

Understanding the development and requirements of the Design Manual for Roads & Bridges (DMRB) and the Manual of Contract Documents for Highway Works (MCHW) 2025. Road Lighting.



Guidance Note

GN23/26

Understanding the development and requirements of the Design Manual for Roads & Bridges (DMRB) and the Manual of Contract Documents for Highway Works (MCHW) 2025.

Road Lighting

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Contents

Acknowledgements	3
Abbreviations	3
Introduction	5
Why the change?	5
The vision	6
The development process	7
DMRB approach	8
MCHW approach	9
Supporting information	9
MCHW overview	9
How to design and specify road lighting and minor structures	11
DMRB	11
MCHW	13
Lighting design (TD 501 and TC 501)	15
Commissioning of road lighting and illuminated traffic signs	22
Preparation for dissemination	22
Publication	23
Available support	23
Conclusions	24
Annex 1 – Brief review of the 501 series RAD developments	25

Acknowledgements

The production of this GN has kindly been sponsored by National Highways to raise awareness of the updates to Manual of Contract Documents for Highway Works (MCHW) and the associated consequential amendments to relevant Design Manual for Roads & Bridges (DMRB) documents pertaining to road lighting.

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Abbreviations

Abbreviation	Definition
CARS	Collaborative Authoring and Review System
CMS	Central Management System
DMRB	Design Manual for Roads & Bridges
MAT	Most Advantageous Tender
MCHW	Manual of Contract Documents for Highway Works
MEAT	Most Economically Advantageous Tender
RAD	Requirements and Advice Documents
SHW	Specification for Highways Works
WSR	Works Specific Requirements

Introduction

The UK motorways and all-purpose trunk roads are managed by the Overseeing Organisations using a set of design standards and specifications, including:

- **Design Manual for Roads and Bridges (DMRB)** – which defines the design requirements for every aspect of the UK road infrastructure
- **Manual of Contract Documents for Highway Works (MCHW)** – our standard suite of specification documents

Overseeing Organisations are National Highways, Transport for Scotland, Welsh Government and the Department for Infrastructure Northern Ireland.

The MCHW is important because it underpins all construction contracts for UK motorways and all-purpose trunk roads managed by the Overseeing Organisations. It is also used by many others, such as local highway and road authorities, as well as many highway organisations worldwide.

Why the change?

The Manual of Contract Documents for Highway Works has been modernised to reflect current best practice. The primary driver was an obligation on National Highways set by the Technical Regulations Protocol to refresh the MCHW following the findings from an industry-wide consultation. This obligation did not come from a vacuum, and some other drivers are explained as follows:

The age of the MCHW documents was growing over the years; in 2020, the average age was 11 years, with all documents requiring editorial review, technical update or withdrawal.



Over a period of about 30 years, the MCHW grew to a size that became difficult to manage, with inconsistent style and format including presentation of instructions on contract compilers phrased as advice.



All documents were published in PDF on the Standards for Highways website, with limited accessibility.



With the refresh of the DMRB at the end of the Road Investment Strategy period RIS1 (March 2020), there was a desire to align the MCHW with the updated DMRB.



There was no formal process for producing a contract-specific specification. Lack of central guidance/training for compilers has led to inconsistent content (sometimes incomplete), style and quality of specifications.



Positively there was a desire to get the MCHW fit for a digital future and make the specification contract neutral to support contract flexibility.



The development is also an opportunity to align to the requirements of the Procurement ACT 2023. This requires a move away from the 'Most Economically Advantageous Tender' (MEAT) to the Most Advantageous Tender (MAT) moving away from a focus on lowest cost to performance specification.

MEAT (Most Economically Advantageous Tender):

- Under the Public Contracts Regulations 2015 (revoked) the focus was primarily on price and quality, with a weighting system that often-prioritized price. So, if a contract had a weighting of 60% for price and 40% for quality, a slightly lower quality but cheaper bid could still win.
- The focus was on finding the "best value for money" considering both immediate cost and long-term benefits, but with a strong emphasis on price.

MAT (Most Advantageous Tender):

- This approach considers a broader range of factors beyond price and quality, including social value, sustainability, and other non-price criteria. Under the Procurement Act 2023 Authorities have greater flexibility to determine what constitutes "value" and can prioritize factors like circular economy, sustainability, or environmental impact. So, a contract could be awarded based on a combination of price, quality, and a significant weighting for sustainability and social value initiatives, even if the price was slightly higher than other bids.

There is a shift in Emphasis where MAT emphasizes that price doesn't always have to be the primary factor, and other considerations can be equally or more important.

The vision

An industry-wide consultation was run in 2018 and included over 100 organisations from across the industry including Contractors, Designers, Local Authorities etc. There was consistent feedback that the MCHW needed updating, to future-proof the content and enable future efficiencies. The outcome of the consultation underpinned the vision for the future MCHW that guided the redrafting and digitalisation process.

"The future MCHW will provide clear and unambiguous requirements and instructions, compatible with modern contract forms and future construction practices".

The development process

The MCHW and associated DMRB documents (also called RADs, i.e. Requirements and Advice Documents) are all held and authored within the National Highways' Collaborative Authoring and Review System (CARS). MCHW clauses were rationalised with larger clauses split where multiple topics were combined, vague terms such as 'adequate', 'as appropriate' and 'reasonably practicable' and references to specific products were removed to make clauses contractually sound. Each old clause has an associated change log record against it and each new clause has got background commentary, enabling those undertaking future reviews to understand the thought processes and reasoning behind each requirement.

In parallel, DMRB clauses have been added or updated to align content with the new MCHW. Specifically, the ultimate goal was to achieve a thread of information running through DMRB, MCHW and as-built information and documentation using consistent topics and terminology. This supports the wider aspiration of the Overseeing Organisations to reinforce continuity of thinking from design through to construction.

Once authored in CARS, the clauses were issued to relevant National Highways' Technical Standards Committee's consultees for comments, which were then considered and resolved. The approved documents were published on the Standards for Highways website on 30 September 2025 with a big bang publication to support easier contractual adoption. A high-level timeline of the development process is provided in Figure 1.

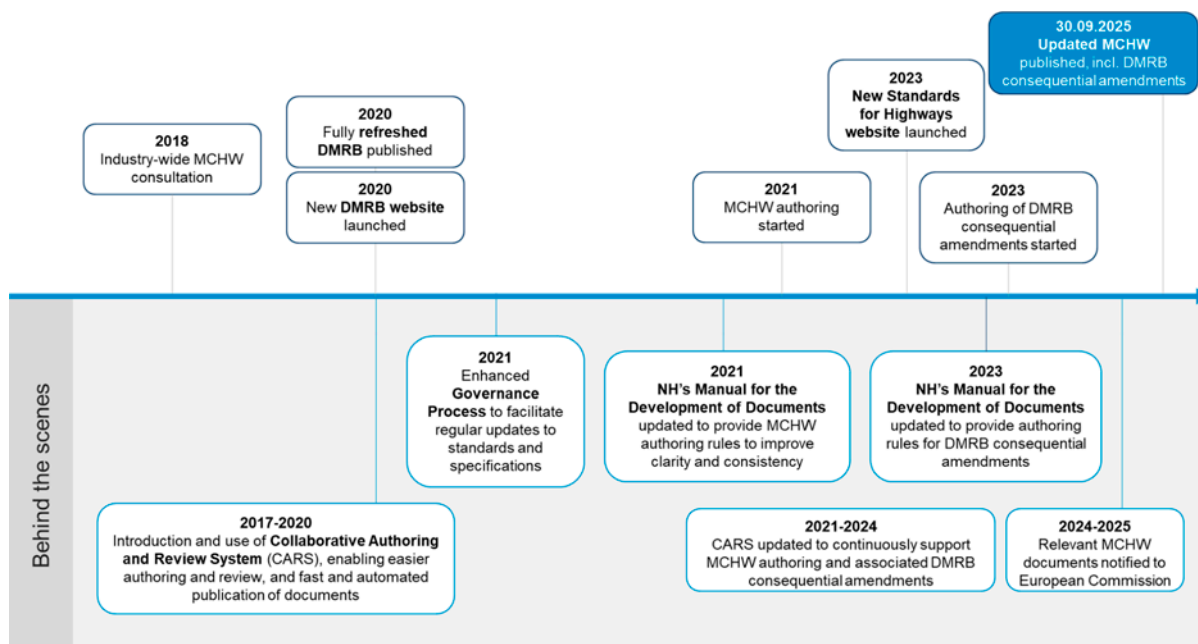


Figure 1 – Timeline for the DMRB / MCHW / DMRB development and launch.

DMRB approach

The DMRB is a suite of Requirements and Advice Documents (RADs) relating to the design of the UK motorway and all-purpose trunk roads for which the highway authority (or local authority who chose to adopt it) is one of the Overseeing Organisations. The DMRB embraces the collective experience of the Overseeing Organisations, their agents and designers. It provides requirements and advice resulting from research, practical experience of constructing and operating motorway and all-purpose trunk roads, and from delivering compliance to legislative requirements.

The general principles and scheme governance are advised in GG 101 *Introduction to the Design Manual for Roads and Bridges*, and it is based upon the following assumptions.

- The DMRB has been developed for use by competent practitioners who are qualified professionally in their relevant field and will apply their own skill and judgement when making decisions involving the information within the DMRB.
- The DMRB is not exhaustive, it does not duplicate national, UK or EU legislative requirements and those undertaking the work should understand and comply with the relevant legislation.
- Works will be constructed in accordance with the Manual of Contract Documents for Highway Works (MCHW).

It is worth understanding how the DMRB is structured. The document number depends on the discipline and project life-cycle stage. Each document consists of requirements and advisory content, where advice always relates to a requirement and may also be supported by a note. The use of ambiguous phrases (e.g. "consideration given to..."), is avoided and it is formed of explicit requirements which may supported by advice and notes. Relevant verb forms are provided below.

- There are two verb forms for **requirements**
 - **Must** indicates a statutory or legislative requirement.
 - **Shall** Indicates a requirement of the Overseeing Organisation.
- Three verb forms for **advice**
 - **Should** indicates advice expressed as a recommendation.
 - **May** indicates advice expressed as a permissible approach.
 - **Can** used to introduce note which provide a short clarification of a concept or statement of fact.

MCHW approach

Supporting information

An MCHW Information Hub <https://information-hub.standardsforhighways.co.uk/> provides essential help and guidance for the implementation of the updated MCHW.

MCHW overview

Before looking at the direct implications for road lighting it is best to take an overview of the changes implemented by the 2025 publication, see also Figure 2.

- Firstly, the suite of the MCHW now has a new structure; the seven volumes of the former MCHW have become three streamlined document sets. These are:
 - The Specification for Highways Works (SHW) documents, all non-work specific instruction requirements.
 - The Instructions for Specifiers (IfS), containing the instructions to draft contract specifications.
 - The Method of Measurement for Highway Works.
- When you access these documents on the Standards for Highways website, you now access the country-specific versions (England (E), Scotland (S), Wales (W) and Northern Ireland (NI)). These include the same core content with the only differences being the nationally determined requirements, denoted with a country-specific prefix (e.g. E/1.8). These nationally determined requirements, which were previously typically found as annexes at the end of the document, are now presented in-line at the point where they are applicable.
- The Instructions for Specifiers document provide instructions to the Specifier on how to provide Works Specific Requirements. These instructions are published in-line with the Specification for Highway Works clauses for ease of understanding and to reduce navigation between documents.
- The final piece of the puzzle is the templates for the Works Specific Requirements (WSRs) which are available from the Standards for Highways website alongside the related IfS document. They replace the contract specific appendices and provide a consistent format to develop contract specifications.

As part of this restructuring, the documents now have new document numbers. The new numbering system aligns with the existing DMRB numbering system, with the letters defining the discipline and project life-cycle stage.

The new clause style adopted provides clear and unambiguous requirements. Designed to be contract-neutral, these clauses offer greater agility for use with modern contract forms.

The MCHW has been aligned with the DMRB, which underwent a similar modernisation in 2020 as noted previously. Anything within the old MCHW that related to design or advice has been moved to the appropriate DMRB document. In addition, technical requirements have been aligned with latest standards and industry practice and, in doing so, have a positive impact on health and safety, sustainability and customers, with due consideration of commercial implications.

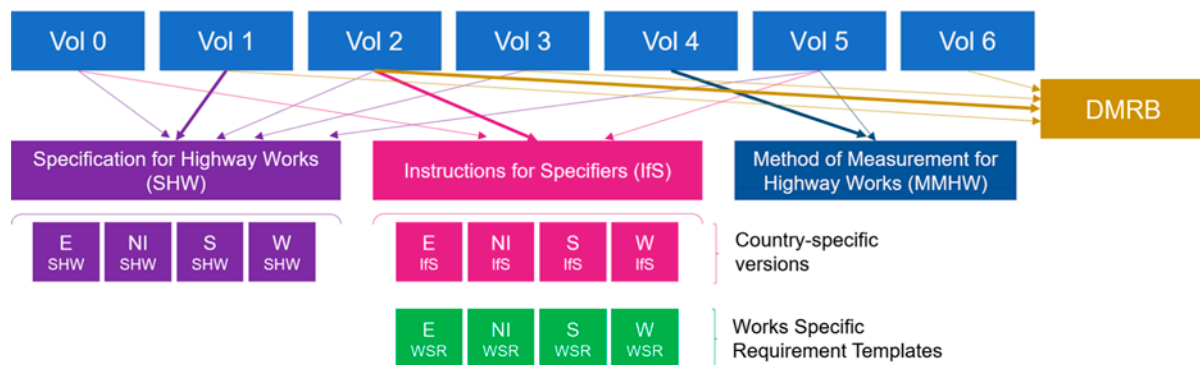


Figure 2 – Development of the MCHW structure.

How to design and specify road lighting and minor structures

DMRB

The following DMRB RADs have been reviewed and updated to align with the new MCHW.

- TA 501 Road lighting appraisal
- TD 501 Road lighting design
- TM 501 Road lighting maintenance
- TS 501 Road lighting inspection and testing

To support the effective delivery of the road lighting service, an additional new DMRB document has been developed.

- TG 501 Enabling handover into Operation and Maintenance has been developed

This review and update has taken due account of changes and developments in the relevant standards and national guidance, such as guidance produced by the Institution of Lighting Professionals (ILP). In addition, feedback received since the first publication has been considered and a detailed review of all requested departures from standards undertaken.

It also ensures that any design and advisory aspects that have been removed from the MCHW and is still relevant have not been lost and are covered by the applicable DMRB document(s).

It is worth noting here that the DMRB has been developed for competent lighting professionals to apply their own professional judgement when undertaking the design work. Where they consider that there is a need for deviating from a DMRB recommendation, then they should undertake their own risk assessment and consider any implications, record these within the design file and proceed. Instead, any deviation from DMRB requirements will need a departure from standard following the process of the relevant Overseeing Organisation.

When undertaking a road lighting design, we must also consider the minor structure element (columns / luminaire fixings etc) and these are under the following DMRB document:

- CD 354 Design of minor structures

This document and the associated MCHW document CC 481 Minor structures (see below for more details) are of significance as lighting columns are classified as minor structures and are therefore covered within these standards.

Understanding the development of TD 501 is pertinent to the development and application of TC/TP 501 and is discussed in this section.

The key changes in TA 501, TM 501, TS 501, TG 501 and CD 354 are outlined in Annex 1.

TD 501 Road lighting design

TD 501 applies where the need for lighting has been established through the TA 501 process. It shall be followed for the design of new and replacement road lighting and short tunnels on motorways and all-purpose trunk roads.

As with the other updated RADs, the current document has been reviewed and updated to cover current best practice, competency of those undertaking design, the information to be provided and the certification required that accompanies any design submissions.

In addition, the design and advisory aspects from old MCHW 1400 series such as electrical requirements have been removed from the new MCHW and transferred into TD 501.

The biggest change is the introduction of two new sections:

- Electrical design for road lighting – This has not been included before and is the first-time electrical design for road lighting installations has been considered in the DMRB.
- Design outputs for road lighting – This is necessary to take the designer through the assessment of their design and how this shall be specified in terms of standards and performance under the updated MCHW.

A key element of this is the introduction of the 'Road lighting zone'. The road lighting zones are a method of defining areas of a road lighting installation that differ in lighting classification, luminaire mounting height, change in carriageway width, column spacing and geometry etc. Each zone is verified for compliance with the specified criteria once the luminaires have been selected and will be specified separately.

Section 6 of TD 501 'Design outputs for road lighting and illuminated traffic signs' provides the designer with guidance relating to the design outputs to be provided to the contractor. This includes all details necessary for the installation of the electrical infrastructure and lighting equipment for the project.

The requirements include:

- The road lighting design layout
- Electrical schematic diagram(s)
- Outputs from the design

The road lighting design layout includes the following details

- The extent and unique references for each 'Road lighting zone'
- Details of Central Management System including communication coverage
- Power cable ducting positions and lengths
- Position of access chambers
- Position of proposed and existing feeder pillars, road lighting units
- Position of proposed and existing illuminated traffic sign units
- Position of proposed or existing power cable joints
- Asset I.D. numbers

Electrical schematic diagram includes the following details:

- Source supply and characteristics
- Circuit protection
- Circuit control
- Cable details
- Ancillary items such as heating, ventilation and lighting.

TD 501 section 6 provides full details of all attributes and information to be advised for all of the above.

MCHW

Firstly, we have a reference change and the new references for MCHW 1300 and 1400 series.

From the old 1300 series to the new CC/CP 481

MCHW 1300 *Road Lighting Columns and Brackets, CCTV Masts and Cantilever Masts* has become:

- CC 481 *Minor structures*, setting out the fixed requirements for the constructor with reference to CD 354 for the actual design.
- CP 481 *Instructions for specifiers for CC 481 Minor structures*, setting out instructions to complete works specific requirements that fluctuate depending upon the needs of a project as identified by the specifiers.

Previous design-related content from MCHW 1300 has been moved to CD 354. Minor highway structures include:

- Lighting columns
- Masts for traffic signals, speed cameras, CCTV and fixed vertical road traffic signs
- Noise barriers

From the old 1400 series to the new TC/TP 501

MCHW 1400 has become:

- TC 501 *Electrical work for road lighting and illuminated traffic signs*, setting out the fixed construction requirements that are common to all contracts.
- TP 501 *Instructions for specifiers for TC 501 Electrical work for road lighting and illuminated traffic signs*, setting out instructions to complete works specific requirements that fluctuate depending upon the needs of a project as identified by the specifiers.

The works specific requirements to be provided, as instructed in TP 501, cover all the requirements for a road lighting system, except for the columns which as advised above shall be specified in accordance with CC/CP 481.

The TP 501 works specific requirements includes:

- Feeder pillars
- Control systems (CMS & photoelectric cells)
- Switch gear
- Power cables
- Ducting
- Luminaires
- Cable joints
- Commissioning requirements

The purpose is to provide detailed specifications and guidelines for the installation, commissioning and maintenance of electrical infrastructure related to road lighting and illuminated traffic signs.

TC 501 and CC 481

A contract (works) specification will include TC 501 and CC 481 and the compiled Work Specific Requirements (WSR). Together these are a set of requirements dealing with the works, which include requirements on geometry, contractor design, performance, activities, verification, documentation submission and the limitation of construction activities and these can be fixed or works specific.

A WSR template is available to download from the Standards for Highways website and will be populated by the specifier to define the project characteristics, in accordance with the Instructions for Specifier (e.g. TP 501 / CP 481). Designers will then apply the TD 501 section design outputs for road lighting and provide sufficient detail to allow the WSRs to be completed.

When the WSR templates are downloaded, they automatically include the required variations for England (E), Scotland (S), Wales (W) and Northern Ireland (NI).

Lighting design (TD 501 and TC 501)

General

Overall, the process is straight forward as indicated in Figure 3 below. This includes:

1. Design to TD 501 and CD 354.
2. Completion of related WSR templates with relevant design outputs.
3. Drafting of contract drawings based on the design.
4. Inclusion of the SHW into the works specification by reference.

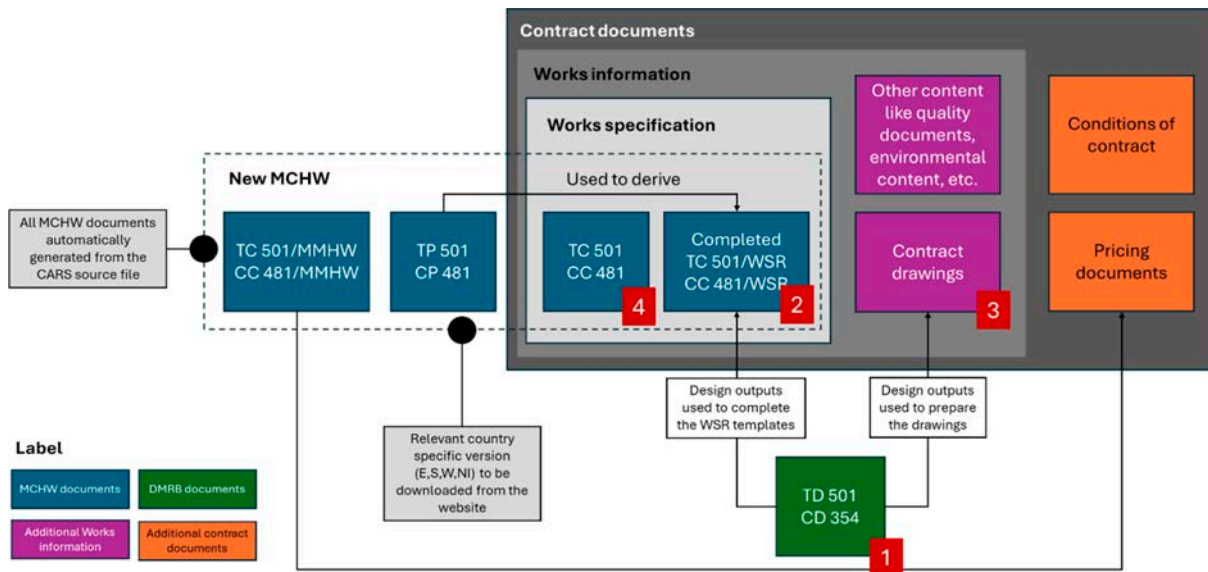


Figure 3 – 'Lighting design excluding luminaires'

Based upon our design we can populate the Work Specific Requirements templates following the instructions in CP 481 and TP 501 (these are duplicated in the WSR templates for ease of navigation). As previously advised, the template will automatically include the country-specific requirements (E, S, W or NI).

For example:

CC 481 Version E/1.0.0	3. Lighting columns and brackets
3. Lighting columns and brackets	
Product requirements for lighting columns and brackets	
E/3.1	Brackets for lighting columns shall include wall mounted brackets and fixtures.
3.2	Lighting columns, brackets and their foundations shall comply with "General requirements for minor structures" in Section 1 of this document.
3.3	Lighting columns shall comply with one of the following options: "Concrete lighting columns" in Section 4 of this document, "Steel lighting columns" in Section 5 of this document, "Aluminium lighting columns" in Section 6 of this document, or "Fibre reinforced polymer composite lighting columns" in Section 7 of this document.

Figure 4a – England version of CC 481, section 3

CC 481 Version NI/1.0.0	3. Lighting columns and brackets
3.	Lighting columns and brackets
	Product requirements for lighting columns and brackets
NI/3.1	Brackets for lighting columns shall include wall and wood pole mounted brackets and fixtures.
3.2	Lighting columns, brackets and their foundations shall comply with "General requirements for minor structures" in Section 1 of this document.
3.3	Lighting columns shall comply with one of the following options: "Concrete lighting columns" in Section 4 of this document, "Steel lighting columns" in Section 5 of this document, "Aluminium lighting columns" in Section 6 of this document, or "Fibre reinforced polymer composite lighting columns" in Section 7 of this document.

Figure 4b – Northern Ireland version of CC 481, section 3

For the above example Northern Ireland (Figure 4b) has a requirement to include wood pole mounted brackets in Clause NI/3.1 of CC 481, whereas England (Figure 4a) don't have that requirement, so they have an alternative Clause E/3.1. Both versions will contain the same Clauses 3.2 and 3.3.

Luminaires

We need to follow a different process when considering the luminaire. The reason for this is that all other assets that need consideration for the road lighting design (feeder pillars, columns, foundations, terminations etc.) are essentially standalone items. However, when we come to the luminaires we have two requirements.

1. The product requirements for luminaires for road lighting.
2. General requirements for luminaires for road lighting.

Taking each in turn we have:

Product requirements for luminaires for road lighting

This is essentially the actual luminaire and its specification and fairly straight forward and we reference the applicable Standards BS EN 60598 parts 1 and 2, as well as the minimum performance characteristics including but not limited to:

- Ingress protection (IP) code
- Weight
- Windage
- Impact (IK) rating
- Protection against electric shock
- Photobiological hazard classification
- Driver requirements (constant light output, dimming)
- Circular economy rating (CIBSE TM66)

General requirements for luminaires for road lighting

The second it that the luminaire together with others needs to provide a lighting performance to BS 5489-1. It is at this stage that we need to consider all the luminaires on the project / section of road as their mounting heights, tilt, orientation, basket or no bracket, column geometry, column spacing etc within a scheme will vary.

Hence, as mentioned previously, the term 'lighting zone' has been introduced. These combinations eventually lead the designer to the lighting level of the road (lux or candela/m², uniformity requirements, Power Density Indicator (PDI) and Annual Energy Consumption Indicator (ANCI) W lx⁻¹ m⁻²).

At this stage the designer needs to provide the relevant information to enable the luminaire performance requirements to be determined by the contractor. The designer is required to complete the information required under the Schedule of works specific requirements.

Essentially the designer must not make any reference to any manufacturer or manufacturers data, this is not permitted, this is also where the procurement Act comes in. The only exception to this is for the Central Management system (CMS) where the various systems are not interchangeable and therefore to integrate into an existing system the specific details of the CMS need to be advised.

The flow chart shown on Figure 5 provides a high-level approach to how the road lighting designer can consider this. The more detailed approach is shown in Figure 6.

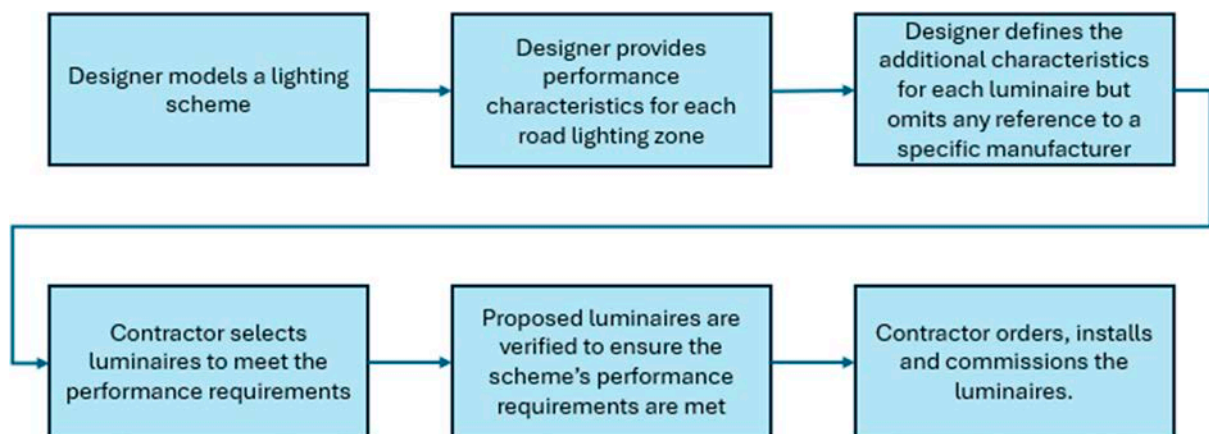


Figure 5 – How a lighting luminaire is now to be specified according to TC/TP 501

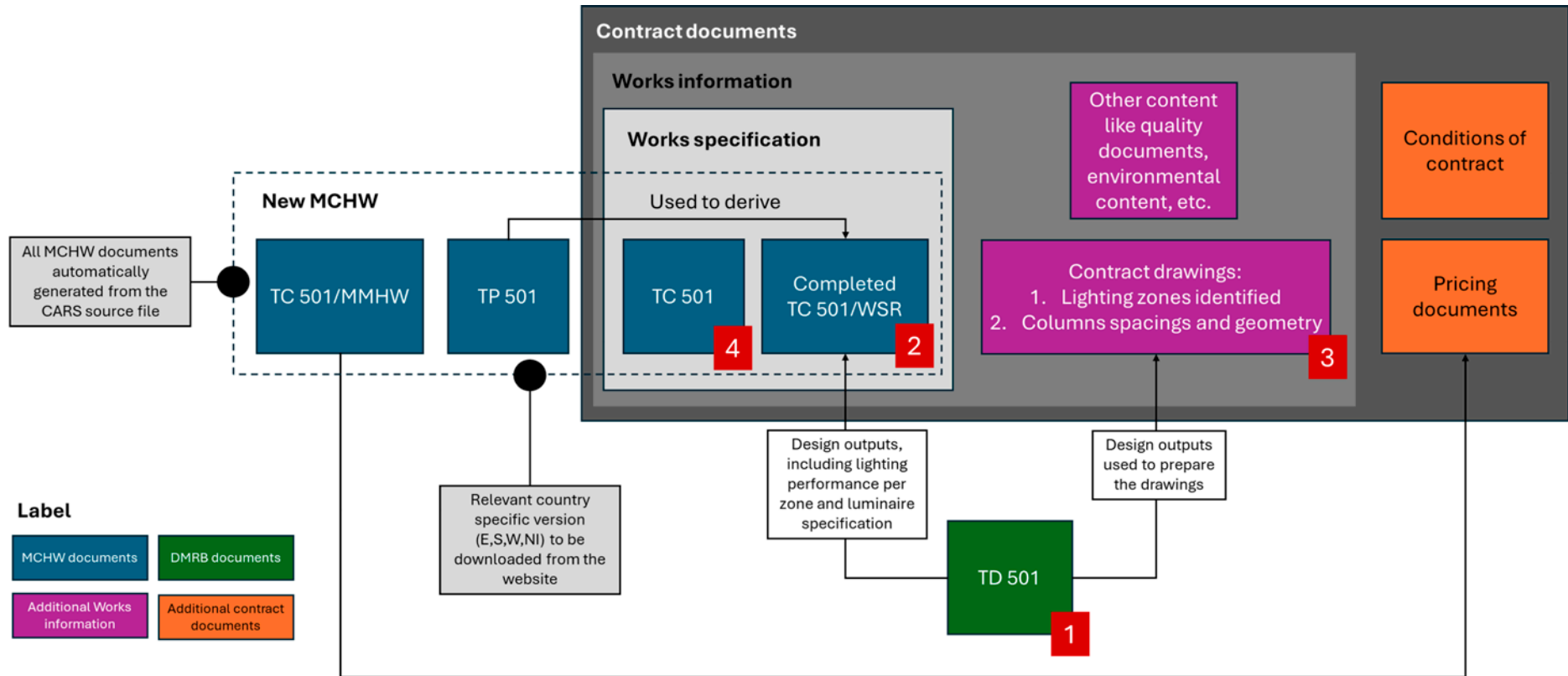


Figure 6 – Lighting design luminaire requirements

Specifically:

The designer develops a design for the road lighting installation following the requirements of TD 501. The designer then breaks the design down into the various road lighting zones discussed earlier. For each zone the designer allocates a unique reference for which the criteria will apply, i.e. Zone 1, Zone 2 etc. They then provide the performance requirements for that zone, completing in turn the tables presented in the following pages.

To aid understanding, if we consider the roundabout shown in Figure 7, the conflict area will have one lighting class / performance level and the four approach roads may have their own which may be similar or different. In addition, the luminaire mounting heights, column spacing and geometries may vary on each approach road. The location, geometry and spacing of columns is obtained from the drawing. We therefore need to consider each as a separate zone, zones 1 to 5 as indicated.

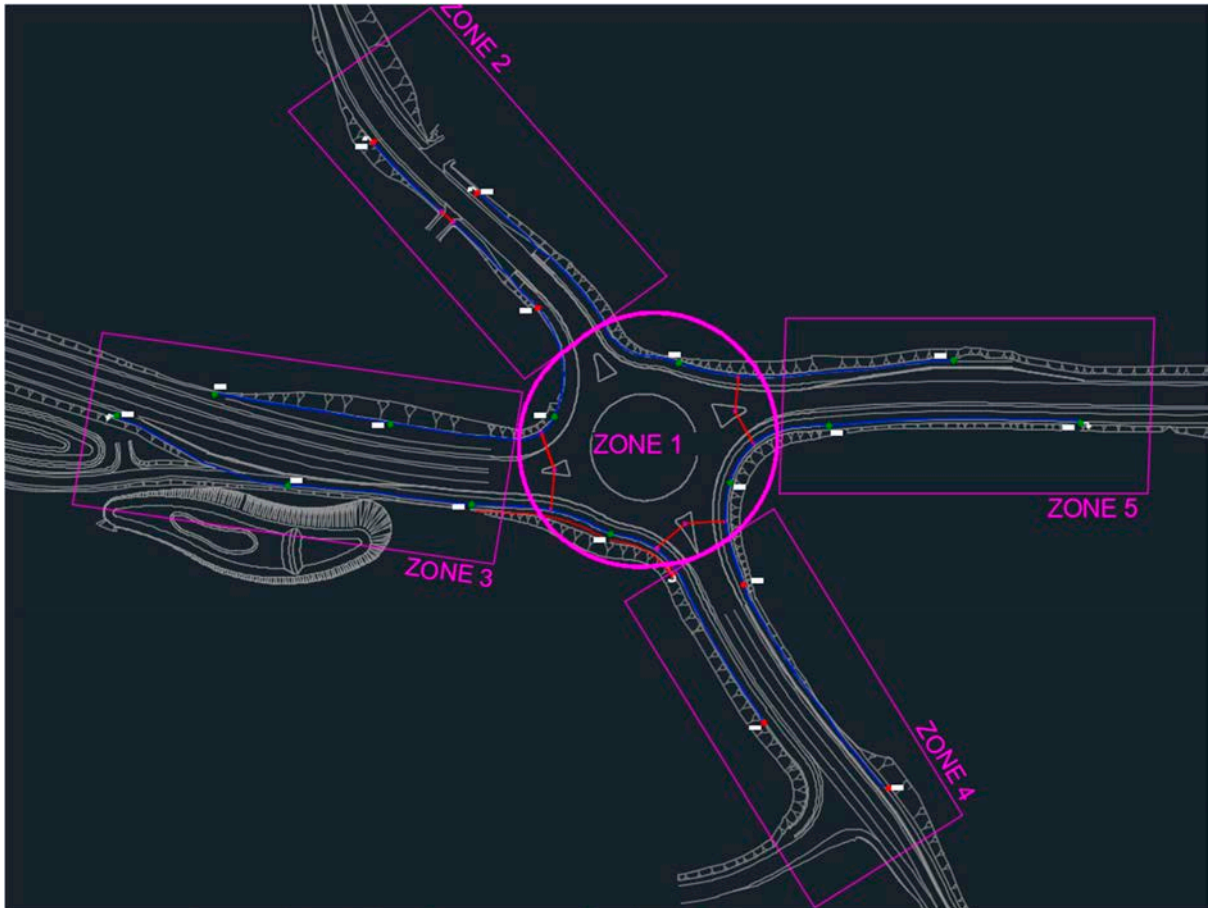


Figure 7 – Sample lighting plan

Based upon our design, we can populate the Work Specific Requirements template taken from section 8 of TP 501 'Luminaires for road lighting and illuminated traffic signs' as overleaf.

General requirements for luminaires for road lighting						
TC 501/8.5 Luminaires for road lighting shall be:						
Road lighting zone reference	Road lighting zone drawing / model reference(s)	Lighting class in accordance with BS 5489-1	Lighting constraints	Power density indicator W/(m-K)	Annual energy consumption indicator W/(m-K)	Dimming profile
(a)	(b)	(c)	(d)	(e)	(f)	(g)
a) Enter a unique reference, to provide a unique reference to the road lighting zone to which the road lighting criteria apply. b) Enter text, to identify the drawing(s) / model(s) that define spatial extents of the road lighting zone. c) Enter text, to define the lighting class for the road lighting zone in accordance with BS 5489-1 . d) Enter text, to to define any constraints that influence the selection of a luminaire for example overhead lines, ecology. e) Enter a number in units of W/(m-K), to define the energy efficiency of the zone. f) Enter a number in units of W/(m-K), to define the annual efficiency of the zone. g) Enter text, to define the dimming characteristics of the luminaire where no CMS is present.						

We then look to the installation aspects of each road lighting zone which includes details of luminaire mounting, some electrical requirements, control socket(s) etc and the following tables to be completed the headings of which are straight forward.

TC 501/8.6 Luminaires for road lighting shall be:						
Luminaire for road lighting reference	Road lighting zone reference(s)	Drawing/model reference(s)	Luminaire for road lighting support	Mounting height m	Minor structure reference	Maximum weight kg
(a)	(b)	(c)	(d)	(e)	(f)	(g)
a) Enter a unique reference. b) Enter text, to provide the unique reference(s) to the road lighting zone(s) to which the road lighting criteria apply. c) Enter text, to identify the reference(s) of the drawing(s) / model(s) that show the location of the luminaire for road lighting. d) Enter text, to describe how the luminaire for road lighting is supported. e) Enter a number in units of m, to define the height of the luminaire for road lighting above adjacent ground level. f) Enter a unique reference, to identify the minor structure to which the luminaire for road lighting is attached (where applicable). g) Enter a number in units of kg, to define the maximum weight of the luminaire for road lighting to ensure compatibility with the lighting column for road lighting to ensure compatibility with the lighting column.						

Reference (a) to (c) are as indicated previously.
 d) in this case relates to how the luminaire is supported, column, wall mounted etc.

TC 501/8.6 Luminaires for road lighting shall be:						
Maximum windage area m ²	Lumen output lm	Design attitude °	Minimum luminous intensity class	Shield requirements	Correlated Colour Temperature (CCT) (K)	Minimum Colour Rendering Index (CRI) (n)
(h)	(i)	(j)	(k)	(l)	(m)	(n)
h) Enter a number in units of m ² , to define the maximum windage area of the luminaire for road lighting to ensure compatibility with the lighting column. i) Enter a number in units of lm, to define the lumen output of the luminaire for road lighting. j) Enter a number in units of °, to specify the angle of displacement of the luminaire for road lighting from the horizontal. k) Enter one or more values, from options G4, G5, G6, to define the minimum luminous intensity class for the luminaire for road lighting. l) Enter text, to identify any shields required to be fitted to the luminaire for road lighting. m) Enter text, to define the colour temperature of the luminaire for road lighting in Kelvin. n) Enter a number, to identify the minimum CRI value of the luminaire for road lighting.						

Commissioning of road lighting and illuminated traffic signs

Section 10 to TP 501 has got specific requirements for the verification and documentation for commissioning of road lighting and illuminated traffic signs

The documentation requirements shall be submitted prior to the commencement of the commissioning handover.

Preparation for dissemination

Upon completion, the WSR's are combined with the rest of the design package and issued to the Contractor, see also the MCHW information hub for details on how to manage large tables like the one for luminaires for road lighting shown on the previous pages.

Publication

The MCHW and associated DMRB documents were published on the Standards for Highways website (<https://www.standardsforhighways.co.uk/>) on 30 September 2025. They are to be used on projects from then.

In-flight projects are likely to continue using the existing standards, your project team will advise as applicable. See also GP 110 and the MCHW information hub ([When do I adopt it? | MCHW Information Hub](#)) for more information about the implementation approach.

All MCHW documents, including previous versions, are published on and available to download from the Standards for Highways website. Use the date functionality when searching to find standards applicable at a given date.

Available support

The updated MCHW looks quite different so there is support provided for this transition, including mapping of old to new documents, worked examples and how-to guides for compiling a specification with the new MCHW. Essential guidance is provided on the MCHW information hub (<https://information-hub.standardsforhighways.co.uk/>), which is accessible from the Standards for Highways website.

This site provides core information, links and explanations on how to use the MCHW, the following are key examples of what is contained in the site.

What has changed

- Key changes
- Document mapping old to new

Most importantly the 'What do I do?' selection.

Where do I find the MCHW documents and core areas within this are:

- How do I navigate the Standards for Highways website?
- How do I prepare a contract-specific specification?

How do I prepare a contract specific specialisation?

- Role of the specifier
- Identification of mandatory and document specific WSR templates
- WSR templates – completion
 - How to download the templates
- WSR templates – departures
- WSR templates – common items
- WSR templates – worked examples
- Preparation of WSR templates for documentation

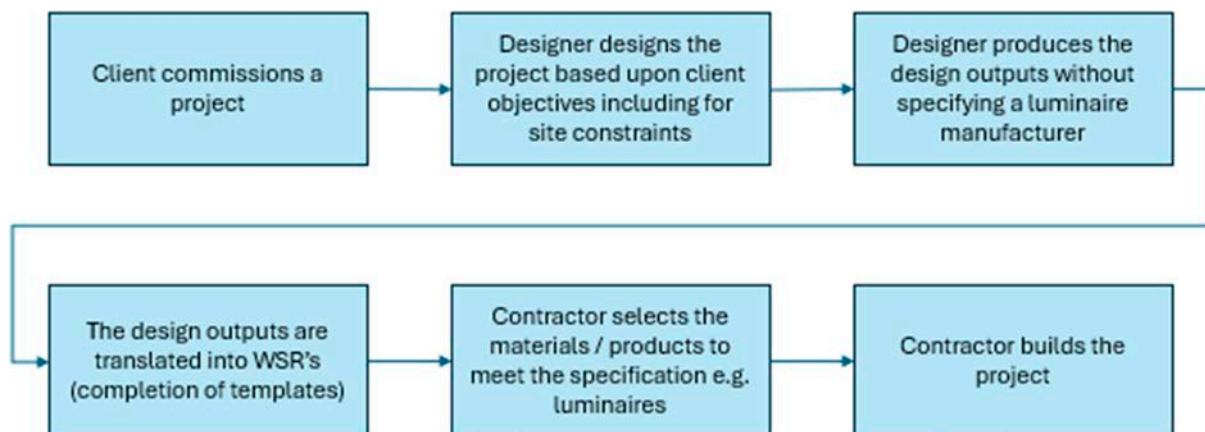
Conclusions

The Manual of Contract Documents for Highway Works has been modernised to reflect current best practice. It also meets the obligation on National Highways set by the Technical Regulations Protocol to refresh the MCHW following the findings from an industry-wide consultation.

The development is also an opportunity to align to the requirements of the Procurement ACT 2023. This requires a move away from the 'Most Economically Advantageous Tender' (MEAT) to the Most Advantageous Tender (MAT) moving away from a focus on lowest cost to performance specification.

These developments perhaps place road lighting design and specification in a unique position as we have two core requirements to consider. We have the requirements of the actual products that are required (luminaires, control systems, columns etc) and then how those products, especially the luminaires come together to achieve a stallation performance requirement.

The following flow chart provides a high level over view of the required approach.



Important points to consider going forward:

- Essential that Contractor solutions are checked and approved to ensure compliance with Overseeing Organisation specification and lighting/ electrical standards.
- Training/assistance is provided to help Specifiers adapt to the new approach.

Annex 1

Brief review of the 501 series RAD developments

TA 501 Road lighting appraisal

Road lighting appraisal is a decision-making process that balances a range of factors to determine if the removal, reduction, replacement or introduction of road lighting is justified. This document sets out the process for road lighting appraisal on motorways and all-purpose trunk roads in order that the Overseeing Organisation complies with its legal duties and other obligations and acts in a manner best to determine if the provision of lighting is justified for the road sections under consideration.

Essentially this is the first step in considering new or retaining an existing road lighting installation. It is a mechanism to assess the viability of retaining or introducing a system of road lighting linked to qualitative aspects such as cost, as well as non-qualitative considerations including human factors, circular economy, environmental considerations.

In the past the approach could lead to a wide range of subjective conclusions than tended to result in different assessments for similar sections of road coming up with differing opinions. The revised RAD is aimed at reducing this and looks to provide a more balanced and considered approach especially when considering the more qualitative aspects that need consideration.

TM 501 Road lighting maintenance

This document outlines road lighting system maintenance requirements that shall be implemented through maintenance and response to operational failures on motorways and all-purpose trunk roads except for tunnel lighting.

Essentially a refresh of the existing RAD, a new section regarding general maintenance requirements has been added with minor changes and clarifications linked to a risk assessment approach regarding categorisation of defects and response times.

TS 501 Road lighting inspection and testing

This document outlines road lighting system inspection and testing requirements that shall be implemented through inspection and testing to road lighting systems on motorways and all-purpose trunk roads except for tunnel lighting.

As with TM501 a refresh with the addition of testing to the RADs title. The RADs looks at the importance of undertaking and maintaining records relating to all inspection and testing based upon an asset management plan / strategy.

TG 501 Enabling handover into Operation and Maintenance has been developed

As mentioned earlier, this is a new RAD and applies to road lighting and related electrical apparatus over, under or alongside the highway and references TS and TM501.

This RAD describes the processes, certification, liaison, asset details and planning required for the successful handing over a lighting installation from construction to maintenance. In addition, and within certain parameters the other way around where an existing installation is being handed over to a construction project.

CD 354 Design of minor structures

This RAD covers the design of minor highway structures including lighting columns, cantilever masts for traffic signals and/or speed cameras, CCTV masts, and fixed vertical road traffic signs. It incorporates the provisions of BS EN 40, BS EN 12899, PD6547, ILP PLG07 and BS EN 14388 and supersedes BD 94/17.