susceptible in the past, the increased scrutiny we apply to these sources due to their known variability often leads to sources being removed from the Approved List after routine monitoring tests. There remains the possibility of the sources being approved as frost susceptible Type 1 sub-base or as 6F5 capping.

FROST SUSCEPTIBLE TYPE 1 SUB-BASE

SUPPLIER	AGGREGATE TYPE	QUARRY/SOURCE	DATE
Brauncewell Quarry	Recycled Concrete & Limestone Blend (50:50)	Brauncewell Quarry	05-19
Geo Quarries Ltd	Limestone	Little Ponton Quarry	12-20
G Webb Haulage	Recycled Crushed Concrete	South Witham Quarry	9-22
Mick George	Limestone	Wakerley Wood	04-21
Welton Aggregates	Crushed Concrete	Kirton Lindsey	09-17

Lincolnshire County Council has revised the county's specifications for sub-base. Sub-bases complying with the appropriate BS EN Standards are now specified.

The above lists are therefore subject to review as sources are re-assessed against the new standards

6F5 CAPPING LAYER MATERIALS FOR DEVELOPMENT ROADS

SUPPLIER	AGGREGATE TYPE	QUARRY/SOURCE	APPROVAL DATE
Brauncewell Quarry	Limestone	Brauncewell	10-17
Brauncewell Quarry	Crushed Concrete / Brick	Brauncewell	11-19
Brianplant (Humberside) Ltd	Recycled Concrete	Head Office, Grimsby	5-22
Brianplant (Humberside) Ltd	Limestone	Manton Quarry	5-22
Bullimore Sand & Gravel	Limestone	Collyweston Quarry	8-18
Breedon Group	Limestone	Holme Hall	6-21
CES Ltd	Limestone	Stainby	7-17
CES Ltd	Recycled Concrete / Brick	Stainby	1-18
Daniel Charles Aggregates	Limestone	Dunston Quarry	11-23
GBM Waste Management Ltd	Crushed Concrete / Brick	Boundary Lane, South Hykeham	10-20
Geda Construction	Crushed Concrete / Brick	Station Road, Long Sutton	9-19
Geo Quarries Ltd	Limestone	Little Ponton Quarry	1-17
G S Hughes	Crushed Concrete / Brick	Harmston	5-18
G S Hughes	Limestone	Great Ponton	7-22
Jelson Ltd	Crushed Concrete	Northons Lane, Holbeach	1-19
Jelson Ltd	Ironstone/Limestone/Clay	Barrowby Road, Grantham	11-23
Johnston Quarry Group Ltd	Limestone	Creeton Quarry	7-22
Johnston Quarry Group Ltd	Limestone	Ropsley Quarry	7-22
Kirton (Fox Plant)	Limestone	Kirton Lindsey	4-22
Lindum Waste Recycling	Recycled	Saxilby	11-23
Lindum Group Ltd	Recycled Concrete/Brick	Boultham Road, Lincoln	8-19
Mick George (Haulage) Ltd	Limestone	Wakerley Wood	4-21
Longwood Quarry Ltd	Recycled Concrete/Brick	Longwood Quarry	6-19
Longwood Quarry Ltd	Limestone	Longwood Quarry	10-20
Midland Quarry Products	Granite	Cliffe Hill	2-20
P J Thory	Crushed Concrete / Brick	Coates, Peterborough	8-17
Tarmac Ltd	Limestone	Hindlow	3-23
Tarmac Ltd	Granite	Mountsorrel	9-22
Tarmac Ltd	Blast Furnace Slag	Santon	6-22
Tarmac Ltd	Limestone	Tunstead	3-23
Tarmac Ltd	Limestone	Whitwell	3-23
Total Aggregates	Crushed Concrete/Brick	Slippery Gowl Lane, Boston	2-22
Welton Aggregates	Chalk	Welton Le Marsh	4-18
Welton Aggregates	Crushed Concrete / Brick	Welton Le Marsh	3-22
Welton Aggregates	Limestone	Slate House Quarry, Hibaldstow	7-19
Willowcroft Aggregates Ltd	Limestone	Willowcroft Fisheries	9-22

NOTES

1. Approved status under review. Contact Materials Advisor at Lincs Laboratory for the latest approved status. The sources listed above are suitable for use as Granular Fill in Development Roads (Clause 6.8 of the Specification). They have demonstrated the ability to achieve the technical requirements for 6F5.
2. All materials listed above are also suitable as trench backfill at appropriate depth when the width of the trench exceeds 850mm.

6F5 Capping layer materials are required to comply with **BS EN 13285 Unbound mixtures – Specification** and be made from aggregates complying with **BS EN 13242 Aggregates for unbound and hydraulically bound materials for use in Civil engineering work and road construction**.

It is the producer's responsibility to ensure an appropriate Factory Production Control (FPC) system is in place as an integral part of the production process

If sources other than those listed above are proposed, please contact Lincs Laboratory to establish the current status of the source. For works other than Development Roads contact Lincs Laboratory to establish the suitability of the proposed source. All Capping layer materials are classified as frost susceptible.

GEOSYNTHETICS (GEOTXTILES / GEOGRIDS / GEOCOMPOSITES)

Due to the significant increase in number and variety of geosynthetics now available, a definitive list of approved suppliers is not possible. The following is a selection of suitable materials for Development Roads.

Advice should be sought from the Lincolnshire County Council Highway and Flood Authority before selection or installation of geogrids, geocomposites and geofabrics.

Geogrid reinforcing is required in areas where the subgrade CBR value is less than 1.5%. Suitable advice should be obtained from the manufacturer and approval obtained from Lincolnshire County Council Highway and Flood Authority for the use of an geosynthetics material.

Geotextile – Separation

Manufacturer	Product Name	Date
Don & Lowe	Lotrak 200	07-20
Don & Lowe	Lotrak 2800	07-20
Fibertex Nonwovens	Fibretex F35	07-20
Fiberweb Geosynthetics Ltd	Terram 3000 GT	07-20
Geosynthetics Ltd	Rhyno GW8129	07-20
Geosynthetics Ltd	Ekotex 18	07-20
Maccafferi Ltd	Mactex H2800	07-20
TCS Geotechnics	TNW2000T	07-20
Tencate	Polyfelt TS60	07-20
Wrekin Products Ltd	Multitrack NW 18	07-20

Geogrid – Reinforcement

Manufacturer	Product Name	Date
Don & Lowe	Lotrak 40/40S	07-20
Geosynthetics Ltd	Interlock 40/40	07-20
Tencate	Miragrid GX80/80	01-21
Tensar	SS40	07-20
Wrekin Products Ltd	E'grid 40/40	07-20

Geogrid – Composite (Reinforcement and Separation)

Manufacturer	Product Name	Date
NAUE GmbH & Co	Combigrid 40/40 Q1 GRK 4	05-21

Geotextile – Filter membrane

Manufacturer	Product Name	Date
Don & Lowe	Lotrak 200	07-20
Fibertex Nonwovens	Fibretex F35	07-20
Fiberweb Geosynthetics Ltd	Terram 3000 GT	07-20
Geosynthetics Ltd	Ekotex 18	07-20
Maccafferi Ltd	Mactex H2800	07-20
TCS Geotechnics	TNW2000T	07-20
Tencate	Polyfelt TS60	07-20
Wrekin Products Ltd	Multitrack NW 18	07-20

BLOCK PAVING BEDDING SAND FOR CONVENTIONAL PAVEMENTS

The sources listed below produce sand suitable for use as bedding for either concrete or clay paving blocks used in conventional (i.e. not permeable or pervious) pavements.

SUPPLIERS	AGGREGATE SOURCE	SITE CATEGORY
Aggregate Industries	Pode Hole 0/4 MP	III
Bardo Midlands Ltd	Freemans Pit Baston Fen	II
Breedon Group	Kettleby 0/4	III
Breedon Group	Norton Disney	II
Breedon Group	Tattershall (Sharp Sand)	III
CEMEX Materials UK Ltd	Hykeham (Sharp Sand)	III
CEMEX Materials UK Ltd	Manor Pit (Coarse Sand)	II
Heidelberg Materials	Auckley	II
Heidelberg Materials	Earith	I
Heidelberg Materials	Needingworth	III*
MQP	Baston Fen	II
Tarmac Ltd	Whisby (Grit Sand)	II
Tarmac Ltd	Besthorpe	II
Tarmac Ltd	Finningley	II
Tarmac Ltd	Langford	III
Woodhall Spa Sand & Gravel	Kirkby on Bain (0/4 MP Sand) (Woodhall Spa)	II

SAND CATEGORIES	
SITE TYPE	APPLICATION
I	Pavements subjected to significant channelised traffic, bus stations, industrial pavements, loading bays, Chart 6 Development Roads.
II	General highways and other roads, Chart 3 Development Roads, pedestrianisation projects with regular heavy trafficking, car parks, receiving some heavy traffic, footways regularly overridden by vehicular traffic.
III	Pedestrianisation projects with only occasional heavy traffic, car parks receiving no heavy vehicles and footways.

NB Site Category II sands can be considered suitable for use at Site Category III locations.

The designation III* indicates the sand to be theoretically capable of performing satisfactorily on more arduous sites. Contact Lincs Laboratory for further advice.

SURFACE DRESSING BINDERS

C69B3 (K1-70) UNMODIFIED EMULSION BINDERS

SUPPLIER	SOURCE	PRODUCT
Ayton Products	Wymondham	Ayton K1-70
Colas	Warrington	Surfix C K1-70
Nynas UK AB	Ellesmere Port	Spraymuls K1-70
Total	Preston	Emulsis K1-70

INTERMEDIATE OR MID-RANGE POLYMER MODIFIED BINDERS¹ [C70 BP3/ C69 BP3]

SUPPLIER	SOURCE	PRODUCT
Ayton Products	Wymondham	Aquagrip 70P (KE90 + KE93)
Colas	Warrington	Surfix 80S
Nynas UK AB	Ellesmere Port	Fleximulus
Total	Preston	Emulsis Ultra

PREMIUM OR HEAVY DUTY POLYMER MODIFIED BINDERS² [C70 BP3/ C69 BP3]

SUPPLIER	SOURCE	PRODUCT
Ayton Products	Wymondham	Aquagrip PMB (KE94)
Colas	Warrington	Premium 80
Colas	Warrington	SLX80
Nynas UK AB	Ellesmere Port	Duramuls
Total	Preston	Emulsis Satis
Total	Preston	Emulsis Supreme

¹ Suitable for sites described as Moderate sites – see Appendix 2.2 Table 4A of the Code of Practice: Highway Works (HT/14/1/94)

² Suitable for sites described as Difficult Sites – see Appendix 2.2 Table 4A of the Code of Practice

PERMANENT COLD LAY SURFACING MATERIALS

6mm ASPHALT CONCRETE SURFACE COURSE

SUPPLIER	AGGREGATE/ MATERIAL NAME	HAPAS APPROVAL DATE & CERTIFICATE NO.	PTSPAS APPROVAL DATES & CERTIFICATE NO.	APPROVAL CATEGORY
Colas Ltd Rowfant Crawley Sussex RH10 4NF	Bitucrete 6mm Surface Course	25 April 2012 07/H128		Footway and Cycle Tracks Only
Instarmac Group PLC Kingsbury Link Trinity Road Kingsbury Tamworth B78 2EX	Ultracrete IRR 6mm	25 November 2016 01/H060		Class 3 and 4 Carriageways Footways and Cycle Tracks
Larsen Manufacturing Ltd 07 West Bank Road Belfast Harbour Industrial Estate Belfast County Antrim Belfast BT3 9JL	Larsen PCL06	22 June 2017 17/H264		Footways and Cycle Tracks Only
Red Stag Highclere Business Park, Highclere Way, Inverurie, Aberdeenshire, AB51 5QW	EZ Street 6mm	23 Oct 18 12/H190		Type 3 and 4 Carriageways Footways and Cycle Tracks
Tarmac Trading Ltd Bickenhill Lane Solihull B37 7BQ	Ultipatch Footway 6mm	10 March 2017 02/H073		Footways and Cycle Tracks Only
Vialit mbH Josef Reiter Strasse 78 5280 Braunan Am Inn Austria	Rephalt 6mm Surface Course	20 December 2010 09/H147		Type 2, 3 and 4 Carriageways Footways and Cycle Tracks
Viatec UK Ltd Westfield Business Park Second Avenue Radstock BA3 3BH	Viafixquick 6mm	18 February 2016 16/H245		Type 3 and 4 Carriageways Footways and Cycle Tracks

10mm ASPHALT CONCRETE SURFACE COURSE

SUPPLIER	AGGREGATE/ MATERIAL NAME	HAPAS APPROVAL DATES	PTSPAS APPROVAL DATES & CERTIFICATE NO.	APPROVAL CATEGORY
Instarmac Group PLC Danny Morson Way Birch Coppice Business Park Dordon Tamworth Staffordshire B78 1SE	Ultracrete IRR 10mm	25 November 2016 01/H060		Type 3 and 4 Carriageways Footways and Cycle Tracks
Vialit mbH Josef Reiter Strasse 78 5280 Braunan Am Inn Austria	Rephalt 10mm Surface Course	20 December 2010 09/H147		Type 2,3 and 4 Carriageways, Footways, Footpaths and Cycle Tracks
Viatec UK Ltd Westfield Business Park Second Avenue Radstock BA3 3BH	Viafixquick 10mm	18 February 2016 16/H245		Type 3 and 4 Carriageways, Footways, Footpaths and Cycle Tracks

PERMANENT COLD LAY SURFACING MATERIALS FOR CLAUSE 946 MINOR CARRIAGEWAY REPAIRS

6mm ASPHALT CONCRETE SURFACE COURSE

Supplier	Material	HAPAS Approval Dates & HAPAS Certificate No.	PTS PAS Approval Dates & Certificate No.	Material Approval Status									
				LCC Carriageway Hierarchies									Footways & Cycleways
				Major Road Network	1	2	3	4	5	6	7	8	
Instarmac Group PLC	Ultracrete IRR 6mm	25 Nov 16 01/H060		x	x	x	√	√	√	√	√	√	√
Instarmac Group PLC	Ultracrete Tough Patch 6mm	-	PA9460005 01/02/19	x	x	x	x	x	x	x	x	x	√
Red Stag	EZ Street	23 Oct 18 12/H190		x	x	x	√	√	√	√	√	√	√
Vialit mbH	Rephalt 6mm Surface Course	20 Dec 10 09/H147		x	x	√	√	√	√	√	√	√	√
Viatec UK Ltd	Viafixquick 6mm	18 Feb 16 16/H245		x	x	x	√	√	√	√	√	√	√

10mm ASPHALT CONCRETE SURFACE COURSE

Supplier	Material	HAPAS Approval Dates & HAPAS Certificate No.	PTS PAS Approval Dates & Certificate No.	Material Approval Status									
				LCC Carriageway Hierarchies								Footways & Cycleways	
				Major Road Network	1	2	3	4	5	6	7	8	
Instarmac Group PLC	Ultracrete IRR 10mm	25 Nov 16 01/H060		x	x	x	√	√	√	√	√	√	√
Instarmac Group PLC	Ultracrete Tough Patch 10mm	-	PA9460005 01/02/19	x	x	x	√	√	√	√	√	√	x
Vialit mbH	Rephalt 10mm Surface Course	20 Dec 10 09/H147		x	x	√	√	√	√	√	√	√	√
Viatec UK Ltd	Viafixquick 10mm	18 Feb16 16/H245		x	x	x	√	√	√	√	√	√	√

Note –

√ = Suitable as temporary and permanent repair material for these Carriageway Hierarchies and Cycleways and Footways.

X = Unsuitable as temporary and permanent repair material for these Carriageway Hierarchies.

14 February 2024

**HIGH FRICTION SURFACES SYSTEMS
HIGHWAYS AUTHORITIES PRODUCT APPROVAL SCHEME (HAPAS)**

APPROVED HIGH FRICTION SURFACE SYSTEMS (HFS) WITH HAPAS ACCREDITATION AS OF DECEMBER 2022

HFS Type 1

SYSTEM PROVIDER	SYSTEM	CERTIFICATE NUMBER	AGGREGATE	BINDER
Aximum	Hypergrip Type 1	15/H233	Calcined Bauxite	Methyl Methacrylate
GCP Applied Technologies (UK) Ltd	Safetrack HFS	21/H310	Calcined Bauxite	MMA Based ESSELAC Resin
GCP Applied Technologies (UK) Ltd	Safetrack HW	19/H291	Calcined Bauxite	ESSELAC Resin
Geveko Markings UK Ltd	Coldgrip Type 1	20/H300	Calcined Bauxite	Polyurethane
Hitex Traffic Safety Ltd	Ecogrip Epoxy Type 1	14/H212	Calcined Bauxite	Epoxy
Hitex Traffic Safety Ltd	Hitex Type 1 Thermoplastic	04/H088	Calcined Bauxite	Thermoplastic Resin Ester
Hitex Traffic Safety Ltd	Pumagrip Type 1	16/H256	Calcined Bauxite	Polyurethane – MMA Resin
Jobling Purser	Rocbinda/Colorvial	12/H196	Calcined Bauxite	Polyurethane
Kestrel Thermoplastics Ltd	Kestrel Grip Type 1 Hot	18/H280	Calcined Bauxite	Thermoplastic Resin Ester
MV Plastics Limited	Valgrip HFS	22/H6089	Calcined Bauxite	MMA Based Resin
Prismo Road Marking Ltd	Prismogrip Type 1	21/H308	Calcined Bauxite	MMA Resin
Prismo Road Marking Ltd	Tyregrip HFS Type 1	05/H115	Calcined Bauxite	Epoxy
Prismo Road Marking Ltd	Zebraflex Type 1 HFS System	00/H043	Calcined Bauxite	Thermoplastic
Road Techs Specialist Products Ltd	Techgrip RTT1	10/H158	Calcined Bauxite	Thermoplastic Hydrocarbon
Shildon Thermoplastics	Thermogrip Type 1	12/H193	Calcined Bauxite	Thermoplastic
Star Uretech Ltd	Star Polymers HFS	11/H177	Calcined Bauxite	Polyurethane
Trustseal Ltd	Keygrip Epoxy 924	00/H039	Calcined Bauxite	Epoxy
Trustseal Ltd	Keygrip Type 1 Thermoplastic	01/H058	Calcined Bauxite	Thermoplastic Resin Ester
WJ Products Ltd	Weathergrip Type 1 HFS System	20/H293	Calcined Bauxite	MMA Resin

HFS Type 2

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HFS Type 3

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Please contact Lincs Laboratory when selecting High Friction Surfaces Systems.

PERMEABLE PAVING AGGREGATES FOR DEVELOPMENT ROADS

Materials approved for use in accordance with Tables 10/1 and 10/2 of the Lincolnshire County Council, Highway and Flood Authority, Development Road and Sustainable Drainage Specification and Construction for the following use.

Only virgin aggregates are deemed suitable when used as part of a Sustainable Drainage system.

Laying Course, Drainage Hole Fill and Jointing Material

SUPPLIER	PRODUCT NAME / SOURCE	AGGREGATE TYPE	SIZE	DATE
Aggregate Industries	Bardon Hill	Granite	2/6.3mm	07-20
Aggregate Industries	Superflow, Bardon Hill	Granite	2/4mm	07-20
Tarmac	Ultiflow, Santon	Blast Furnace Slag	2/6.3mm	07-20

DRAINAGE AGGREGATES

Materials approved for the use as described in the following tables in accordance with Section 5 of Lincolnshire County Council, Highway and Flood Authority, Development Road and Sustainable Drainage Specification and Construction and Series 500 of Lincolnshire's Specification for Highway Works.

Only virgin aggregates are deemed suitable when used as part of a Sustainable Drainage system, no sources listed below as recycled shall be used in a Sustainable Drainage system.

Pipe Bedding

SUPPLIER	SOURCE	AGGREGATE TYPE	SIZES	DATE
Aggregate Industries	Woodhall Spa	Gravel	4/10, 10/20, 20/40	04 - 23
Brauncewell Quarries	Brauncewell Quarry	Recycled Aggregate	0/1, 0/4, 4/10, 10/20, 20/40	01 - 23
Breedon Group	Holme Hall	Limestone	4/10, 10/20, 20/40	06 - 21
Breedon Group	Kettleby	Sand & Gravel	0/4, 4/10, 10/20	10 - 22
Breedon Group	Norton Bottoms	Sand & Gravel	0/4, 4/10, 10/20, 20/40	05 - 21
Breedon Group	Tattershall	Sand & Gravel	0/4, 4/10, 10/20, 20/40	05 - 21
Cemex	Cromwell	Gravel	10/20	07 - 20
Cemex	Swinderby	Gravel	10/20	07 - 20
Daniel Charles Aggregates	Dunston	Washed Recycled Aggregate	0/2, 0/4, 4/10, 10/20, 20/40	09 - 23
Fox Plant Ltd	Wigsley	Sand & Gravel	0/4, 4/10, 10/20	02 - 24
GBM Tudworth Recycling	Doncaster	Washed Recycled Aggregate	4/10, 10/20	10 - 22
Kirton (Fox Plant)	Kirton Quarry	Washed Recycled Aggregate	0/4, 4/10, 10/20	06 - 22
MQP	Baston Fen	Limestone Gravel	4/10, 4/20, 10/20	02 - 23
P J Thory	Willowhall	Sand & Gravel	0/4, 4/10, 4/20, 20/40	11 - 22
Tarmac Ltd	Besthorpe	Gravel	4/10	07 - 22
Tarmac Ltd	Block Fen	Sand & Gravel	0/4, 4/10, 4/20, 20/40	11 - 22
Tarmac Ltd	Broom South	Sand & Gravel	0/4, 4/10, 4/20, 10/20, 20/40	11 - 22
Tarmac Ltd	Langford	Gravel	4/10, 10/20	07 - 20
Tarmac Ltd	Maxey	Sand & Gravel	0/4, 4/10, 4/20, 20/40	11 - 22
Tarmac Ltd	Whisby	Gravel	4/10, 10/20	07 - 20
Total Aggregates	West Deeping Quarry	Sand & Gravel	4/10	12 - 22
Welton Aggregates	Welton Le Marsh	Recycled	4/10, 10/20	07 - 22

Type B Filter Media

SUPPLIER	SOURCE	AGGREGATE TYPE	DATE
Aggregate Industries	Woodhall Spa	Gravel	04 - 23
Brauncewell Quarries	Brauncewell Quarry	Recycled Aggregate	01 - 23
Breedon Group	Holme Hall	Limestone	06 – 21
Breedon Group	Kettleby	Gravel	07 – 20
Breedon Group	Norton Bottoms	Gravel	05 – 21
Breedon Group	Tattershall	Gravel	05 – 21
CEMEX	Cromwell	Gravel	07 – 20
Daniel Charles Aggregates	Dunston	Washed Recycled Aggregate	09 - 23
GBM Tudworth Recycling	Ex-Site	Recycled Aggregate	06 – 22
P J Thory	Willowhall	Gravel	11 – 22
Tarmac Ltd	Block Fen	Gravel	11 - 22
Tarmac Ltd	Broom South	Gravel	11 - 22
Tarmac Ltd	Langford	Gravel	07 - 20
Tarmac Ltd	Maxey	Gravel	11 - 22
Tarmac Ltd	Whisby	Gravel	07 - 20