

Luke Espin  
Project Sponsor  
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Case Ref: - PRM-IOP-0519

IN Number UK/62/2023/0003

Date 21<sup>st</sup> December 2023

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

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

Dear Luke Espin,

## **THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED**

### **East Coast Power Supply Upgrade Phase 2 Hambleton Junction Static Frequency Convertor**

Further to your application for authorisation received on the 7<sup>th</sup> December 2023 with Technical File East Coast Power Supply Upgrade Phase 2 Hambleton Junction SFC NCB\_N04896\_CAR\_5624 dated 24/11/2023 assessed against the Energy National Technical Specification Notice (ENE NTSN) with the following certificates:

- a) ApBo Certificate of Verification - ref 2444/6/SG/2023/ENE/EN/376 version 1.0

There were no applicable National Technical Rules (NTRs)

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 the Static Frequency Convertor at Hambleton Junction and supporting works detailed below:

#### **The range of certification for the subsystem:**

East Cost Power Supply Upgrade Phase 2 Hambleton Junction SFC FS, ECM3 174m 58ch:

- 132kV Cable Termination to Northern Powergrid Triple Pole Disconnecter 403 (ECM3: 174m 58ch) to Retford Feeder Station Northern Busbar (ECM1: 139m 39ch) and OLE neutral sections (ECM1: 139m 41ch), and Leeds TSL (DOL2: 184m 57ch)
- 132kV Cable Termination to Northern Powergrid Triple Pole Disconnecter 303 (ECM3: 174m 58ch) to Colton Junction limit of electrification (NOC: 5m 61ch), and Dalton Track Sectioning Cabin Southern Busbar and OLE neutral sections

(ECM5: 19m 9ch)

Two No. new traction power supplies at Hambleton Junction with the principal component parts of each circuit being a 132kV incoming supply cable from Northern Powergrid, 132kV / 27kV transformer, triple-pole disconnecter, 3ph. to 1ph Static Frequency Converter (including 3 and 1 Ph. filters, start-up transformer and circuit breaker, 3 Ph. to 1 Ph converter and LV auxiliary supply transformer), double pole disconnecter, 25kV containerised traction feeder station with air insulated switchgear, IEC61850 intelligent protection and control devices, supervisory control and data acquisition interfacing with York Electrical Control Room, and power to overhead line cabling to the East Coast Main Line

The Eastern System Review Panel (ESRP) 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.

The restrictions or limitations of use on the structural subsystem are those contained in the UK Verification Declaration 152605-NWR-DOV-000001 V1 and Declaration of Control of Risk 152605-NWR-DCR-000002 V1

### **Limitations**

The static frequency convertor is to be operated and locked in 'Island Mode'. Other modes can be utilised following a successful assessment by the ApBo and by following Network Rails procedures for entry into service. It is noted that full operational flexibility will not be realised until two or more SFC's are integrated.

### **Conditions**

#### **Provisions for Maintenance (clause 4.5)**

The system will be operated and maintained by Siemens on behalf of the project until a long-term service agreement is implemented and necessary competencies have been recorded on Sentinel. This relates to the operation, maintenance and emergency response of the SFC only and is required to manage the transition to an operational site. The long term service agreement and necessary competencies will be in place by June 2024 following Network Rails Health and Safety Management System and endorsement by the ApBo.

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 Commission Implementing Decision 2011/633/EU. 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

Copies: Ian Prosser, ORR, Director Railway Safety 25 Cabot Square, London, E14 4QZ  
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