

Julie Evans
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Your Ref 153390-INF-NOT-
MPM-000090

Case Ref PRM-IOP-0384

IN Number
UK/62/2021/0001

28th April 2021

**Contact: Mark Gough
HM Inspector of Railways**

ORR, 3rd Floor, Mallard House, Kings Pool,
1-2 Peasholme Green, York.
YO1 7PX

Dear Julie Evans,

THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED

LONDON TO CORBY ELECTRIFICATION AND CAPACITY UPGRADE PROJECT (L2C) – ENERGY SUBSYSTEM AUTHORISATION – STAGE 2

Further to your application for authorisation received on the 27th April 2021 with Technical File London to Corby Electrification and Capacity Upgrade Stage 2, which was assessed against the Energy National Technical Specification Notice (ENE NTSN) and Safety in Railway Tunnels National Technical Specification Notice (SRT NTSN), and reported in File ref: NCB_IC4164_CAR_4274 Version 2.0 with the following certificates:

- a) ApBo Certificate of Verification - ref 2444/6/SG/2021/ENE/EN/322 Version 2.0
- b) DeBo Certificate of Verification - ref 6492/6/SG/2021/ENE/EN/323 Version 2.0

Following review of your application, I can confirm that ORR grants authorisation under regulation 4(1)(a) of the Railways (Interoperability) Regulations 2011, as amended. This authorisation is for the placing in service of new energy subsystem using the United Kingdom Master series overhead contact system, which is titled:
London to Corby Electrification and Capacity Upgrade project Stage 2.

The scope of authorisation of the Energy subsystem (Stage 2) is defined as follows:

Energy (ENE)

- UKMS125 OCL System
 - Fast Lines - SPC1 49m38ch - SPC3 73m59ch
 - Slow Lines - SPC1 49m79ch - SPC3 73m59ch
- UKMS100 OCL System
 - Corby Branch - SPC3 73m59ch - GSM1 79m60ch
- Power Supply System
 - Long Meadow Farm ATFS – SPC1 34m65ch

- Sharnbrook MPTSC – SPC2 56m58ch
- Irchester TSC – WYM 61m6ch
- Harrowden TSC – SPC3 68m17ch
- Kettering North TSC – SPC3 74m04ch

Safety in Railway Tunnels (SRT)

- WYM 59m 0ch to 60m 5ch

The Eastern region System Review Panel (ER SRP) and Network Rail Acceptance Panel (NRAP) have endorsed this project, and are satisfied that any identified hazards, both legacy and residual, have been adequately closed and/or transferred to the appropriate body before placing in service in accordance with the Declaration of Control of Risk.

Regulation 12 of the Electricity at Work Regulations 1989 requires electrical system to be isolated in a manner that is secure. Due to a suspension of the supplementary isolation process due to COVID 19, the project or the maintainer after project handover, will be applying the existing Network Rail standards and procedures until the suspension is lifted.

There were no derogations from the TSIs, and no derogation from the National Technical Rules.

The restrictions or limitations of use on the structural subsystem are those contained in the Verification Declaration 153390-INF-NOT-MPM-000089 Version 2.1 and Declaration of Control of Risk 153390-INF-NOT-MPM-000088 Version 1.0.

The AsBo noted the project's safe energisation process detailed in section 9.4 of the SSP clearly articulated their five-stage process. This was considered to be good practice and an example for projects to follow.

The project demonstrated an understanding of safety by design and compliance with CDM/CSM with the following examples:

- Hazards MMLP0056 and MMLP0057 – maintenance hatches have been installed in the platform canopies to assist with ongoing maintenance activities and minimise the maintainer being in the vicinity of live OLE
- Hazard MMLP0117 – folding signals provided and located so that the maintainer is in a position of safety when the signal is lowered, and also refers to zero maintenance signals being selected to eliminate the requirement for the maintainer to go trackside for maintenance purposes
- Hazards MMLP0712 and MMLP1068 – provision of TSS (track side switch) walkways and platforms to provide clear pathways and standing surfaces to de-risk maintenance and switching activities
- Hazard MMLP0056 – walkway opened up through Wellingborough Goods Shed on Platform 1 to provide an improved thoroughfare for passengers as opposed to the existing reduced width platform section

The following Limitations apply:

Limitation 1 - NTSN clause 4.2.4.2 mean useful voltage: due to the capability of the power supply, electric rolling stock services shall be limited to two trains per hour at a maximum speed of 110mph (180km/h). This limit of use can be lifted subject to compliance with this clause through further modelling and possible power supply enhancements. This should be managed by Network Rail's processes and agreed by the Approved Body.

Limitation 2 - ENE NTSN clause 6.1.4.1 Assessment of dynamic behaviour and quality of current collection: testing at maximum design speed is incomplete. The UKMS100 OCL installed on the slow lines between SPC3 74 miles 36 chains and GSM1 79 miles 60 chains shall be limited to 90mph (140km/h) and a configuration of three pantographs or fewer until further testing is completed and an updated UKMS100 ISV certificate is issued.

Limitation 3 - ENE NTSN clause 6.1.4.1 Assessment of dynamic behaviour and quality of current collection: testing at maximum design speed is incomplete. The UKMS125 OCL installed on the fast lines between SPC1 49 miles 38 chains and SPC3 73 miles 59 chains and on the slow lines between SPC1 49 miles 79 chains and SPC3 74 miles 36 chains shall be limited to 110mph (160km/h) and a configuration of three pantographs or fewer until further testing is completed and an updated UKMS125 ISV certificate is issued.

Limitation 4 - NE NTSN clause 6.2.4.5 Assessment of dynamic behaviour and quality of current collection (Integration into a subsystem): the overhead contact line, at locations in the table below, shall be limited to 75mph (120km/h) until dynamic testing is successfully completed. This should be managed by Network Rail's processes and agreed by the Approved Body.

Wire	Start / mileage, chainage and ELR		End / mileage, chainage and ELR		Track
B39-02	71 m 21 ch	SPC3	71 m 58 ch	SPC3	Up Fast
B40-02	71 m 52 ch	SPC3	71 m 71 ch	SPC3	Up Fast
B39-01	71 m 21ch	SPC3	71 m 58 ch	SPC3	Down Fast
B40-01	71 m 52 ch	SPC3	71 m 71 ch	SPC3	Down Fast

The infrastructure subsystem authorised by this letter must be operated and maintained in accordance with Regulation 20.

You should be aware that any future modifications to the authorised subsystem may constitute a further 'renewal' or an 'upgrade' as defined in Regulation 2. If a project entity, in relation to the project, considers that the modification meets either of these definitions they may apply, in accordance with the provisions of Regulation 13, to the Department for Transport (DfT) for a decision on whether a new authorisation will be required. Should DfT decide that an authorisation is not required they must consult with ORR whether authorisation is required on safety grounds.

As the project entity you are responsible for retaining the technical file, keeping it up to date and making it available to the ORR in accordance with Regulations 18 and 19.

If you are not the owner of the authorised subsystem you shall within 60 days, in accordance with Regulation 19(3), transfer the technical file, certificate of verification and verification declaration to the owner of the subsystem and the owner shall then be regarded as the project entity. If the owner, in accordance with Regulation 19(4), disposes of his interest in the authorised subsystem, he shall within 60 days of the disposal transfer the technical file, certificate of verification and verification declaration to the person acquiring that interest and that person shall be regarded as the project entity.

Please note that the person who applied for the authorisation shall send particulars to the owner of the infrastructure to enable the owner of the infrastructure to enter the items on the Register of Infrastructure in accordance with Table 1 of Commission Implementing Decision 2019/777. This will include such further information as the registration entity may reasonably require set out in the relevant standard.

The person who applied for the authorisation to place in service may apply to the ORR for a determination of type. You will receive the type authorisation after providing the relevant data to the ORR.

If you are the operator, may I remind you of the need to have adequate arrangements within your Safety Management System to control the risks associated with this renewed infrastructure subsystem.

This decision letter will be published on ORR's website.

Yours sincerely



Steve Fletcher

Deputy Director of Engineering & Asset Management

Cc

Ian Prosser	ORR Director of Railway Safety
Ian Jones	Head of Interoperability, Safety and Standards, DfT
David Galloway	Head of System Compatibility, Network Rail
Darin Grey	Network Certification Body
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