PAVEMENT SURVEY STANDARD FOR REGIONAL AND LOCAL ROADS





An Roinn Iompair Turasóireachta agus Spóirt Department of Transport, Tourism and Sport Second Edition February 2018

ABSTRACT

This document sets out requirement for the surveying and collection of data relating to pavement management on Regional and Local Roads in Ireland. It applies to all Regional and Local Roads and is to be followed by all local authorities for all pavement related works.

Much of this document represents an update to previous requirements as set out in Department of Transport, Tourism and Sport Circular RW 21/2014. Some additional requirements have been added to strengthen and improve efficiency.

The Road Management Office (RMO) has been set up since the 2014 Circular. The supporting and co-ordination role of the RMO in the efficient implementation of the requirements is also set out.

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1. INTRODUCTION AND BACKGROUND

The introduction of pavement management in Ireland has necessitated the implementation of requirements for data gathering in relation to Regional and Local Roads. These are set out under a number of key headings in this document and are driven by the need to ensure that there is a clear and consistent decision process to managing pavements that also meets best practice. These requirements are particularly important in terms of value for money, demonstration outcomes, oversight, audit and funding. It is also important to emphasise that the data gathered will also be used to support other processes such as Road Opening Licenses.

The requirements of this document apply to all local authorities and to all Regional and Local Roads and includes the use of MapRoad PMS, which has been developed on behalf of the Department and local authorities by the Local Government Management Agency (LGMA) and the Road Management Office (RMO).

The Road Management Office (RMO) has been set up to provide a support service to local authorities in relation to pavement management and many of the requirements set out in this document will be co-ordinated by it.

2. THE ROAD MANAGEMENT OFFICE (RMO)

The Road Management Office (RMO) was set up in late 2014 in order to support and strengthen local authority capacity and function in the areas of Pavement Management and Road Licencing. This local authority based shared service office was set up with the support of the Department and consists of a consortium of 5 local authorities that is primarily managed by Donegal and Cork County Councils.

Given the above a key role for the RMO is to co-ordinate the carrying out of surveys in an effective and efficient manner, particularly in relation to machine surveys as PSCI surveys are primarily arranged and carried out by local authorities themselves. The RMO will also regularly report to DTTAS and the sector on progress on these surveys throughout the country.

3. ROAD PAVEMENT WORKS DATA

In order to support the implementation of pavement management in Ireland Local Authorities are required to maintain an up to date record of <u>all pavement related works</u> on the MapRoad system. In particular the following treatment types are to be recorded: -

Treatment Type	Code
Resealing and Restoration of Skid Resistance	RS (previously SD)
Surface Restoration	SR
Structural Rehabilitation (Structural Overlay / Inlay)	SO / SI
Road Reconstruction	RR

TABLE 1: - TREATMENT TYPES

A description of these treatment types, along with a list of associated funding categories/codes are set out in more detail in Appendix A.

This requirement relates to <u>all pavement related works</u> such as those funded by the Department and those funded by other agencies or own resources. It is important to note that the treatment types are aligned with funding streams from the Department. These are:-

Treatment Type	Code
Restoration Maintenance	RM
Restoration Improvement	RI
Community Involvement	CI
	(where applicable)
Specific Improvement Grant	SG
	(where applicable)
Discretionary Grant	DG
	(where applicable)
Strategic Regional and Local Road Grant	SRLR
	(where applicable)

TABLE 2: - FUNDING CATEGORIES

It is extremely important that local authorities record all pavement works/treatments relating to these funding streams. In addition local authorities must record all pavement works that are carried out from other funding sources. Table B3 in Appendix B sets out relevant funding sources and grant codes as well as the type of treatments that are permitted.

All completed pavement works carried out on the Regional and Local Road Network must be recorded using the MapRoad system. The '<u>Completed Works App</u>' is specifically focused on pavements and will record the completed data onto the MapRoad system. It also facilitates completion of DTTAS grant return forms such as 'Grant Return Form B'.

3.1. <u>Road Pavement Historical Works Data</u>

Fundamentally an effective Pavement Management System is dependent on good data. The more data that is available, including over an extended period of time, the more effective the system is and the better the decision making within the Pavement Management System (PMS).

Local authorities are required to load historical works data onto the system. The benefit of this is for a more rapid implementation of pavement management and improved decision making on location and type of pavement treatments. This requirement for History of Works data on MapRoad has been set out since circular 19/2010 and relates to works based on the following treatments: -

- Resealing and Restoration of Skid Resistance (RS) (previously SD);
- Surface Restoration (SR);
- Structural Rehabilitation (Structural Overlay / Inlay) (SO);
- Road Reconstruction (RR).

In accordance with this local authorities are required to: -

- Ensure that <u>all</u> works data relating to the above treatments are inputted onto the MapRoad system as far back to 2008;
- Seek to load further works back as far as possible to 1996, if available.

In carrying out the exercise, local authorities should evaluate the availability and accuracy of historical records. The Road Management Office (RMO) will assist and support local authorities where possible in retrieving and inputting History of Works data into the MapRoad system. In that regard local authorities should contact them to agree the steps required and an implementation plan. In addition the RMO will also have access to DTTAS records, which may be used to assist the process.

4. ROAD PAVEMENT SURFACE INVENTORY

A key element of an effective Pavement Management System is to have an accurate record of pavement surface types for all roads. Much of this can be gathered through having good works and history of works data in a PMS system as well as continually keeping these records updated every year with new projects. Notwithstanding this there would be gaps in the inventory data as some roads may still not have any works recorded. When completed, local authorities will not need to repeat this task annually, but will need to keep the data up to date and carry out an audit, supported by the RMO, every few years to ensure continued accuracy.

Local authorities are required to maintain an up to date record of the road surface inventory based on works data and dedicated inventory surveys. The pavement surface inventory data should be recorded on MapRoad browser or, using the associated Surface Inventory App for which details are available from the RMO.

5. PAVEMENT CONDITION SURVEYS (MECHANICAL AND VISUAL)

In order to support the implementation of pavement management and the execution of pavement works, the Department has set out a pavement condition survey regime at network and project level for both machine and visual data. The regime is also designed to be aligned to, and support, reporting requirements, works management and decision making. There are extensive visual surveys supported by targeted and more limited machine surveys designed to meet best practice in the area of pavement management as well as being a key tool in the management and monitoring of expenditure.

The Network level surveys support a number of different objectives and requirements for the Department and individual local authorities:

- Report on pavement condition at national and county level
- Define Backlog funding requirements over time
- Monitor the impact of spending on network performance over time

- Support a Quality Assurance process for PSCI surveys to ensure consistency nationally and within local authorities
- Report to Independent Monitoring/Auditing Agency, e.g. National Oversight & Audit Commission (NOAC)

At a Network level it is important that a Road Authority maintain an up to date record of the road network condition and that it is used to support decision making in terms of where to treat. At Project level, all works should be assessed both 'Before' and 'After' the works are undertaken. This ensures that there are records that demonstrate the need and verify the outcome of the treatment undertaken. Project level machine sampling surveys are also designed to support this process.

5.1. Visual Pavement Surface Condition Index (PSCI) Surveys

The Department and the LGMA has developed a series of 3 manuals for Pavement Surface Evaluation and Rating for Irish Roads. These manuals form part of an overall Pavement Management System and are intended to fulfil a number of objectives that include providing a standardised approach to link pavement distress to treatment measures. The manuals apply to all Regional and Local Roads both inside and outside the urban 60km/h limit as appropriate. An IT solution based on MapRoad and an Android device App are provided to assist. These Apps also allow for the use of a Bluetooth GPS tether to improve location accuracy. See <u>www.maproadpms.ie</u> for details.

As part of the implementation of PSCI, local authorities are required to: -

- Implement <u>network level</u> survey as per Table 3 below.
- Carry out <u>project level</u> surveys 'Before' and 'After' for all pavement related works carried out on the Regional and Local Road Network in accordance with Table 4 below.

It should be noted that the network level survey regime has been updated to allow for more efficient surveying. In particular it should be noted that some of the project level PSCI works surveys can be co-ordinated with network PSCI surveys and that the RMO can assist in that co-ordination.

It is important that all PSCI surveys <u>must</u> be carried out by appropriately trained personnel.

5.2. <u>Machine Surveys</u>

For the Regional and Local Road Network there is a requirement to carry out machine surveys for a number of parameters at: -

- Network level, based on requirements depending upon the asset type as set out in Table 3 below.
- Project level by measuring "Before" and "After" parameters relating to a sample of works as set out in Table 4 below

Costs in relation to machine surveys can be recouped through the Discretionary Grant.

The following tables set out consolidated minimum survey requirements for machine and visual surveys both at network and at project level: -

A	Machine	Survey	PSCI Visual Survey		
Asset Type	Frequency Coverage		Frequency	Coverage	
Regional Roads (R)	6 years	100%	2 years	100%	
Local Primary Roads (LP)	2 years	10%	2 years	100%	
Local Secondary Roads (LS)	2 years	5 %	2 years	100%	
Local Tertiary Roads (LT)	5 years	5%	5 years	100%	

TABLE 3: NETWORK SURVEYS

TABLE 4: 'BEFORE' AND 'AFTER' WORKS/PROJECT SURVEYS

Asset Type	Machi (RR, SO a	ine Survey and SR works)	PSCI Visual Survey (All works)		
	Frequency	Coverage	Frequency	Coverage	
Regional Roads (R)	Every year	100%	Every year	100%	
Local Primary Roads (LP)	Every year	10%	Every year	100%	
Local Secondary Roads (LS)	Every year	10%	Every year	100%	
Local Tertiary Roads (LT))	Every year	5%	Every year	100%	

Notes: -

- 1. Machine network survey samples are in addition to works surveys.
- 2. Machine surveys do not apply to LS and LT roads less than 4.0m wide.
- 3. For flexibility, frequency requirements for network surveys may be averaged in a manner that ensures that the minimum requirements in Tables 3 and 4 are met.

For works related PSCI surveys the 'Before' PSCI survey must not be greater than two years in advance of the commencement of works and the 'After' survey must be completed no later than the end of March the year following the completion/closeout of works.

For the purposes of the above surveys Machine Surveys are defined to include the following parameters:-

- Ride Quality (International Roughness Index IRI)
- Rut Depth (mm)
- Texture Depth (mm)
- PSCI
- SCRIM (Regional Roads Only)
- Minimum length of machine surveys 1km.

The following additional parameters are also required for machine surveys: -

- Pavement Width
- Bendiness / Curvature
- Gradient
- Crossfall / Super-elevation
- Surface material type

Works/Project Machine Surveys are confined to surveys relating to RR (Road Reconstruction), SO (Structural Overlay) and SR (Surface Restoration) treatment works only. The sample length is based on the length of those treatments only.

5.3. Survey Co-ordination

In is important that local authorities implement the survey regime in an efficient manner to ensure efficiency and value for money. This is particularly so for machine surveys whereby both network level and project (works) surveys can be carried out in a co-ordinated manner to ensure the minimum targets set in Table 3 and 4 are met simultaneously. The RMO will seek to achieve this in conjunction with local authorities who should liaise with the RMO in that regard. In addition it should be noted that network level machine surveys on Regional Roads will be carried out by DTTAS in accordance with the frequency specified in Table 3.

5.4. Survey Verification and Audit

The PSCI visual survey is ultimately a manual survey that needs to be quality checked and verified using other surveys. This verification process will be carried out by the RMO. In addition machine data collected as part of the quality and verification process can be utilised to give other information about the performance of the road network.

5.5. <u>Pavement Condition Reporting Parameters and Treatment Thresholds</u>

In addition to PSCI, local authorities need to ensure that selected treatments are consistent with machine based condition parameters. These parameters are consistent with those measured and derived as part of the 2004 and 2011 pavement condition surveys. These parameters will also be used for calibration purposes and will evolve and be developed further. Appendix C, Tables C5 and C6 set out condition thresholds which serve as a guide and will be further developed by the RMO.

6. MAPROAD

All Visual PSCI and machine survey results must be recorded on MapRoad. In addition the RMO will separately keep all machine survey results on file in order to improve access and use by local authorities of such data.

7. HISTORICAL SURVEYS

For historical machine surveys, local authorities should review their records of such surveys and consider whether data from such surveys should be imported into MapRoad. The RMO will contact each local authority and evaluate both whether and how this should be done.

8. IPAG DOCUMENT

As part of the development and rollout of Pavement Management, the Department has developed a series of guidance documents to set out and support this work. In the absence of any other Department guidelines, these IPAG documents should be followed and can be found on both the Department and RMO websites.

9. TRAINING REQUIREMENTS

Visual PSCI surveys must be carried out by appropriately trained personnel. Local Authorities are required to have a panel of approved PSCI surveyors, who are trained in such survey work and have carried out such surveys at least annually. In addition, these panels of PSCI surveyors shall be maintained by the RMO on behalf of DTTAS and shall also consist of other people from the public and private sectors who have carried out such surveys at least annually.

10.<u>REPORTING AND OUTPUTS</u>

It is important to note that the data gathered as part of compliance with this circular is required for a number of purposes as follows: -

Data Analysis by the RMO to develop track and monitor for local authorities and DTTAS: -

- Unit costs,
- Works backlog,
- Works prioritisation,
- Works analysis using project level strip maps,
- Key Performance Indicators (KPI's).

In particular the network data allows trends to be tracked and network weaknesses to be identified.

The RMO will compile data gathered as part of a regular health check reporting back to local authorities and to DTTAS. This reporting will be on a quarterly and an annual basis and will also include a national report on the health and condition of the Regional and Local Road Network to be submitted to the DTTAS.

Reporting Requirements

- a. As part of the oversight process local authorities are required to submit data to the National Oversight and Audit Commission (NOAC) that tracks the condition of the road network. This data is collated and submitted via the RMO.
- b. DTTAS require data at network and project levels as part of the tracking, audit and compliance process for road pavement expenditure on Regional and Local Roads. This supports compliance with expenditure guidelines and in turn is subject to review and oversight by the Comptroller and Auditor General.

Please note that failure to gather data and submit returns in a timely manner and by the deadlines set out may lead to grants being frozen or withdrawn. In addition full records of all projects including data in relation to this circular must be maintained on MapRoad (GIS) and be made available for inspection, if required.

APPENDIX A: - TREATMENT TYPES

PSCI Rating	Pavement Treatment / Works Type	Treatment Code	Permitted Grant
10	Routine Maintenance	na	DG
9		na	
8	Resealing and Restoration of Skid Resistance	RS	
7	Researing and Restoration of Skid Resistance	(or SD)	CI, KIVI, DO
6	Surface Restoration		
	Carry out localised repairs and treat with surface treatment or thin overlay		
5	Works can include combinations of: - Pothole Repair (PR); Edge Repair (ER); Drainage Works (D) and Surfacing	эк	CI, KI, DG
4	Structural Rehabilitation	<u>so / si</u>	CI, RI, SG,
3	Structural Overlay / Inlay (Urban)	50751	DG
2	Road Reconstruction	BB	CI, RI, SG,
1	Nodu Neconstruction		DG

TABLE A1: TREATMENT / WORKS TYPE CATEGORIES AND CODES WITH CURRENT PERMITTED GRANTS

TREATMENT TYPES

In general, where the condition rating is less than or equal to 8, some form of intervention is required.

Once the Pavement Surface Condition Index (PSCI) rating is determined, Local Authority staff can define the category of treatment work to be carried out. These categories are summarised and described below:

Routine Maintenance

The pavement is in good condition and no works are required to be carried out other than routine type operations such as clearing of drains, sweeping etc.

Resealing and Restoration of Skid Resistance (RS)

This maintains or restores waterproofing of the pavement surface and provides improved skid resistance to pavements with surface defects present. The purpose of this is to protect the structural integrity of the road through the sealing of the road surface and in maintaining adequate skid resistance. If more than basic preparatory works are required then other treatments should be used. A core aspect of the treatment is to maintain the asset before it requires improvement. A typical example of this treatment is Surface Dressing.

<u>Surface Restoration</u> (SR) which in addition to Resealing and Restoration of Skid Resistance should, as necessary include improvement of transverse and longitudinal profiles, pothole patching and restoration of road widths to those originally provided and some local strengthening of weak road edges.

<u>Structural Rehabilitation Structural Overlay/Inlay (Urban) (SO / SI)</u> involves the regulation and overlaying of existing pavements with bound or sealed unbound materials and the provision of drainage, where necessary. This treatment can involve excavating and replacing damaged sections of the road pavement base and sub-base layers as part of the preparation work before overlaying.

<u>Road Reconstruction (RR)</u> involves the full removal of existing layers of pavement, and their replacement with new structural layers of bound or sealed unbound materials along with the provision of drainage, where necessary.

APPENDIX B: - PAVEMENT SURFACE INVENTORY DATA

The following tables set out requirements regarding the recording of a <u>History of Works</u> and <u>Pavement Inventory</u>.

TABLE B2: - MAPROAD RECORDS SHALL BE ILLUSTRATED AND ANNOTATED BASED ON THE FOLLOWING
DATA REQUIREMENTS: -

ANNOTATION CODES		CO- ORDINATES	Year	Funding Code	TREATMENT / WORKS TYPE	Material Types	Layer Depth
		X AND Y	4 Digit	TABLE 4	TABLE 2	TABLE 3	mm
1	Pavement Surface Inventory	Required	Required	-	Optional	Required	Optional
2	HISTORY OF WORKS [HISTORICAL]	Required	Required	Optional	Optional	Required	Optional
3	Records of Works [On-going & Planned]	Required	Required	Required	Required	Required	REQUIRED

TABLE B3: FUNDING / GRANT TYPE CATEGORY CODES

No	Funding Source(s)	Grant Category	Code	Status
1	DTTAS (RLR) (Department of Transport, Tourism	Strategic Regional and Local Road Improvement Grant	SRLR	Limited
2	and Sport)	Special Grant	SPG	Limited
5		Specific Grant	SG	Limited
6		Restoration Improvement	RI	
		Restoration Maintenance	RM	
		Discretionary Grant	DG	
		Community Involvement Scheme	CIS	
		Low Cost Safety Scheme	LCS	
		Drainage Grant	DRG	
		Bridge Rehabilitation Grant	BRG	
		Discretionary Improvement	DI	Former Category
		Improvement Grant	IG	Former Category
		Discretionary Improvement	DI	Former Category
3		Discretionary Maintenance	DM	Former Category
4		Urban Special Block	SBG	Former Category
7		Urban Block Grant	BG	Former Category
8		Footpath Former Town Commissioners	FTC	Former Category
9	TII (Formerly National Roads Authority)		ТІІ	
10	NTA (National Transport Authority)		NTA	
11	Local Authority Own Resources		OR	
12	Department of Arts, Heritage,		CLAR	
	Regional, Rural and Gaeltacht Affairs			
12	COM (Community)		СОМ	
13	OTH (Other)		ОТН	

ROADWAY LAYER DESCRIPTIONS

The following are the typical layers in a flexible pavement.

- The **subgrade** is the existing ground underlying the pavement. It consists of the native ground from that particular location or imported material if embankment construction is required.
- The **capping** layer, typically consisting of low quality crushed rock or gravel, acts as a support to the sub-base and transfers load to the subgrade. The top level of the capping is known as the formation.
- **Sub-base**, typically consisting of high quality crushed rock, provides a surface on which paving machinery can lay the bituminous material. It is designed to evenly spread the load caused by the trafficking of the bituminous material above to the layers below. Sub-base also allows sub-surface drainage of the pavement.
- The **base** layer is the main structural element of the pavement. It provides most of the load distribution for the pavement and distributes the wheel load stresses to levels with which the subgrade can cope. This layer is designed to resist structural deformation and fatigue cracking.
- The **binder course** layer helps distribute the load of traffic on the surface course above onto the base course and is designed to ensure that the top layer has an even surface on which to be laid.
- The **surface course** is the upper course of the pavement which is in contact with the traffic. It's is to provide a smooth running surface for traffic. It also transmits the contact stresses resulting from vehicles accelerating and braking to the layers below. The surface course must provide good skid resistance.
- The **geo-grid** is used to reinforce pavements over soft soil, particularly pavements in need of rehabilitation over peat. There are options regarding it's location in a road section, however for the purposes of illustration it is between the Binder and Base Courses.



TABLE B4 (A): - IDENTIFICATION OF MATERIALS

Product Identification	Common Name
Bituminous Materials	
SMA 14 PMB surf 65/105-60 (PSV 60) des	14 mm Stone Mastic Asphalt surface course
SMA 10 bin 70/100 reg	10 mm Stone Mastic Asphalt regulating course
HRA 30/14 F surf 40/60 rec	Hot Rollled Asphalt surface course - 30% stone content, 14 mm max agg
AC 32 HDM base 40/60 rec	32 mm Heavy Duty Macadam base
AC 20 dense bin 70/100 rec	20 mm DBM binder course
AC 14 close surf 70/100 rec	14 mm close graded surface course macadam
AC 10 open surf 160/220 rec	10 mm open graded surface course macadam (footway)
Granular & Cement Bound	
Cl. 804 (804 Material)	804 Material
Cl. 808 (Unbound materials near cement)	Low Soluble Sulphate 804
Cement Bound Granular Mixture B (CBGM B)	Leanmix
(Also called HBM – Hydraulically Bound Mixture)	
C32/40 Concrete	40N Concrete (Roadway)
C25/30 Concrete	30N Concrete (Footway)

TABLE B4 (B): - NEW PRODUCT IDENTIFICATION FOR BITUMINOUS MATERIALS

All bituminous products are identified in the following way:-

Material type	Aggregate size	Grading type	Layer	Binder grade/type	Recipe / design	Misc.
AC HRA SMA	10 14 20 32 30/14	dense close open HDM F	surf bin base	40/60 65/105-60 70/100 160/220 PMB	rec des	(PSV 60) reg

No	Main Category		Material Type Category					
(i)	Surface	Surface	Dressing	SD				
	Course	Hot Rol	Hot Rolled Asphalt					
		Polyme Layer (d	r Modified Stone Mastic Asphalt (Clause 942) including Thin liscontinued) where existing	SMA				
		Micro s	urfacing / Slurry Sealing	MSS				
		Surface includin	Surface Course Asphalt Concrete (formerly Wearing Course Macadam) including Open/Close Graded Asphalt Concrete Surface Course					
		High Fri	HFS					
		Concret	CON					
		Modula	MOD					
		Cobbles	Cobbles					
		Other		ОТН				
(ii)	Geo-grids			GEO				
(iii)) Sub-Surface Layers		Dense Asphalt Concrete (formerly Dense Bitumen Macadam – DBM))	DAC / DBM				
			Wet Mix	WM				
			Stabilised Wet Mix	SWM				
			Clause 804 Stone	STN				

TABLE B5: ROADWAY PAVEMENT LAYERS AND MATERIAL TYPE CODES

APPENDIX C: - PAVEMENT CONDITION PARAMETERS AND TREATMENT THRESHOLDS

PSCI Rating	Pavement Treatment / Works Type	Treatment Code	International Roughness Index (IRI)	Rut Depth (LWRD) (mm)	Mean Profile Depth (MPD) (mm)	SCRIM Coefficient (SC)
10 9	Routine Maintenance	n/a		< 25	> 0.6	> 0.3
8 7	Resealing and Restoration of Skid Resistance	RS	<= 6	<= 25	<= 0.6	<= 0.3
6	Surface Restoration Carry out localised repairs and treat with					
5	Works can include combinations of: - Pothole Repair (PR); Edge Repair (ER); Drainage Works (D) and Surfacing	SR	6 <= 7	<= 25		
4	Structural Rehabilitation Structural Overlay / Inlay (Urban)	SO / SI	> 7	> 25		
3						
2	Road Reconstruction	RR				
1						

TABLE C5: PAVEMENT CONDITION PARAMETERS VERSUS TREATMENT TYPE CATEGORIES FOR REGIONAL ROADS

PSCI	Pavement Treatment / Works Type	Treatment Code	International Roughness Index (IRI)			
Rating			LP	LS	LT	
10	Routine Maintenance	na				
9						
8	Resealing and Restoration of Skid Resistance	RS				
7						
6	Surface Restoration	SR				
	Carry out localised repairs and treat with					
5						
	Works can include combinations of: - Pothole Repair (PR); Edge Repair (ER); Drainage Works (D) and Surfacing					
4	Structural Rehabilitation	SO / SI				
3	Structural Overlay / Inlay (Urban)		N 0	> 10	> 12	
2	Road Reconstruction	RR	~ 0			
1						

TABLE C6: PAVEMENT CONDITION PARAMETERS VERSUS TREATMENT TYPE CATEGORIES FOR LOCAL ROADS

APPENDIX D: - MAPROAD MOBILE APPS



Mobile Apps for MapRoad Pavement Management System

Introduction

The MapRoad Pavement Management System is a browser-based GIS application for use by local authorities for recording asset information on the road network along with attribute and operational data.

The following layers of information are recorded:

- Road Schedule
- Surface Material
- Pavement Works
- Speed Limits and Signs
- Visual & mechanical survey data
- Collision Data
- Bridges

Sources of Data

Information is predominantly entered to the system by a local authority user using a Browser interface. However, there are also a suite of mobile apps used for recording data on site using a Tablet device and this information is uploaded to the centrally hosted pavement management system. The Apps available are:



Installing the MapRoad Mobile Apps

The apps are installed by first installing the MapRoad Mobile Dashboard from the Google Playstore. Only Android versions of the apps are available.



The Works App

When a new pavement works job is to be recorded in MapRoad PMS, the Works App is used on site to:

- Locate the extent of the works
- Rate the road at this planned works location according to PSCI^{*} methodology
- Record information; material, depth, width, type of intervention, estimated cost
- Upload the information to the MapRoad Pavement Management System

* PSCI - Pavement Surface Condition Index

There is also a Close-Out step for rerecording information when the works is complete



Pavement Survey App

This MapRoad Mobile APP is used for rating the road network based on a 1-10 visual rating in accordance with DTTAS circulated guidance manuals. It can also be used for identifying the surface material of the roadway. The user will drive the road network (as a passenger) and record the information by the simple pressing of a button on the APP. When the desired route has been driven the information is uploaded to the MapRoad Pavement Management System.





Postal Address:	Department of Transport, Tourism and Sport, Leeson Lane, Dublin 2, Ireland, D02TR60
Website:	www.dttas.ie
E-mail:	info@dttas.ie
Telephone:	LoCall 0761 001 601 or + 353 1 670 7444 (outside Ireland)