

Approval of **Ultracrete Permasoil** Soil Stabiliser, for use in utility reinstatements in accordance with Appendix 9 of the SROH



## Appendix A9 Trial



- In accordance with the SROH a trial was agreed with **Worcester County Council** and **Severn Trent Services Ltd** in conjunction with **West Midlands HAUC Materials Group**
- Purpose: to assess the process for using handmix techniques in allowing the reuse of excavated material treated with **Ultracrete Permasoil** Soil Stabiliser, in small excavations such as water meters, tobies and valve boxes in footpaths & type 3 & 4 carriageways
- **Ultracrete Permasoil** was trialled as part of a reinstatement system to deliver a right first time solution....

**'Right first time solution'.....**



## The System

### Ultracrete **PERMA-SOIL**

Soil stabiliser for the backfill and reinstatement of small utility excavations  
Reduces the amount of virgin aggregates used and landfill costs.

25kg Plastic bags or tubs, 12.5kg tubs



### Ultracrete **SCJ**

Cold joint sealer and tack coat spray.  
Prevents water ingress and protects joints from freeze/thaw damage.  
Spray on bitumen sealer for sealing vertical edges of asphalt reinstatements.

750ml aerosol cans



### Ultracrete **INSTANT ROAD REPAIR**

Permanent cold lay asphalt concrete with HAPAS Approval (PCSM) from the BBA 'Right First Time' permanent surface material which can be used in all types of weather.

Available in 6mm and 10mm aggregate. Also available in red (6mm only)

25kg plastic bags or tubs



### Ultracrete **INSTABAND ECO**

Heat applied overbanding tape with impregnated anti-skid.  
HAPAS Approved by the BBA  
Prevents water ingress which can cause joint damage through freeze/thaw cycles.

5m rolls



# *This is what we did.....*



## Trial Plan

- **Quality**

Operatives from Severn Trent Services Ltd attended a material awareness course which specifically covered the products in the system to ensure correct handling and application of the materials.

- **Approach**

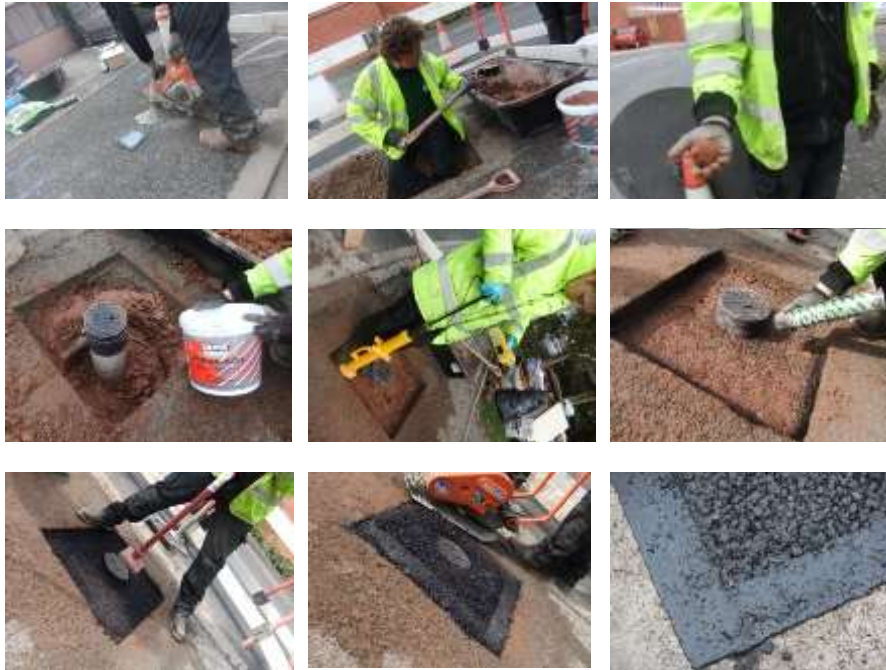
Through the West Midlands HAUC Materials Group, it was agreed that 3 trial sites would be selected in Worcestershire to include a type 'D' soil . The sites were subjected to the following actions:

- Cube/cylinder tests from site
- Photographic documentation
- Site inspections agreed with Worcestershire CC Streetworks Inspectors

Additional sites were also trialled and identified on the noticing system.

**Reinstatement Method**

Seven Sites were completed to ensure backfill soil classifications from types B, C & D were included.



# Laboratory tests....



## Site Cylinder Tests



Samples in cylinder form were taken from the trial sites.



They were returned to the lab and sealed by wrapping a plastic sheet around them to prevent moisture loss.



The samples were placed in a water bath at 20°C to maintain moisture levels during the curing process.



After curing for 28 days the samples were removed from the bath and their mould and tested for compressive strength results.

## A9 Approval Site Trials

Date: 18/01/2011  
 Site Address: 20 Broom Meadow Road, WR3 7TJ  
 Site reference: A  
 Spoil type: Class C (granular / cohesive - fine and coarse aggregates, gravel, sand, silt and clay)  
 Excavation type: SMF  
 Excavation dimensions: 700 x 800 x 900mm (0.50m<sup>3</sup>)  
 Permasoil addition to spoil: 18kg (36 per m<sup>2</sup>)  
 Reinstatement completed in: 6 layers  
 Clegg hammer reading: 11am = 6  
 3 pm = 14  
 Compressive cylinders taken: 3                      cylinder ref:

### Other comments/observations:

- Arrived on site, reinstatement is water meter in the footway at the entrance to the driveway.
- Pavement saw cut and excavation completed.
- Perma-soil added to spoil and mixed in a plaster's bath, reinstatement completed in 6 layers.
- Returned at 3pm and repeated clegg, reading of 14 achieved.
- Reinstatement completed using IRR 6mm and Instaband.

### 28-day Compressive strength results

- cylinders were taken back to the lab then stored at 100% humidity for 28 days before being demoulded and tested.

Cylinder	Density (kg/m <sup>3</sup> )	Compressive (N/mm <sup>2</sup> )
A1	2240	3.11
A2	2235	2.66
A3	2224	2.31
Average	2233	2.69



## Site Data Document Sample

At each site, data was recorded as per this document sample.

### A9 Approval Site Trials - Final Test Results

Site	Spoil Type	Date	Permasoil Addition	Initial Clegg Reading	CBR conversion I	CBR conversion II	Cylinder Density (kg/m <sup>3</sup> )	Comp Strength (N/mm <sup>2</sup> )
A	C	18/01/12	36kg	6	2.5	6.0	2233	2.69
B	D	18/01/12	50 kg	9	5.7	10.0	1994	2.15
C	D	22/03/12	41kg	6	2.5	6	2359	1.91
D	C	22/03/12	44kg	8	3.4	8.5	2286	2.26
E	B	27/04/12	46kg	11	10.5	13.2	2128	2.52
F	B	27/04/12	50kg	12	12.1	15.1	2205	2.50
G	B	27/04/12	46kg	10	7.0	11.6	2161	2.08



# Inspection documents....



## Inspection Sheet

### Ultracrete Permasoil A9 Approval Inspection Sheet

PARTIES TO TRIAL			
UNDERTAKER		AUTHORITY	
Name: SOVEREIGN TRENCH WATER		Name: WORCESTERSHIRE CC	
Address: UNIT 8, CATWISLEY PARK DRIVE, DEBBY DE21 7BA.		Address: SLECHWET ROAD, WORCESTER, WLS 2AD.	
SUPPLIER		Name: INSTARMAC GROUP PLC	
		Address: DAWNY HORSEW WAY, D-2-DAY, WARRINGTON, WIR 9 3SC.	
Site Details			
Installation Date	Address	Attendees at Installation	Site Reference and Type
18/01/2011	20 Broom Meadow Road Worcester WR3 7TJ	Mark Cound Worcs CC Jane Harris Instarmac Andy Taylor Severn Trent Ltd Nick Holmes Instarmac James Warwick Instarmac	Site A Water Meter
Spoil Type: C (granular/cohesive fine and coarse aggregates, gravel sand silt and clay)		Excavation size: 700x800x900mm 0.50m³	
Permasoil Quantity: 18 kg	Final Clegg Hammer Reading: 14	Final Average Compressive Strength: 2.69	Other Materials Ultracrete Instant Road Repair and Ultracrete SCI
Inspection Check List			
Observation Type	Yes	No	N/A
Reinstatement stable no sinking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free from edge trips (within 6mm tolerance)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lid fitted correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overcuts present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Crowning and depressions within 10mm tolerance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perma soil stain present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCSM compacted correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspection Attendees			
Comments			
REINSTATEMENT AS GOOD AS WHEN FIRST REINSTATED IN JANUARY			



“Reinstatement as good as when first reinstated in January”

Worcestershire County Council

Signatures:   
On behalf of Worcestershire County Council  
Authority Inspector

Date: 29.6.12

Signatures:   
On behalf of Instarmac Group plc  
Supplier

Date: 29.6.12



Site: 20 Broom Meadow Close,  
Worcester

**Instermac Group plc**  
Head Office:  
Denny Monon Way  
Birch Coppice Business Park  
Denton, Warwick  
Staffordshire B78 1QE  
Tel: 01827 872344 Fax: 01827 874486  
Email: [enquiries@instermac.co.uk](mailto:enquiries@instermac.co.uk)  
Website: [www.instermac.co.uk](http://www.instermac.co.uk)


**A9 APPROVED**

**SPECIFICATION FOR REINSTATEMENT OF OPENINGS IN HIGHWAYS**  
New Roads and Streetworks Act 1991

**Appendix A9 Approval of Ultracrete Permacol Soil Stabiliser as an Alternative Reinstatement Material**


**PRODUCT SCOPE AND SUMMARY OF CERTIFICATE**


This document confirms the Appendix A9 Approval of Ultracrete Permacol Soil Stabiliser as a suitable alternative reinstatement material for use in footpaths, cycle tracks and type 3 & 4 carriageways. The approval is only relevant to soil stabiliser supplied under the Ultracrete brand and supplied in 12.5kg and 25kg buckets or 25kg bags.



It was agreed that the A9 Approval Trial would be endorsed and monitored by West Midlands HAUC Materials Group.


In accordance with A9.5.5 the parties who completed the trial were:


**Severn Trent Ltd (Underaker)**  



**Worcestershire County Council (Local Authority)**  



The Appendix A9 trial methodology and results are detailed in the accompanying document.


**Approval Signatories:**

 Mr Bob Lloyd Worcestershire County Council and West Midlands HAUC Materials Group

 Mr Anis Solanki Utilities Side Co-Chair (WMJAG)

 Mr Andy Wilms, Highways Side Co-Chair (WMJAG)

 Ms Jane Harris Instermac Group plc

 Mr John Crowther, Chair of West Midlands HAUC Materials Group

**Date of Issue: July 2012**

# *Material Awareness Training...*



## A9 Certificate

- ✓ Dedicated training department and site support
- ✓ Free of charge
- ✓ Training for new customers and refresher courses
- ✓ Training certificates are issued to individuals

### **THE BENEFITS**

- Get it right first time
- Try out some innovative products
- Learn the correct application process
- Increase productivity
- Save money
- Eliminate repeat visits





Heron Close, Worcester  
Water meter installed using Ultracrete's  
Reinstatement System

# The complete 'right first time' delivery approach



Perma-Soil  
Soil Stabiliser



Instant Road Repair  
Cold Lay Asphalt



Instaband ECO,  
Thermoplastic Anti-Skid Overbanding Tape



SCJ  
Seal & Tack Coat Spray



### ULTRACRETE

# PERMA-SOIL

## SOIL STABILISER

- Eliminates the need to haul away spoil to landfill
- Quick and easy to use, turning excavated spoil into usable backfill within minutes
- Can be re-excavated
- Meets the requirements as set out in the Utility WRAP agreement
- Meets SMF and SMR requirements of Appendix 9 of the SROH

### SAVES YOU MONEY!



For more information call us on 01827 87187 or email [enquiries@instarmac.co.uk](mailto:enquiries@instarmac.co.uk) [www.ultracrete.co.uk](http://www.ultracrete.co.uk)