

Mr. Paul Carter
Design Assurance and Authorisation Manager
Bombardier Transportation UK Ltd.
Registered Office: Litchurch Lane,
Derby,
DE24 8AD

Your Ref

Case Ref PRM-IOP-0334
EIN UK/51/2020/0027

6th May 2020

Contact: Paul Frary
HM Inspector of Railways
25 Cabot Square
London
E14 4QZ
Telephone 0207 282 3776

E-mail paul.frary@orr.gov.uk

Dear Paul

**THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED
AUTHORISATION OF CLASS 345 AGAINST CCS TSI FOR THE ONBOARD USE
OF ETCS NTC, ETCS LEVEL 0, 1 AND 2.**

VEHICLE NUMBERS (INCLUSIVE): 3450001 TO 345070

I refer to your application for authorisation, received on the 26th March 2020.

This letter of authorisation is only valid when accompanied by Appendix 1 and Appendix 2.

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 into service of an on board ETCS NTC and ETCS Level 0, 1 and 2 sub-system for Class 345 vehicles as per Appendix 1.

The ETCS configuration is PVI 6.4.3. Incorporating product version 2.4.1 and TCMS v7.3.1.8. According to functional baseline as described above and according to documents 3EER400028-7392_A and 3EER400024-2788_G.

Configuration is valid for all vehicles as per Appendix 1.

I also refer to your EC Declaration of Verification, reference 3EER400031-2590_Ben dated 26th April 2020 and Article 16 Declaration dated 27th February 2020.

The restrictions or limitations of use on the structural subsystem are those contained in your Declaration of Verification dated 26th April 2020 and contained in your Technical File, reference 3EER400031-2104.

The conditions are summarised below and reproduced in Appendix 2, along with timescales and implementation methodology.

Limitations

There are 33 limitations of use. 31 limitations of use are based on the out of scope functionality (3EER400032-0008 Rev A) and 2 limitations of use are as identified in the Safety Justification Report conclusions (3EER400030-4631 rev A) and echoed in the Assessment Body Report conclusions (AES/556/L18)

Restrictions

1. Compatibility between the vehicle and the infrastructure.

Network Rail Summary of Compatibility (NRSC) shall be issued in accordance with RIS-8270-RST issue 1 prior to trains being put into use.

2. There are 3 restrictions based on NNTR non-conformity at the time of the authorisation.

GE/RT8075 issue 2 AWS/TPWS:

- Subject to permanent Deviation 16-021-DEV Isolation Switch Design

GE/RT8402 issue 2 ETCS DMI:

- Subject to 19-046-DEV - Speed display in MPH only, expires 6th September 2022
- Subject to 19-047-DEV - Ability to enter invalid Train Running Number on the ETCS DMI, expires 30th June 2020

To remove the two conditions relating to GE/RT8402 issue 2, evidence of either a new Deviation from RSSB or compliance with the standard must be submitted to and agreed by a relevant assessing body.

3. There are 84 restrictions based on TSI non-conformity at the time of authorisation (3EER400032-0011 Rev A).

The applicant and NoBo has made specific reference to the following conditions:

Valid only for ETCS routes:

- Not requiring geographical position reporting (numbering 1)
- With one RBC (numbering 2)

- Not requiring limited supervision mode (numbering 3)
- With a single GSM-R data network (numbering 1)
- Not requiring VBC to be set by the driver (numbering 1)

To remove the five conditions above, evidence of compliance must be submitted to and agreed by a relevant assessing body. They must also be completed in the time scales set out in this authorisation.

In addition, the applicant and NoBo has made reference to the following conditions:

- Non-compliant behaviour (numbering 65)
- Non-standard DMI (numbering 11)

These must also be completed in the time scales set out in this authorisation.

NOTE: One condition regarding the driver not being required to set Virtual Balise Covers (VBC), was identified in the Safety Justification Report conclusions (3EER400030-4631 rev A) and echoed in the Assessment Body Report conclusions (AES/556/L18) but has already been identified by the NoBo.

Non-compliances subject to ETCS Maintenance Release 5 and TCMS Release 7.3.2.3 shall be completed prior to trains being put into use.

Non-compliances subject to ETCS Maintenance Release 6 to 10 inclusive and TCMS 7.6 to 8.0 inclusive shall be completed in a timely manner as set out in the ETCS Non-compliance Resolution Plan (3EER400031-1120) to achieve the overarching end completion date of 31st March 2024.

The NSA may request progress on the ETCS Non-compliance Resolution Plan from time to time to demonstrate progression and ensure timely completion of the scheme.

The Technical File should be kept up to date.

The closure plan is based upon document 3EER400031-1120 and referenced to 3EER400032-0011 demonstrating non-compliant behaviour in line with the Safety Justification Report 3EER400030-4631. Any changes in these documents over the course of the maintenance releases shall be reflected in the closure plan.

It is noted that a safety justification report has been produced by the applicant (3EER400030-4631) and has been reviewed by an Assessment Body.

The rolling stock subsystem(s) 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 '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 under Regulation 36, the person who applied for the authorisation shall send particulars to the Registration Entity to enable the registration entity to enter the information on the National Vehicle Register. 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 will be issued with a determination of type in accordance with Commission Implementing Decision 2011/665/EC. The person who applied for the authorisation to place in service will receive the type authorisation after providing the data to the Registration Entity in accordance with Annex II of Commission Implementing Decision 2011/665/EC.

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 rolling stock subsystem(s).

This decision letter will be published on ORR website.

Yours sincerely



Steve Fletcher
Deputy Director, Engineering & Asset Management

Cc

Ian Prosser	Director, Railway Safety Directorate, ORR
Ian Jones	Head of Interoperability, DfT
National Vehicle Register	nvr@networkrail.co.uk
Phil Clarke	Director of Rolling Stock, RFL
Kam Sandhu	HM Inspector of Railways, ORR
Pete Gracey	Head of Interoperability, ORR
Dave Galloway	Professional Head of System Compatibility, NR