What Does Quality Asphalt Mean to you, Our Customer.

An Express Asphalt Experience.

Mark T Murrin – Earp
Regional Technical Manager

AGGREGATE INDUSTRIES

A member of LafargeHolcim

Introducing Express Asphalt

Key facts:

- Express Asphalt is a unique differentiated business within the UK asphalt market, catering for collect asphalt customers, especially in the utility sector.
- Only dedicated to the collect asphalt business
- 36 Plants (Plus Scotland 4)

Introducing Express Asphalt

What is Quality?

Can be defined as:

“The right product, at the right time in the right place and at the right price”

<u>No more and certainly no less</u>

But quality isn’t simply a case of testing or certification… it’s much more than that…

It is in fact about an experience and an experience as Aggregate Industries Express Asphalt we are very proud of…

The Express Experience at site

Launched in 2012 with 6 elements, review and adjusted annually

The elements of the Express Experience were driven from customer feedback

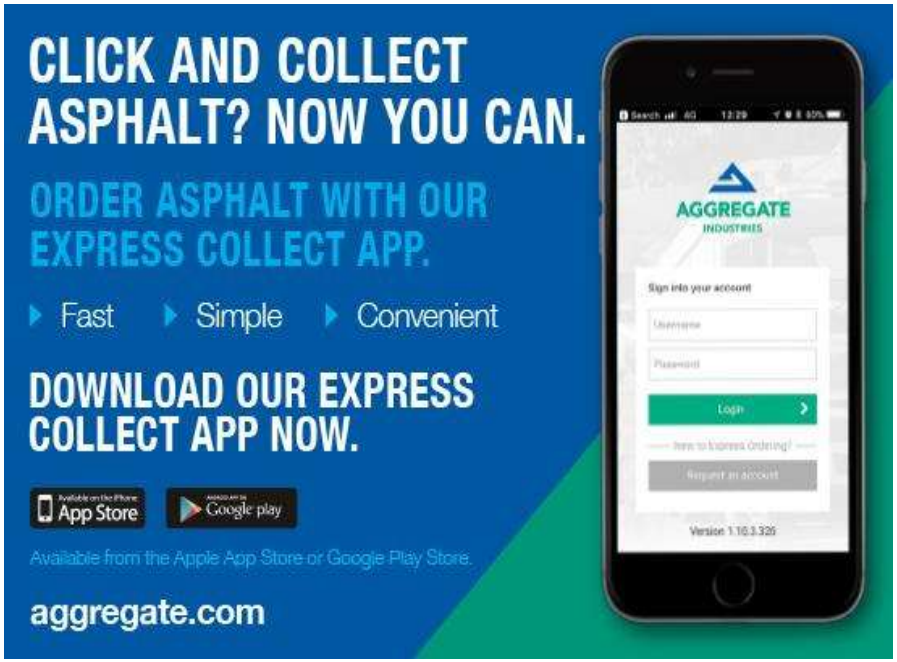
Our goal is to make customers feel welcome at our sites

- We provide welfare facilities for customer use
- Hot or cold drinks
- Free newspapers
- Guarantee to serve them within 30 minutes
- Provide snacks
- Have a range of tools & equipment they need for their jobs

One stop shop - Saving you time

- In 2017 we invested in upgrading our sites by installing shops at our sites
- We stock and supply a range of contractors tools & equipment needed to get the job done.
- These shops continue to be rolled out in 2018

And New for 2018!



The Industry's first online ordering App

- Save time by pre-ordering
- View historic orders
- Desktop version launching this month

Upgraded version of our current Express Asphalt App now includes new features

- Improved site finder
- Tonnage Calculator
- News and information

Investment in Technical Excellence

- In Spring 2017 we invested £750k in a brand new purpose built Technical Centre at our Bardon Hill Unit to serve the needs of our Customers.
- This investment is part of the wider investment in the business
- Supported by Mooredale House R & D Development Centre and Test House

Introducing The Product - SuperTrench®

Continuing improvement of our asphalt footway reinstatement materials has led to the development of SuperTrench®.

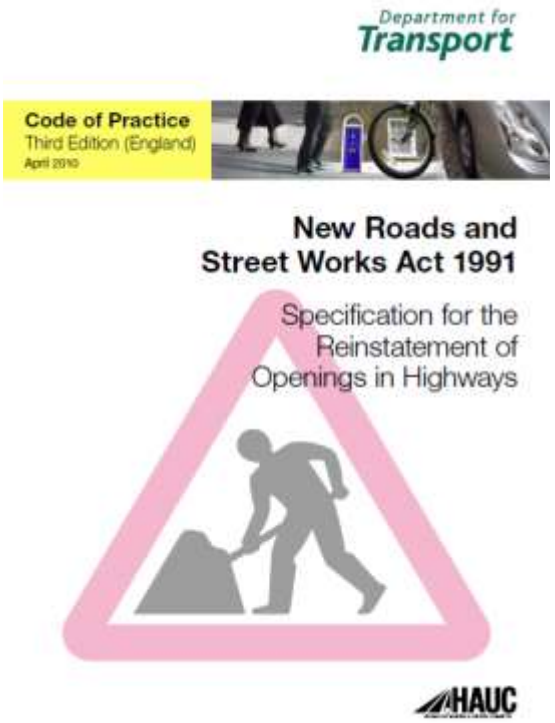
A range of permanent, HAUC approved hot mix surface course mixtures for use in the reinstatement of flexible footways, footpaths and cycle tracks.

Which can be collected from any of our National Network of Asphalt Plants

HAUC Approved

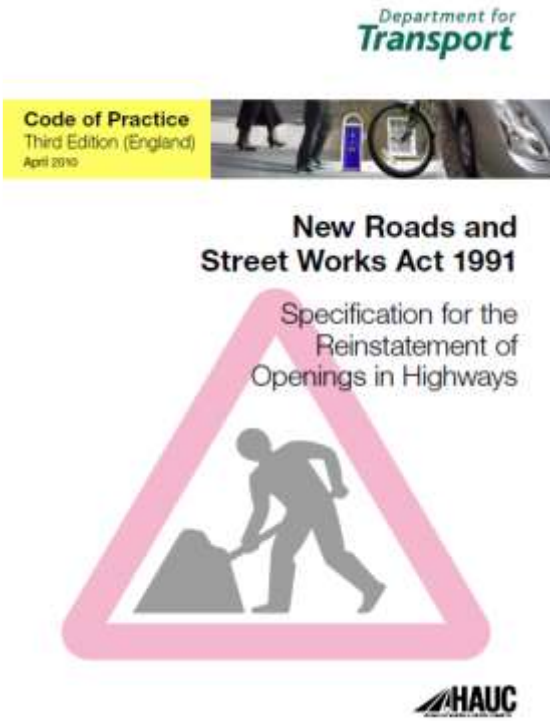
The Issue

- In 1985 the Horne Committee completed its comprehensive review of the Public Utilities Street Works Act 1950.
- The uncoordinated activities of those concerned with carrying out works on the highway led to unnecessary traffic disruption and significant additional costs to the public.
- The New Roads and Street Works Act 1991 (referred to as NRSWA) was introduced in response to this review.



The Issue

- Under section 71, an Undertaker must comply with materials to be used and standards of workmanship observed in the Specification for the Reinstatement of Openings in the Highway (SROH)
- Failure requires the contractor to bear the costs of removal and replacement of all non compliant reinstatements.



The Cost of Non-Compliance

- Under section 75 the utility undertaker (or his contractor) is required to pay the street authority a prescribed fee in respect of the costs of each inspection that fails
- These fees average at £500-600 per inspection and test
- It's not uncommon for some street authorities to core 1000-2000 per month
- On average less than half of defective reinstatements are ever required to be replaced
- The costs to the major Utility Contractors runs into the £m's in some parts of England (primarily the north.)

The Purpose of Testing – Why Test?

Highway Authorities have introduced a structured coring programme aimed at:

- Reducing the number of temporary reinstatements
- Improving the standards of permanent reinstatements
- Reducing disruption to the public from poor quality reinstatements
- Raising revenue!

And When the Testing is Done, What are the Results?

- Dimensional tolerance

Lower level tolerance for thickness of a structural layer	
Surface course	-5mm
Any other bound material	-10mm
Any other unbound material	-20mm

- Compaction tolerance

Air voids in footway asphalt layers	
AC 6 Dense surface course	2-13%
HRA Surface course	2-10%
AC 20 Binder course	2-12%

So is this an On going Issue?

A regional HAUC recently reported:

Non compliance with SROH requirements		
	Dimensional	Air Voids
Footway	20%	65%
Carriageway	50%	40%

So What is a Solution - The SuperTrench® Range

- A range of permanent hot mix asphalt surface course materials for use in streetworks reinstatement
- **SuperTrench®**
  Available in 6mm and 10mm nominal sizes
- Designed to assist in the achievement of the air void requirements of SROH
- Complies with AC6 & AC10 BS EN:13108 Part 1
- Manufactured with 125 or 190pen
- CE certified
- The SuperTrench® Design

HAUC Approved*

Achievements to Date

- To date we have helped contractors improve air void compliance up to 80-85%
- And that's still rising as we work with more and more contractors in the UK

Some Caveats!

- Does not mitigate poor reinstatement practice
- All the normal rules about heat retention and compaction still apply.

Some Customer Experiences - Gallaghers

Address	Pass/Fail	Material	Bulk Density (Mg/m3)	Maxi Density (Mg/m3)	Air Void %
1 Eastby Close Poyton	Pass	6mm DSC	2.088	2.403	**13.1**
10 Cuthbert road Cheadle	Pass	6mm DSC	2.142	2.413	**11.2**
14 Fairbourne Avenue Wilmslow	Pass	6mm DSC	2.211	2.400	**7.9**
175a Glaebrook Lane Warrington	Pass	6mm DSC	2.114	2.391	**11.6**
177 Liverpool Road Widnes	Pass	6mm DSC	2.173	2.428	**10.5**
192 Moorfield Road Widnes	Pass	6mm DSC	2.115	2.412	**9.8**
2 Arley Close Altrincham	Fail	6mm DSC	2.012	2.383	**15.6**
2 Coniston Grove Ashton Under Lyne	Pass	6mm DSC	2.134	2.432	**12.3**
2 Guild ford Road Salford	Fail	6mm DSC	2.043	2.395	**14.7**
20 Barn Lane Golbourne	Pass	6mm DSC	2.141	2.243	**4.3**
21 Glebelands Road	Pass	6mm DSC	2.173	2.386	**8.9**
21a Ridding Road Hale	Fail	6mm DSC	2.070	2.408	**14.0**
22 Neal Avenue Stockport	Pass	6mm DSC	2.169	2.433	**10.9**
31 Marfold Crescent Sale	Pass	6mm DSC	1.933	2.198	**12.1**
37 Talbot Street Hazel Green	Pass	6mm DSC	2.166	2.399	**9.7**
53 Ecclesbridge Road Marple	Pass	6mm DSC	2.149	2.432	**11.6**
57 Main Street Halton	Pass	6mm DSC	2.163	2.374	**8.9**
65 Linden Grove Stockport	Fail	6mm DSC	2.108	2.441	**13.6**
92 Princess Street Ashton under Lyne	Pass	6mm DSC	2.152	2.433	**11.5**
6 Greenway Road Heald Green	Fail	6mm DSC	2.069	2.451	**15.6**
2 Peakdale Avenue Cheadle	Pass	6mm DSC	2.226	2.408	**7.6**

+90% Compliance!

Some Customer Experiences - Morrison Utility Services

Address	Pass/Fail	Material	Bulk Density (Mg/m3)	Maxi Density (Mg/m3)	Air Void %
Hertford -Various sites	Pass	6mm DSC	2.208	2.382	**7.3**
Hertford -Various sites	Pass	6mm DSC	2.131	2.382	**10.5**
Hertford -Various sites	Pass	6mm DSC	2.247	2.382	**5.7**
Hertford -Various sites	Pass	6mm DSC	2.214	2.382	**7.1**
Hertford -Various sites	Pass	6mm DSC	2.289	2.382	**3.9**
Hertford -Various sites	Pass	6mm DSC	2.193	2.382	**7.9**
Hertford -Various sites	Pass	6mm DSC	2.169	2.382	**8.9**
Hertford -Various sites	Pass	6mm DSC	2.296	2.382	**3.6**
Hertford -Various sites	Pass	6mm DSC	2.206	2.382	**7.4**
Hertford -Various sites	Pass	6mm DSC	2.223	2.382	**6.7**
Hertford -Various sites	Pass	6mm DSC	2.232	2.382	**6.3**
Hertford -Various sites	Pass	6mm DSC	2.214	2.382	**7.1**
Hertford -Various sites	Pass	6mm DSC	2.311	2.382	**3.0**
Hertford -Various sites	Pass	6mm DSC	2.232	2.382	**6.3**
Hertford -Various sites	Pass	6mm DSC	2.248	2.382	**5.6**
Hertford -Various sites	Pass	6mm DSC	2.154	2.382	**9.5**
Hertford -Various sites	Pass	6mm DSC	2.194	2.382	**7.9**
Hertford -Various sites	Pass	6mm DSC	2.227	2.382	**6.5**

100% Compliance

SuperTrench® - The Modern Asphalt Quality Solution

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Supertrench®-footway

Aggregate Industries' research programme into asphalt reinstatement materials has led to the development of our Supertrench®-footway system. A permanent hot mix asphalt surface course mixture for use in the reinstatement of flexible footways, footpaths and cycle tracks.

Designed to overcome the installation and specification issues encountered with existing asphalt materials when executing first time permanent reinstatements under the Specification for the Reinstatement of Openings in Highways (SROH)

- The surface course system is designed to be compliant with BS EN13108-1 for asphalt concrete mixtures
- Compatible with the flexible footway reinstatement requirements Method A of SROH
- Reduces issues created by insitu air voids
- Volumetrically designed binder rich surface course optimised to give defined performance characteristics
- Provides high levels of in-service performance demanded from the overseeing authority
- Reduced permeability, extended durability
- CE marked.

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Asphalt

Supertrench®-footway laying guide

Supertrench®-footway is a permanent hot mix asphalt surface course system for use in the reinstatement of flexible footways, footpaths and cycle tracks.

- Designed to overcome the installation and specification issues encountered with existing asphalt materials when executing first time permanent reinstatements under the Specification for the Reinstatement of Openings in Highways (SROH)
- The surface course system is designed to be compliant with BS EN13108-1 for asphalt concrete mixtures
- Compatible with the flexible footway reinstatement requirements Method A of SROH
- Consists of a volumetrically designed binder rich surface course optimised to give defined performance characteristics
- Reduces issues created by insitu air voids
- A range of nominal sized lightly coated chippings explicitly selected to achieve the required surface characteristics of texture, skid resistance and aesthetics.
- Provides high levels of in-service performance demanded from the overseeing authority
- Reduced permeability, extended durability.

Installation method statement

The back fill and/or sub base and should be selected and reinstated according to the [SROH] permitted options for the footway or footpath category being reinstated leaving a minimum of 60mm to the existing surface.

Good practice

- The surface course should be delivered to site at a temperature between 150°C to 170°C and protected at all times with a tarpaulin sheet or duvet to avoid excessive temperature loss
- Working practices should be adjusted to ensure that the laid material is not left exposed to the elements prior to compaction in adverse weather conditions
- Placing and spreading must be carried out with due regard to ambient weather conditions, particularly on thin layers (<30mm) to minimise heat loss
- Laying should not commence when the air temperature falls below 0°C except in very calm, dry conditions.

Thank You for Listening
If you would like to know more, come and visit us on our stand today