

Jagjit (Tony) Rai
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Your Ref 146152-NWR-
SAF-ESS-000033

Our Ref

Case Ref PRM-IOP-0413

IN UK63/2021/0002

Date: 3rd December 2021

Contact: Stephen Williams

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

Dear Jagjit (Tony),

**THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED
AUTHORISATION FOR THE UPGRADE TO THE CONTROL, COMMAND AND
SIGNALLING GSMR TRACKSIDE SUBSYSTEM TO ENABLE IT TO BE USED AS A
BEARER FOR ETCS DATA**

I refer to your application for authorisation, received on the 30th November 2021. Following review of your application, I can confirm that ORR grants an authorisation under regulation 4(1)(a) of the Railways (Interoperability) Regulations 2011, as amended. This authorisation is for the placing in service of the Control, Command & Signalling GSMR trackside subsystem located between the limits as detailed below inclusive.

ELR	Section	Start (Miles.Chains)	End (Miles.Chains)
MLN1	Paddington Station (High Level) (GWML) to Airport Junction (GWML)	0.0	11.20

The restrictions or limitations of use on the structural subsystem are those contained on the declaration of verification dated 24th November 2021 and contained in your technical file, reference 146152-NWR-SAF-ESS-000029 A02 and annex 146152NWR-SAF-ESS-000030 A02, Module SF ApBo 402547/MMRA/ApBo/0021/02 and Module SB ApBo NR/TE/STR0169 Issue 47, and:

1. Cross-border VGCS calls with the SNCF GSM-R network (including RECs) are not implemented

2. For GSM-R acting as the bearer for ETCS data, operation has been demonstrated up to the maximum line speed of 125mph/200kph. This is a limitation of testing (reference SUBSET-093 v2.3.0 clause 6.3.1.4 which refers to support of trackside to train data communications at speeds up to 500 km/h).

3. The GSM-R data network capacity has been verified to support ETCS circuit switched data (CSD) communication for the proposed Crossrail and Heathrow Express December 2019 timetabled services on GWML 0-12MP.
Any increased demand for ETCS timetabled services on GWML 0-12MP shall require GSM-R capacity modelling and analysis to be undertaken to demonstrate that there is sufficient capacity within the GSM-R cell plan to support additional ETCS connectivity via CSD, both in normal and perturbed operation.
If there is insufficient capacity within the GSM-R network to accommodate additional ETCS connectivity via CSD, consideration shall be given to ETCS packet switched data (PSD) operation which will require modifications and upgrade to the GSM-R Infrastructure.

The upgraded 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 as amended by Regulations 21 to 30 of The

Railways (Interoperability) (Miscellaneous Amendments and Revocations) (EU Exit) Regulations 2020. 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 upgraded infrastructure subsystem.

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

Yours sincerely



Steve Fletcher
Deputy Director, Engineering & Asset Management

Cc

Ian Jones	Head of Interoperability, Safety and Standards DfT
David Galloway	Head of System Compatibility, Network Rail
Ian Shannon	Authorisation Manager, Network Rail (Synergy Rail)
Ian Maxwell	ORR Head of Train Control Systems
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