

### PTS Product Assessment Certificate

Product Acceptance Scheme in accordance with Manual for Contract Documents for Highway Works, Specification for Highway Works (MCHW SHW) Volume 1 Sub-Clause 104.15 and 104.16

#### Roadmender Asphalt

Division of Billian UK Limited  
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#### Pavement Testing Services Ltd

Britannia House Unit 1 Rough Hey Road  
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UK Approved Body (UKAB)  
Product Area 23 Road Construction Products

Product Name: RoadMender Asphalt Concrete to BS EN 13108-1 in compliance with MCHW SHW Volume 1 Clause 909 and Clause 912

Product Family: RoadMender Asphalt

Certificate Reference: PA946 0001



Pavement Testing Services (PTS) Ltd has awarded this **Product Assessment Certificate** to the Company named above for the products described herein. These products have been assessed by PTS Ltd as being fit for their intended use provided, they are manufactured, installed, and used as set out in this Certificate.

The issue of this Certificate under Specialist Group PTSSG 946 Hot and Cold Laid Asphalt Surfacing Material for Potholes Repairs, Ironworks, Utility Reinstatements, Airfield Repairs, Patching, Local Repairs and Other Similar Use including Narrow Trenches and Micro Trenches (proprietary materials), which sets out Guidelines and Criteria for the assessment, has been authorised by the PTS Technical Supervisory Panel.

On behalf of PTS Ltd

Signature

Dr A J Sewell Managing Director

Date First Issued: 10.11.17

Date of Second issue: 26.01.21

Certificate Valid until: 09.11.23

This Product Assessment Certificate is issued by Pavement Testing Services Ltd (PTS Ltd) under PTS Product Acceptance Scheme (PTSPAS), in accordance with MCHW SHW Sub-Clause 104.15 and 104.16, supported by PTS Technical Supervisory Panel (PTSTSP) which includes representation from National Highways (NH), Association of Directors of Environment, Economy Planning and Transport (ADEPT), Road Surface Treatments Association (RSTA), Mineral Products Association (MPA), Joint Authorities Group (JAG), Midlands Highways Alliance (MHA), HAUC (UK) SROH Working Group, HAUC (UK) SROH Innovations Working Group and Transport Scotland.

Sub-clause 104.16 (e) requires that *“The scheme must have a technical supervisory panel that provides technical oversight on the operation of the scheme and formally consents to the issue of assessment and certification requirements of the specialist groups developing the assessment and certification requirements. This panel must include a balanced representation of key end users, recognized industry experts and those responsible for the highways on which such products will be used or installed”*.

PTSPAS Product Assessment Certificates are each subject to a review every three years, with annual interim surveillance.

## PRODUCT APPLICATIONS

- Potholes repairs, ironworks, utility reinstatements, airfield repairs, patching, local repairs and any other similar use including narrow trenches and micro trenches
- MCHW SHW Volume 1 Clause 946, amended July 2021

## KEY FACTORS ASSESSED

- Reclaimed Asphalt classification to BS EN 13108-8 : 2016
- Polymer Modified Bitumen manufacturing process and classification to BS EN 14023 : 2010
- Factory Production Control (FPC) and Quality Management System (QMS) Audits
- Current BSI QMS accreditation to BS EN ISO 9001 : 2015
- BSI Certificate Number FM 610607 and recent audit
- BSI Certificate of Conformity of the Factory Production Control 2797CPR640249 in respect of BS EN 13108 – Bituminous Mixtures. Material Specifications; BS EN 13108-1 Asphalt Concrete, BS EN 13108-4 Hot Rolled Asphalt, BS EN 13108-5 Stone Mastic Asphalt, BS EN 13108-6 Mastic Asphalt and recent audit
- Installation Method Statement (IMS) for manufacture and product installation
- Installation Trials
- Review of supporting documents
- Design and Development of Products and Services compliance with BS EN ISO 9001 : 2015
- BSI PD6691 : 2015 + A1 : 2016 Published Document – Guidance on the use of BS EN 13108 Bituminous mixtures – Material Specifications, Section 4.4.4 requires greater levels of control for mixtures with levels of Reclaimed Asphalt above the permissible limits, i.e. 10% for surface course. This Certificate comprises the assessment of surface course material incorporating up to 50% Reclaimed Asphalt.
- Durability (TRL Report CPR2213 Testing of RoadMender Asphaltic Materials Final Report after 36 Month Monitoring) dated 14 May 2019

## 1. TECHNICAL SPECIFICATION

The RoadMender asphalt concrete is a BS EN 13108-1 : 2006 bituminous mixture consisting of BS EN 13108-8 : 2016 compliant reclaimed asphalt, aggregate to BS EN 13043 : 2002 and polymer modified bitumen to BS EN 14023 : 2010

- Department for Transport—New Roads and Street Works Act 1991
- Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May 2020
- RSTA ADEPT National Highways —Code of Practice for Ironwork Systems Installation and Refurbishment, May 2017
- MCHW SHW Clause 946, amendment July 2020
- BS EN 13108-1 : 2006

## 2. MANUFACTURE

- 2.1 Procedures and processes covered under Factory Production Control Certificate No 2797CPR640249
- 2.2 The Quality Management System (QMS) of the manufacturer has been assessed and certified as meeting the requirements of BS EN ISO 9001 : 2015 by BSI (Certificate FM 610607)

## 3. DELIVERY AND SITE HANDLING

- 3.1 The product is delivered to site in 1-tonne pallets of 20kg bags, as specified in the Certificate Holder's QMS and in house documented procedure. Products are colour coded labelled with the product type, name and batch number. Full product information is recorded on the delivery note.
- 3.2 Training is provided if required for the use of the RoadMender DBP machines, which covers all aspects of operation and maintenance. Installer competencies, certificates and skills cards are also recorded.
  - RoadMender Asphalt Installation Method Statement
  - RoadMender DBP 250 Operation Method Statement
  - RoadMender DBP 350 Operation Method Statement
  - RoadMender DBP 500 Operation Method Statement
  - Risk Assessment

## 4. INSTALLATION

- 4.1 Installation must follow Contractor's specific Installation Method Statement (IMS) taking into account requirements of MCHW SHW Volume 1 Clause 903 and Clause 946, SROH, Code of Practice and/or BS 594987 : 2015 + A1 : 2017
- 4.2 The exposed surface must be clean and free of ice, standing water, loose material and any contaminants which may affect the bond between the product and the existing substrate. All the exposed edges, joints and substrate must be treated with a suitable bond or tack coat product before installation.
- 4.3 The heating equipment must be suitable for heating the product at the manufacturer's recommended temperature for the recommended period of time.
- 4.4 The product must only be installed by approved installers, competent and experienced in asphalt products installation. Registration and skill cards (National Highway Sector Scheme NHSS23 or NHSS16 / Construction Skills Certification Scheme CSCS), New Roads and Street Works Act 1991 (NRSWA) operatives and supervisors accreditation requirements must be agreed with the Overseeing Organisation.
- 4.5 Where current IMS does not cover all installation activities, the specific IMS will be developed and incorporated in the QMS as appropriate, in conjunction with the Certificate holder.
- 4.6 The product must be compatible with the surrounding material. The declared surface characteristics data in Section 5.2 shall be compared with those of the adjacent surface to ensure compatibility.
- 4.7 On work completion, the installer shall carry out a visual inspection of the finished surface for uniformity and any discernible defects and shall take immediate actions if necessary.

## 5. TECHNICAL DATA

5.1 The assessment of the laboratory data (PTS Laboratory Report PTS1519-B-02 dated July 2015; PTS Laboratory Report PTS1519-B-02-G-03 dated October 2015 and TRL Client Project Report CPR2213 dated April 2016) reports the following essential characteristics, in accordance with MCHW SHW Volume 1 Clause 946.15 and 946.16 and Department for Transport—New Roads and Street Works Act 1991 Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May 2020.

- \* declared grading in accordance with the requirements of BS EN 13108-1 : 2006, Table 2 and BSI PD 6691 : 2015 + A1 : 2016 Annex B
- \* declared minimum binder content in accordance with the requirements of BS EN 13108-1 : 2006, Section 5.4.1.2 and BSI PD 6691 : 2015 + A1 : 2016 Annex B
- \* declared maximum mixing temperature
- \* Stiffness:  $\geq 1$  GPa after 28 days when tested in accordance with BS EN 12697-26 (ITSM method 20°C)
- \* Resistance to permanent deformation as defined in BSI PD 6691 : 2015 + A1 : 2016 Annex B, Table B.4
- \* The initial surface texture shall be not less than 0.9mm when measured using the volumetric patch method described in BS EN 13036-1
- \* The minimum wet Skid Resistance value shall not be less than 60 when determined using the portable skid resistance tester (pendulum) in accordance with BS EN 13036-4
- \* Air Voids Content shall be as stated in Department for Transport – New Roads and Street Works Act 1991 Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May , 2020, Table S10.1, Section S10.2.8
- \* Thickness shall be as stated in Department for Transport – New Roads and Street Works Act 1991 Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May 2020, Section A2.8.2
- \* Durability shall be assessed as stated in Department for Transport – New Roads and Street Works Act 1991 Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May 2020, Section S2.2.8 & S2.2.1 (3)

5.2 Installation trials were carried out during 2015—2016:

- Corehard Ltd Report REP/0417/BIL/INV-001 dated 20 April 2017  
Location: Clancy Docwra Head Office, Coppermill Lane, Harefield, Middlesex  
Various recycling options were adopted for repairs of already damaged areas in March 2015.  
Visual inspection of patches after 2 years in service under heavy trafficking reported good condition and no signs of any observable issues such as surface cracking, edge depression, crazing or surface depression.
- Corehard Ltd Report REP/0517/BRM-001 dated 8 May 2017  
Location: DJT Utilities Yard, Dacca Farm, Ducks Cross, Wilden, Bedfordshire, MK44 2QW  
Produced and Installed by: RoadMender  
Skid Resistance (Pendulum Test Value) in accordance with BS EN 13036-4 reported mean corrected PTV range from 68 to 70 after 18 months in service.
- TRL Client Project Report CPR2213 dated 14 May 2019  
Location: Alliance Cockridden Farm Estate Brentwood, Essex  
Produced and Installed by: RoadMender

i) Resistance to permanent deformation

Wheel Tracking									
BS EN 12697-22 small device, Procedure B at 45°C									
WTS <sub>air</sub>					PRD <sub>air</sub>				
3 Months	6 months	12 Months	24 months	36 months	3 months	6 months	12 months	24 months	36 months
0.08	0.10	0.09	0.11	0.11	7.29	6.14	6.32	7.83	5.57

## 5. TECHNICAL DATA cont.

- ii) Skid Resistance (Pendulum Test Value) in accordance with BS EN 13036-4
  - \* mean corrected PTV range from 76 to 81 after 3 months in service
  - \* mean corrected PTV 83 after 6 months in service
  - \* mean corrected PTV 88 after 12 months in service
  - \* mean corrected PTV 86.5 after 24 months in service
  - \* mean corrected PTV 82 after 36 months in service

## 6. IN SERVICE PERFORMANCE

6.1 Durability as defined in Department for Transport – New Roads and Street Works Act 1991 Specification for the Reinstatement of Openings in Highways (SROH), Fourth Edition, May 2020, Section S2.2.8 & S2.2.1 (3)

- *“At the end of the guarantee period the condition of the reinstatement shall not be required to be superior, in any respect, to the condition of the adjacent surfaces”.*
- *“Where the profile of the existing surfaces adjacent to the reinstatement is uniform and substantially superior to the surface of the reinstatement, the Undertaker shall carry out remedial work to restore the surface profile of the reinstatement to a condition consistent with the adjacent surfaces.”*

6.2 Macrotexture Retention

The initial surface texture volumetric patch method in accordance with BS EN 13036-1

## 7. REQUIREMENTS

Product shall be manufactured only by the Certificate Holder using only the processes, procedures and raw materials approved and covered under the current PFC and QMS:

- Reclaimed Asphalt classified to current BS EN 13108-8 : 2016
- Aggregate to current BS EN 13043 : 2002
- Polymer Modified Bitumen 40/100-65 classified to BS EN 14023 : 2010
- Hydrated Lime with Declaration of Performance (DoP) and CE Certification from the approved supplier

Product to be installed only by the Certificate Owner or Certificate Holder’s authorised installer meeting the requirements of Section 4, Paragraph 4.4.

## 8. TEST RESULTS

Available on request of the Overseeing Organisation from the Certificate Holder, comprising the verification and ongoing validation processes.

## 9. BIBLIOGRAPHY (correct at time of initial certificate issue):

- BS EN ISO/IEC 17065 : 2012 Conformity assessment—Requirements for bodies certifying products, processes and services
- BS EN ISO/IEC 17067 : 2013 Conformity assessment—Fundamentals of product certification and guidelines for product certification schemes
- BS EN ISO 17025 : 2005 General requirements for the competence of testing and calibration laboratories
- BS EN ISO 17025 : 2017 General requirements for the competence of testing and calibration laboratories
- BS EN ISO/IEC 9001 : 2015 Quality Management System Requirements
- Manual of Contract Documents for Highways Works, Volume 1 Specification for Highway Works, amended July 2019
- Department for Transport – New Roads and Street Works Act 1991,
- Specification for the Reinstatement of Openings in Highways (SROH), Third Edition, April 2010
- RSTA ADEPT HE Code of Practice for Ironwork Systems Installation and Refurbishment, May 2017
- BS 594987 : 2015 + A1 : 2017 Asphalt for roads and other paved areas — Specification for transport, laying, compaction and product-type testing protocols
- BS EN 13043 : 2002 Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas
- BS EN 14023 : 2010 Bitumen and Bituminous Binders. Specification Framework for Polymer Modified Bitumens
- BS EN 13108-1 : 2006 Bituminous Mixtures — Materials Specifications — Asphalt Concrete
- BS EN 13108-8 : 2016 Bituminous Mixtures — Materials Specifications — Reclaimed Asphalt
- PD 6691 : 2015 + A1 : 2016 Guidance on the use of BS EN 13108, Bituminous mixtures – Material Specifications
- PTS SG946R Guidelines and Criteria Document for the Assessment and Certification of Hot and Cold Laid Asphalt Surfacing Material for Potholes Repairs, Ironworks, Utility Reinstatements, Airfield Repairs, Patching, Local Repairs and Other Similar Use including Narrow Trenches and Micro Trenches (proprietary materials)

## CONDITIONS OF CERTIFICATION

1. This Certificate:
  - relates only to the product/system that is named and described on the front page
  - is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
  - valid only in the UK
  - has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
  - is copyright of PTS Ltd.
  - PTS Product Assessment forms part of the Product Acceptance Scheme as described in MCHW SHW Volume 1 Clause 104.16 and shall be submitted by the Contractor/Certificate Holder to the Overseeing Organisation for Approval.
2. Publications, documents, specifications, legislation, regulations, standards, and the like referenced in this Certificate are those that were current and/or deemed relevant by PTS Ltd at the date of issue or reissue of this Certificate.
3. This Certificate will remain valid for an unlimited period, subject to 3 year review to revalidate that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:
  - are maintained at or above the levels which have been assessed and found to be satisfactory by PTS Ltd
  - continue to be checked as and when deemed appropriate by PTS Ltd under arrangements that it will determine
  - are reviewed by PTS Ltd as and when it considers appropriate
  - remain in accordance with the requirements of PTSPAS. Additional review shall be carried out as necessary should Specification's / Standard's change to ensure compliance.
4. PTS Ltd has used due skill, care, and diligence in preparing this Certificate, but no warranty is provided.
5. In issuing this Certificate, PTS Ltd is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:
  - the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
  - the right of the Certificate Holder to manufacture, supply, install, maintain or market the product/system
  - individual installations of the product/system, including their nature, design, methods, performance, workmanship, and maintenance
  - any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship, and maintenance
  - any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance, and removal
6. Any information relating to the manufacture, supply, installation, use, maintenance, and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained, and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.