

CDM DIFFERENTLY CASE STUDY

2026

CDM 20-20 Case Study:

Network Rail

Network Rail Between August 2017 and January 2018 Network Rail (York) ran the ICE CDM 2015 ‘Principal Designer & Designer; Demonstrating Capability’ one-day course eight times for a total of 112 staff of various disciplines. Senior managers attended the majority of the courses to provide delegates with a contextualized interpretation of the course material. Network Rail is the owner and infrastructure manager for the vast majority of the railway network in Great Britain.

Network Rail is an arm's length public body of the Department for Transport with no shareholders, which reinvests its income in the railways. Network Rails national operational coverage is comprised of eight routes. The London North Eastern & East Midlands (LNE&EM) route has the largest geographical area, with a railway network that has significant strategic importance as a national transport artery.

LNE&EM route carries 221 million passengers and 58 million freight tonnes every year. Asset Management is an essential requirement of owning and managing any infrastructure in ensuring that Capital and Operational expenditure is appropriately directed and to provide sustainable safety and performance outputs. Within each route is an Asset Management Department dealing with core infrastructure themes, such as ‘Track’, ‘Signalling’, ‘Geotechnics’ and ‘Structures’, etc.

This case study will focus upon the LNE&EM Structures, Geotechnical, Drainage and Buildings Asset Routes Management Departments and our Works Delivery Team in their collaborative training with the ICE in running of the ‘CDM2015 Principal Designer & Designer; Demonstrating Capability’ courses.

Between August 2017 and January 2018, the course was run eight times within Network Rails York offices, for the benefit of 112 Technical and Project staff within the various departments.

The Railway operates as an ‘Infrastructure System’, with a high number of complex interactions and safety-critical access-constrained working environments and with a significant number of stakeholders, such as Customers, Regulators, External Developers, Consultants, Contractors etc. Network Rail as a business has unique governance structures for projects, processes, role accountabilities and competencies.

As these functions and Page 10 processes do not always immediately align with the broader general construction industry, there was a need to have a Senior Manager within each training course who had extensive CDM and Industry experience to help interpret terminologies, clarify on Network Rails alignment with CDM 2015 and support the ICE’s course tutor with delegate questioning.

This was achieved by providing contextualised interpretation of the course material. The senior managers involved in delivering the course were the Buildings & Civils Works Delivery Programme Manager and the Structures Route Asset Manager. Clarification was certainly the prominent benefit from the courses for all of Network Rail delegates. This centres mainly around defining the role of ‘Designer’, more than ‘Principal Designer’, under CDM 2015. A further complexity within Network Rails Asset Management governance is that there is a technical duty overlap; with roles and distinctions between Client, Principal Designer and Designer.

These are not as apparent as is traditionally found in other construction sectors. Being an Asset Owner and Budget Holder, this would typically involve allocating the CDM duty of Client to Senior Leaders within Route Asset Management Departments. However, the staff members within these departments are academic/professionally qualified in their respective technical fields and as such are required to make critical Asset Management decisions and instructed physical works activities to our Works Delivery Teams.

Based upon this approach, the role could be perceived as a 'Professional Client', 'Technical Client' or 'Informed Client'. Furthermore, the critical Asset Management decisions, where physical work activities are required, can be conveyed to our Project Delivery Teams as either broad problem statements, or conversely as prescriptive requirements.

Problem Statement Example: 'Bridge 14 on ELR: SPC1 has failed its Structural Assessment. Process through GRIP Deliverables 2-8 to provide the required asset capability to meet the Sectional Appendix / Operating Licence.'

Prescriptive Requirement Example: 'Culvert 158 on ELR: ECML has displaced/dropping brickwork in the crown beneath the Down Main Line and is at risk of collapsing. Attend site, de-silt and install a UV Cured Polymer Structural Liner to the Barrel Intrados.'

Naturally these decisions/instructions have the potential to significantly influence the approaches and safety mind set taken by our Works Delivery Teams and more specifically their numerous Design & Build Framework Contractors and Consultants.

Exploring various scenarios within the course, served to remind the delegates that although they are employed by a Client Organisation, subject to the nature of the remit, they are as much as 'Designer' as the Consultant who produces the drawings, specifications, calculations, etc. Although term 'Designer' is clear for many construction sectors, it can cause notable confusion within some large Client Organisations who have technical authority.

Statements such as "I am not the Designer, I didn't draw it" are often cited when CDM roles are allocated. Often this is due to a gap in CDM awareness and can be addressed by reflecting upon the common definitions of 'Designer'. It is often described as someone who 'decides/defines/devises', thus removing the traditional technical industry stereotype of a 'Designer' specifically being a firm or individual responsible exclusively for producing drawings, specifications, calculations and reports.

With this key learning in mind, the 'CDM2015 Principal Designer; Demonstrating Capability' course comes into its own when we focus more upon how we communicate these decisions throughout the lifecycle of a project and into 'Whole Life Asset Management'. Since completing the course, there have been notable revisions made in LNE&EM Structures Route Asset Management Department to centre our Capital Works Remitting Document around CDM2015 ensuring that there is transparency in understanding prior decision making and continuity in articulating the asset specific risks through the various project stages. Linking this to the 'Hazard Elimination & Risk Reduction' best practice approaches endorsed by the ICE, these considerations can be made at the conceptual stage when a remit is being produced.

Working closely with our Works Delivery Team, forums have been created allowing Contractors and Consultants to visit the Engineering and Technical Staff within the LNE&EM Structures Route Asset Management Department to discuss/clarify remits, highlight risks/assumptions and exchange appropriate Pre-Construction Information for every Capital Works Scheme.

This has provided significant benefits for all parties, with reduced work complications, improved asset intelligence, insight/empathy and continuous improvement. We will continue to work with the ICE and their Training Programmes to ensure both the best and latest practices are adopted, hopefully providing the ICE within further insight into the challenging world of the railway environment.

Christopher Heap CEng FICE FPWI FCMI MIAM Route Asset Manager (Structures), London North Eastern & East Midlands Route

