

Laura Compton
Senior Sponsor
Network Rail Infrastructure Ltd,
151 St Vincent Street
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Case Ref: - PRM-IOP-0477

UK/62/2023/0002

Date 20th November 2023

Contact: Mark Gough
HM Inspector of Railways

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

Dear Laura Compton,

THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED

Glasgow to Barrhead Electrification – Energy Subsystem Authorisation

Further to your application for authorisation received on the 26th October 2023 with Technical File Glasgow to Barrhead Electrification NCB_N05671_CAR_5349 dated 19/10/2023 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/371 version 1.0
- b) DeBo Certificate of Verification - ref 6492/6/SG/2023/ENE/EN/372 version 1.0

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 the energy subsystem using the United Kingdom Master Series overhead line contact system, which is titled: Glasgow to Barrhead Electrification

The range of certification for the subsystem:

The electrification system is a 25 kV AC booster-less classic system with return screening conductor (RSC) and aerial earth wire comprising Network Rail United Kingdom Master Series installed between Muirhouse South Junction and Barrhead station the scope of authorisation of the Energy subsystem (Stage 2) is defined as follows:

Location	ELR/LOR	Line/ID	Mileage From:	Mileage To:
Muirhouse South Jn to Glasgow Central (Route section 1)	MEN2/SC031	Up (1100)	0m 0000y	0m 0131y
		Down (2100)	0m 0000y	0m 0131y
Muirhouse south Jn to Barrhead (Route section 5)	*GBK/ SC031	Up (1100)	1m 0418y	7m 0119y
		Down (2100)	1m 0418y	7m 0119y

*Above authorisation mileages include:

Location	ELR/LOR	Line/ID	Mileage From:	Mileage To:
Barrhead Platform 3 (Route section 5)	GBK / SC031	Single (2600)	6m 1439y	6m 1656y

The Scottish region System Review Panel (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 systems to be isolated in a secure manner. This duty was not assessed as part of Interoperability approvals. It is assumed that this will be managed through your established safety management system.

There were two derogations from the NTSN 4.2.4.1. Maximum train current - 4.2.4.2. Mean useful voltage – Reg 14 derogation due to late change in standards

Bridge parapet heights for overbridge OB222/014, OB223/036, OB223/023A1, OB223/022A, OB223/018A1, OB223/018, OB223/015A1, deviations agreed due to late change in standards none are under 1.5m in height (previous requirement was for 1.8m)

Following a risk assessment process, reduced clearances to standing structures as allowed by GLR1210 issue 2 were applied. These should be monitored for any detrimental effects on safety or performance.

The restrictions or limitations of use on the structural subsystem are those contained in the Verification Declaration 167678-NWR-RCD-MPM-000005 and Declaration of Control of Risk 167678-NWR-RCD-MPM-000004 V1.31

The following Limitations apply:

Limitation 1 - ENE NTSN clause 6.1.4.5 Assessment of dynamic behaviour and quality of current collection (Integration into a subsystem): the overhead contact line, 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.

Limitation 2 ENE NTSN clause 4.2.10 Pantograph Gauge and 4.2.13 Pantograph spacing. Additional simulation and testing of pantograph types, number of pantographs, pantograph spacing and authorised speed will be required to operate configurations not within the UK master series Certificate Number: 2444/6/SG/2021/ENE/EN/319 version 3.0 This should be managed by Network Rail's processes and agreed by the Approved Body.

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

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