DMRB Briefing note

DATE: 24 February 2020 **CONFIDENTIALITY:** Public

CHANGES TO THE PAVEMENT PART OF THE DMRB

The DMRB is undergoing a transformation into a new and consistent format. This briefing note outlines the headline changes that are being introduced to the pavement documents.

Organisation of the pavement documents

All of the old-style DMRB document codes are being replaced with new document codes, comprising 2 letters followed by a 3 digit number. All new-style civil engineering documents (including pavements) have a document code that begins with a C**.** Refer to Table 1 for the other parts of the DMRB.

Table 1 – Parts of the DMRB

Parts of the DMRB	Disciplines
G - General principles and scheme governance	General principles and scheme governance
L - Sustainability and environment	Sustainability and environment
C - Civil engineering	Road layout; Pavement; Structures and bridges; Drainage; Geotechnics
T - Technology	Control and communications technology; Road lighting

The second letter in the new document code is determined by the life-cycle stage. Table 2 shows how the pavement documents are organised, with some examples.

Table 2- Organisation of pavement documents

2-letter part and volume code	Example document
CG - General information	(None at this time)
CA - Appraisal	(None at this time)
CD - Design	CD 226 Design for new pavement construction
CC - Construction	(None at this time - refer to MCHW)
CM - Maintenance and operation	CM 231 Pavement surface repairs
CS - Inspection and assessment	CS 230 Pavement maintenance assessment procedure
CZ - Disposal	(None at this time)

Overview of key updates

The majority of the changes in the pavement documents comprise an editorial consolidation of the material in the previous versions of the DMRB documents and the related interim advice notes, removing duplications and out-of-date material to achieve a much more concise and clearer definition of the requirements. For example, **CD 227** “Design for pavement maintenance” incorporates requirements and

advice previously contained in HD 30, HD 31, HD 32 and HD 37. The editorial updates have also moved content to the most appropriate location to align it with the relevant life-cycle stages and content relating to pavement construction has been transferred to the Manual of Contract Documents for Highway Works (MCHW). This has resulted in the previous 21 documents being consolidated into 10 new documents with a significant reduction in associated page count.

Although many of the changes are editorial or associated with alignment to the asset life-cycle stages, most of the new documents also include technical updates and new requirements. For example, **CD 226** "Design for pavement construction" now includes standard designs for the use of Roller Compacted Concrete (RCC) as a pavement base material and **CD 236** "Surface course materials for construction" allows for surfacing designs based on traffic in individual lanes that allow more efficient use of higher Polished Stone Value (PSV) aggregates.

Across the range of documents for pavements, opportunity has been taken to improve the technical content where possible and bring the documents up to date, including alignment with extant European and British standards, implementing the findings of research and addressing feedback. Some examples of the technical changes incorporated in this round of updates are listed in Table 3.

Table 3- Some examples of key technical changes in pavement documents

Document	Examples of key technical changes
CD 226 - Design for pavement construction	New standard design option for Roller Compacted Concrete (RCC); Rationalised standard designs for flexible pavements; Pavement design verification via a 'Certified Pavement Engineer' qualification
CD 227 - Design for pavement maintenance	All construction types in one document; Emphasis on collecting condition data at traffic-speed; Improved advice on maintenance of rigid pavements; New requirements for use of geosynthetics and steel meshes for suppressing reflective cracking; Clearer design requirements for pavements renewals
CD 239 - Footway and cycleway pavement design	Pavement construction types and design thicknesses rationalised; Cumulative traffic loadings (msa) introduced for some design categories; Requirements for skid resistance properties of surfaces
CS 230 - Pavement maintenance assessment procedure	New requirements and guidance on the application of TRAffic-speed Structural condition Survey (TRASS) data; Updates on the analysis of TRACS condition data; Identification of lengths suitable for preventative maintenance treatments
CS 229 - Data for pavement assessment	Requirement for Visual Condition Surveys (VCS) to be undertaken using downward and forward-facing images collected at traffic speed; Contactless temperature method for Deflectograph and FWD surveys; New requirements for FWD testing of jointed pavements; Improvements to the application and use of GPR

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Additional research activities are planned to enable further technical improvements to be incorporated in subsequent revisions.

Implementation

The requirements regarding implementation of the new documents are given in **GG 101**. The default position stated in **GG 101** is to use the new documents as soon as they are published, although some exceptions can be proposed in accordance with **GG 101**, for example, where the contract has reached a stage that the implementation of the new documents would result in significant additional expense or delay.

Feedback

Comments, suggestions and queries on the new documents may be addressed to Standards_Enquiries@highwaysengland.co.uk.