

Accreditation Certificate

PMS Pavement Management Services Ltd - Highway Testing Laboratory

Raheen Industrial Estate, Athenry, Co. Galway

Testing Laboratory

Registration number: 230T

is accredited by the Irish National Accreditation Board (INAB) to undertake testing as detailed in the Schedule bearing the Registration Number detailed above, in compliance with the International Standard **ISO/IEC 17025:2005 2nd Edition** *“General Requirements for the Competence of Testing and Calibration Laboratories”*
(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)

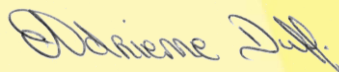
Date of award of accreditation: **09:06:2009**

Date of last renewal of accreditation: **29:04:2014**

Expiry date of this certificate of accreditation: **29:04:2019**

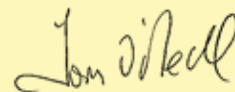
This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager: _____



Dr Adrienne Duff

Chairperson: _____



Mr Tom O'Neill

Issued on 29 April 2014

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.

The INAB is a signatory of the European co-operation for Accreditation (EA) Testing Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement.

The Metropolitan Building, James Joyce Street, Dublin 1, Ireland Tel 1890 289 389 E-mail inab@inab.ie Web [inab@inab.ie](http://inab.inab.ie)

Schedule of Accreditation



(Annex to Accreditation Certificate)

Permanent Laboratory:

Category A & B

PMS PAVEMENT MANAGEMENT SERVICES LTD - HIGHWAY TESTING LABORATORY

Construction Materials Testing Laboratory

Initial Registration Date : 9-June-2009
Postal Address: Raheen Industrial Estate
(Address of other locations as they apply) Athenry
Co. Galway
Telephone: +353 (0)91 877040
Fax: +353 (0)91 844101
E-mail: info@pms.ie, highwaytestinglab@pms.ie
Website: www.pms.ie
Contact Name: Brian Mulry
Facilities: Public testing service

Schedule of Accreditation



Permanent Laboratory:
Category A & B

THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish body for the accreditation of organisations including laboratories.

Laboratory accreditation is available to testing and calibration facilities operated by manufacturing organisations, government departments, educational institutions and commercial testing/calibration services. Indeed, any organisation involved in testing, measurement or calibration in any area of technology can seek accreditation for the work it is undertaking.

Each accredited laboratory has been assessed by skilled specialist assessors and found to meet criteria which are in compliance with ISO/IEC 17025 or IEC 15189 (medical laboratories). Frequent audits, together with periodic inter-laboratory test programmes, ensure that these standards of operation are maintained.

Testing and Calibration Categories:

- Category A:** Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.
- Category B:** Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.
- Category C:** Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.
- Category D:** Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using
- (a) portable test equipment
 - (b) a site laboratory
 - (c) a mobile laboratory or
 - (d) equipment from a mobile or site laboratory

Standard Specification or Test Procedure Used:

The standard specification or test procedure that is accredited is the issue that is current on the date of the most recent visit, unless otherwise stated.

Glossary of Terms

Facilities:

- Public calibration/testing service:** Commercial operations which actively seek work from others.
- Conditionally available for public calibration/testing:** Established for another primary purpose but, more commonly than not, is available for outside work.
- Normally not available for public calibration/testing:** Unavailable for public calibration/testing more often than not.

Laboratory users wishing to obtain assurance that calibration or test results are reliable and carried out to the Irish National Accreditation Board criteria should insist on receiving an accredited calibration certificate or test report. Users should contact the laboratory directly to ensure that this scope of accreditation is current. INAB will, on request, verify the status and scope.

Scope of Accreditation



Highway Testing Laboratory

Permanent Laboratory:
Category A

(Highway Testing Laboratory is a Registered Business of PMS

Pavement Management Services Ltd.)

Construction Materials Testing Laboratory

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
212 Concrete		
.23 Compression Tests on Moulded Specimens	Determination of Compressive Strength (Loads from 100 kN-2000 kN) Dimension Strength	BS 1881:Part 116: 1983 IS EN 12390-3:2009
.22 Compression Tests on moulded specimens	Concrete Curing	BS 1881:Part 111:1983 IS EN 12390-2:2009
.27 Mass per unit volume of hardened concrete	Determination of Density Determination of Density Dimension	BS 1881:Part 114:1983 IS EN 12390-7:2009 IS EN 12390-1 2000
216 Aggregates		
.13 Sieve Analysis	Particle Size Distribution Washing & Sieving Dry Sieving	BS 812: Part 103.1:1985 IS EN:933-1:2012
.17 Flakiness	Determination of Flakiness Index	BS 812: Part 105 section 105.1:1989 IS EN 933-3:2012
.34 Moisture Content Water Content	Determination of Moisture Content Determination of Water Content	BS 812:Part 109: 1990; Clause 6 IS EN 1097-5:2008

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INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
216 Aggregates		
.20 Aggregate Crushing Value	Aggregate Crushing Value (Loads from 100 kN-2000 kN)	BS 812: Part 110:1990
.22 Los Angeles Value	Determination of resistance to fragmentation of Los Angeles Value	IS EN 1097-2:2010
Particle Density	Determination of PD 31.5 mm-63 µm	IS EN 1097-6: 2000 Clause A4
Particle Density and Absorption	Determination of PD and Absorption 31.5-4.0 mm	IS EN 1097-6: 2013 Clause 8
216 Aggregates		
.03 Sample preparation	Sample Reduction by Riffling	EN 932-2 Clause 8 1999
216 Aggregates		
.99 Fines	Assessment of fines- Methylene Blue Test	IS EN 933-9:2009 + A1:2013
216 Aggregates		
.35 Polished stone value	Polished Stone Value (PSV)	EN 1097-8:2009

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216 Aggregates .99 Aggregate Abrasion Value	Aggregate Abrasion Value (AAV)	EN 1097-8:2009
216 Aggregates .01 Sampling	Sampling of aggregates from Stockpiles, Heaps and Stockbays	EN 932-1 Clause 8.8 1996
.12 Particle density and water absorption	Particle density	EN 1097-6:2013 [□]
217 Bituminous materials .41 Bituminous emulsions	Hot Sand Test Determination of Bulk Density for Bituminous Specimens	EN 12697-37:2003 EN 12697-6: 2012
.01 Sampling	Determination of thickness of bituminous pavement	EN 12697-36: 2003

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INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
218 Soils .31 Compaction & Density Tests	Optimum Moisture Content (OMC). Dry Density/ MC Relationships. Vibrating Hammer Method. Moisture Condition Value (MCV): Natural Moisture Content	BS 1377: Part 4: 1990 Clause 3.7 BS 1377: Part 4: 1990 Clause 5
218 Soils .11 Classification Tests	Determination of Moisture Content Determination of Particle Size Distribution (Wet Sieving Method) Determination of Particle Density Determination of Liquid Limit-Definitive Method using the Cone Penetrometer.	BS 1377: Part 2: 1990; Clause 3 BS 1377: Part 2: 1990; Clause 9.2 BS 1377: Part 2: 1990; Clause 8.2 BS 1377: Part 2: 1990; Clause 4.3

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INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
218 Soils		
.11 Classification tests	Plastic Limit Plasticity Index Liquidity Index	BS1377-2:1990 Clause 5 BS1377-2:1990 Clause 5.4 BS1377-2:1990 Clause 5.4a
.31 Compaction and density tests	Optimum Moisture Content (OMC)	EN 13286-4:2003
.61 Asphalts	Determination of bulk density for bituminous specimens Method C	EN 12697-6: 2012

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Construction Materials Testing Laboratory

Permanent Laboratory:

Category B

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
217 Bituminous Materials .61 Asphalts .11 Bituminous Macadam	Binder Content and Aggregate Grading by Ignition Oven Method. Percentage Refusal Density (PRD)	BS DD250:1999 IS EN 12697 - 39 :2012 IS EN 12697 - 2:2002 IS EN 933- 1 2012 BS 598: Part 104: 1989
.99 Other materials - Road and Paving Materials	Duriez Compressive Strength Test (Loads from 5 kN to 200 kN)	NRA Revised Specification for Stabilised Wet-Mix Macadam (02/11/99) NRA Specification for Grave Emulsions based on French National Standard NF P98-251-4:2004)

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Permanent Laboratory:

Category B

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
217 Bituminous Materials .99 Roads and Paved Areas	Measurement of Texture Depth by Sand Patch Test Measurement of Pavement Surface Macro-texture depth using a Volumetric Patch Method - Glass Beads	BS 598:Part 105:2000; Clause 5 I.S. EN 13036-1:2010
224 Road Pavement and Surfaces .99 Road and Airfield Surfaces - Friction	Measurement of surface skid resistance using Griptestter	BS 7941-2:2000

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Category B

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
224 Road pavement and surfaces .30 Surface characteristics	SCRIM (Sideway-force Coefficient Routine Investigation Machine)	BS 7941-1:2006 S.R. CEN/TS 15901-6:2009
224 Road pavement and surfaces .40 Structural tests	FWD (Falling Weight Deflectometer)	NRA Guidelines for the use of the Falling Weight Deflectometer in Ireland, July 2000
290 Other tests - Road marking materials	Measurement of retroreflective and reflective properties of pavement markings with the use of a portable field retroreflectometer Measurement of retroreflective and reflective properties of pavement markings with the use of a mobile retroreflectometer	IS EN 1436:2007 + A1:2008 IS EN 1436:2007 + A1:2008

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INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
224 Road pavement and surfaces .20 Surface profile tests	Road Surface Profiler (RSP): Longitudinal and transverse profile	ASTM E1926 - 08 ASTM E950/E950M - 09
224 Road pavement and surfaces .30 Surface characteristics	Road Surface Profiler (RSP): Texture depth Method for Measurement of Slip/Skid Resistance of a Surface - the Pendulum Test	ISO 13473: Part 1: 2004 Characterization of pavement texture by use of surface profiles EN 13036-4: 2011
235 Pedestrial surfaces .01 Wet pendulum frictional resistance	Wet pendulum frictional resistance	BS 7976-2: 2002 (+A1:2013)
.02 Dry floor frictional resistance	Dry floor frictional resistance	BS 7976-2: 2002 (+A1:2013)

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INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
224 .30 Surface characteristics	Measurement of rate of spread of coated chippings	BS 598-1: 2011