



## A Practitioner's View of CEEQUAL: 'Network Rail's experience of using CEEQUAL on Crossrail'

### *Crossrail Surface Works:*

For this project Network Rail is working as the delivery partner for Crossrail, therefore we are essentially contracted to Crossrail.

Always helpful when you have a strong client who, not only specifies for a CEEQUAL Assessment but helps push the agenda. We also have the Crossrail Act 2008 in place which outlines the minimum Environmental Requirements and the construction code for the project.

As a contractor when you have a strong client, strong regulation and strong commitment, this gives a strong foundation on which to build the CEEQUAL Assessment.

The scope of the project for Network Rail is as follows:

- 27 station upgrades
- 2 major structures (Stockley Viaduct & Acton Dive-under)
- 61 km of track
- 179 switch & crossing units
- 1000 Overhead Line Equipment structures
- 150 km Overhead Line Equipment wiring
- 373 units of signalling remodelling

The projects Network Rail has registered for CEEQUAL are:

#### • Acton

- o Includes grade separation to meet the planned timetable

#### • Stockley

- o Providing grade separation at Stockley Junction.

#### • Old Oak Common and Paddington Approaches

- o A lot of track that has to be extensively remodelled.
- o We need to organise and facilitate the access to the central section (tunnels) to the overland section and the train depots

#### • North East Spur in its entirety

#### • South East in its entirety

#### • Western stations

The reasoning to pick the Acton and Stockley are because they are the main bits of civil engineering on the project. The rest combined makes the majority of our major works. We have a lot of enabling works, smaller works and preparatory site work. If we were to use CEEQUAL on all aspects using CEEQUAL, the assessment and workload would become a bit onerous. After liaising with the client and CEEQUAL, the decision was made that by having all of the above projects assessed under CEEQUAL it would capture the majority of what we deliver and how we assess the programme.



**Tertius Beneke, Network Rail  
Environment Manager**



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These projects, in regards to CEEQUAL, are nice discreet civil engineering projects: you can draw a boundary around them and they are one type of civil engineering project.

### North East Spur:

- 13 Stations
- Infrastructure works
- Signal movements
- Stabling/Sidings

There is a varying level of work being done on the 13 stations from rebuilding and refurbishments to superficial modifications such as a change of signage. Major question that arose for this section is how to administer and manage the CEEQUAL Assessment in particular reference to the stations. Do you have one Assessment for all 13 stations (where some questions would not be applicable to all projects), or a CEEQUAL Assessment for each station? How do you decide what evidence to reference and which to leave out?

A balance needs to be struck between being thorough and applying a consistent rigour to the approach on the one hand and on the other hand not overburdening the project team with collecting evidence and adding unnecessary cost to the project.

### South East Spur:

- Abbey Wood Station
  - Rebuild
  - How do we value the work on this refurbishment within the scheme?
- Four tracking
- Major Civil works
- OLE Electrification
  - Does not have the same impact as the civils work or the rebuild of the station

### Western Stations:

This includes 12 stations and one staff accommodation (13 locations in total), with the variety of the work varying from rebuilding and refurbishments to superficial modifications such as a change of signage and everything in between.

## Complexity

- Complex Railway Programme
  - Scope and geographic spread of the project is a long thin linear network with various types of work.
- Design and construction phases occurring at the same time
  - We will be finalising detailed design and at the same time preparing and clearing our sites.
- Delivery partner arrangement
  - Network Rail is the delivery partner for the project and our client is Crossrail. Some of the Client decisions were made before Network Rail was brought in as the delivery partner and therefore there is some administrative jobs in acquiring the evidence needed to obtain the client score.
- Network Rail Crossrail programme and Network Rail
  - Crossrail programme team from Network Rail are very much a discreet entity whilst still being part of a big organisation. Some of the civil engineering works we can influence but engineering standards and how a railway is built and maintained is very much of national concern. As a team, we can only take it up to a certain point, need to decide within the team where that point is.



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### *A practical approach*

The approach that we have taken for our stations is that we have a two tier approach for answering the CEEQUAL Questions:

- Tier 1 is project-level (design phase)
- Tier 2 is location specific (construction)

The question set for Tier 1 will be the same for all station locations. Whereas, at tier 2 the Assessors will seek guidance from their Verifiers on what should and should not be scoped out in each location, whilst keeping the rigour of the process. The scoring for each question for both Tier 1 and Tier 2 will be lowest common denominator.

### **Benefits from using CEEQUAL**

The sections in CEEQUAL have helped highlight and drive our EMS. The EMS in place is based on the Crossrail Act 2008, this means it aligns nicely with the 12 sections of CEEQUAL.

It helps to get 'buy in' from your project team. Project Managers like targets and they like the competition which gets them motivated.

We found WRAP extremely useful on the waste sections of CEEQUAL. I believe that the three systems (WRAP, CEEQUAL and the EMS) all work nicely together and complement each other very well.

It gives visibility of our commitment to sustainability and sets the standard within Network Rail. Lots of Network Rail projects are currently undertaking a CEEQUAL Assessment, such as the Thameslink Programme (Farrindgon Station, Blackfriars Station, and Borough Viaduct), Manchester Victoria and Kings Cross. It is therefore setting the standard within Network Rail.

It is pushing our contractors to deliver sustainability, in railway it pushing the need for sustainability performance.

Finally, it is preparing Network Rail for a more commercial world. We need to be more efficient, we need to deliver sustainability better and I think this will make us more competitive. This means that a project is not only delivered on time and under budget but also was sustainable and to an excellent standard which can be externally verified.

### **Network Rail & CEEQUAL**

CEEQUAL is embedding sustainability into the way Network Rail delivers its investment projects. I believe that CEEQUAL will feature strongly in Network Rail's future projects. I do think CEEQUAL is indeed contributing to moving society on a pathway towards sustainable living.