

Mr Ian Harrison  
Network Rail  
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167-169 Westbourne Terrace,  
Paddington, London.  
W2 6XJ

Your Ref: 146152-NWR-LTR-ESS-  
000009 A03

Case Ref: PRM-IOP-0429

IN Number: UK/63/2023/0002

23<sup>rd</sup> November 2023

**Contact: Stephen Williams**

3<sup>rd</sup> Floor, Mallard House, Kings Pool  
1-2 Peasholme Green  
York  
YO1 7PX

Dear Mr Harrison,

**THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED  
AUTHORISATION OF CONTROL, COMMAND AND SIGNALLING (CCS) TRACKSIDE  
SUBSYSTEM RELATING TO THE INSTALLATION OF ETCS LEVEL 2 BASELINE 3MR1  
FOR THE 146152 WESTERN ETCS OVERLAY 0-12MP PROJECT PADDINGTON -  
HEATHROW (STAGE TB2).**

I refer to your application for authorisation, received on the 21<sup>st</sup> November 2023 and technical file report reference 146152-NWR-REP-ESS-000008 A03 dated 21<sup>st</sup> November 2023.

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 the Control, Command and Signalling trackside subsystem as identified in your submission as ETCS Level 2 (Project Baseline 6.2.2, RBC software 8.3.2 (R2), MSS software 3.3.1 and NRG software C3.1). This is only valid to the limits detailed in Appendix 1 which forms an integral part of this letter.

It is noted that the subsystem has been assessed against set of specifications #2 (ETCS Baseline 3 Maintenance Release 1) of the CCS National Technical Specification Notice (NTSN) dated 1<sup>st</sup> January 2021.

I refer to your UK Declaration of Verification and Attachment 1 146152-NWR-REP-ESG-000015 A03. The restrictions or limitations of use on the structural subsystem are those contained in your Technical File. These are related to the Control, Command and Signalling structural subsystems.

It is noted that ETCS Level 2 will be used as an overlay onto the existing signalling system and an option to implement a “Level 2 No Signals” system in future works. This should be undertaken in compliance with legislation in force at that time.



I also refer to your Declaration of Control of Risk according to Article 16 (EU) 402/2013 as amended, 146152-NWR-REP-ESS-000007 dated 10<sup>th</sup> November 2023. At the time of authorisation, there remained one recommendation and four observations outstanding. These should be addressed as detailed in the Safety Assessment Report.

This authorisation supplements, the original 146152 Western ETCS Overlay 0-12MP Project Paddington – Heathrow (Stage A) authorisation granted on 30<sup>th</sup> August 2018 (PRM-IOP-0243).

I should remind you that our published guidance on the approach to authorisations is available on our website. It is our expectation that this is used, and processes managed by the applicant. Our guidance requires four weeks from receipt of the application to issue a letter of authorisation. Applications for authorisations should be made at the earliest possible opportunity and not within four weeks of when they are needed for successful completion of the project. We reserve the right to extend this time depending upon the completeness of the application. The four-week timer will effectively be paused until a compliant application is received. The applicant should consider this risk in planning project milestones. We have been raising concerns about Network Rail not using this guidance and are now reviewing our policy and guidance to prevent further inappropriate use of the authorisation process. Failure to follow the guidance may delay the authorisation process outside the four-week period.

The Control, Command and Signalling 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 '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 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 infrastructure subsystem.

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

Yours sincerely

**Steve Fletcher**  
**Deputy Director, Engineering & Asset Management**

Cc

James Le Grice  
David Galloway  
Giles Turner  
ORR Interoperability  
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Head of Interoperability, Safety and Standards DfT  
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ORR HM Inspector of Railway  
Project Manager, Network Rail



**Appendix 1: Limits of Authorisation for Paddington – Heathrow**  
**ETCS Project Stage TB2**

ELR	Line Name	Section of Line (SoL) Start	Section of Line (SoL) End	Description	Start (meters)	Measuring Point (Balise Group / Buffer Stop)	End (meters)	Measuring Point (Balise Group / Buffer Stop)
MLN1	Down Main	ACTON	STOCKLEY JUNCTION	Acton to Stockley Jun	7151.50m	BG001411 HO_SN179DN	19838.92m	BG001479 LT_8206B_N_
MLN1 / HLL	Down Main	ACTON	HEATHROW TERMINAL 4 <sup>1</sup>	Acton to Heathrow Terminal 4 <sup>1</sup> Plat 1 & Plat 2	7151.50m	BG001411 HO_SN179DN	Plat 1 26629m Plat 2 26644m	bs1ba  bs2ba
MLN1 / HLL	Down Main	ACTON	HEATHROW TERMINAL 5 <sup>1</sup>	Acton to Heathrow Terminal 5 <sup>1</sup> Plat 3 & Plat 4	7151.50m	BG001411 HO_SN179DN	Plat 3 26179m Plat 4 26183m	bs3ba  bs4ba
MLN1 / WEL	Down Main	ACTON	GREENFORD	Acton to Down Greenford	7151.50m	BG001411 HO_SN179DN	11934.96m	BG001836 LT_DB7_N_
MLN1	Down Relief	ACTON	STOCKLEY JUNCTION	Acton to Stockley Jun	6598.70m	BG001901 HO_SN175DN	19913.43m	BG001991 LT_8218B_N_
MLN1 / HLL	Down Relief	ACTON	HEATHROW TERMINAL 4 <sup>1</sup>	Acton to Heathrow Terminal 4 <sup>1</sup> Plat 1 & Plat 2	6598.70m	BG001901 HO_SN175DN	Plat 1 26629m Plat 2 26644m	bs1ba  bs2ba
MLN1 / HLL	Down Relief	ACTON	HEATHROW TERMINAL 5 <sup>1</sup>	Acton to Heathrow Terminal 5 <sup>1</sup> Plat 3 & Plat 4	6598.70m	BG001901 HO_SN175DN	Plat 3 26179m Plat 4 26183m	bs3ba  bs4ba
MLN1 / WEL	Down Relief	ACTON	GREENFORD	Acton to Down Greenford	6598.70m	BG001901 HO_SN175DN	11934.96m	BG001836 LT_DB7_N_
MLN1	Up Main	IVER	ACTON	Iver to Acton	25520.98m	BG002000 NR_T488	9440.00m	BG001314 LT_SN204_N_
MLN1 / AWL	Up Main	IVER	ACTON WELLS	Iver to Acton Wells Up Poplar	25520.98m	BG002000 NR_T488	6218.00m	BG001825 LT_AW146_N_
MLN1 / HAN	Up Main	IVER	GREENFORD	Iver to Greenford via Down West Loop	25520.98m	BG002000 NR_T488	11934.96m	BG001836 LT_DB7_N_
MLN1	Up Relief	IVER	ACTON	Iver to Acton	24413m	BG001999 NR_8285	8806.00m	BG001313 LT_SN202_N_
MLN1 / AWL	Up Relief	IVER	ACTON WELLS	Acton Wells Jun Up Poplar to Iver	24413m	BG001999 NR_8285	6218.00m	BG001825 LT_AW146_N_
MLN1 / HAN	Up Relief	IVER	GREENFORD	Iver to Greenford via Down West Loop	24413m	BG001999 NR_8285	11934.96m	BG001836 LT_DB7_N_



ELR	Line Name	Section of Line (SoL) Start	Section of Line (SoL) End	Description	Start (meters)	Measuring Point (Balise Group / Buffer Stop)	End (meters)	Measuring Point (Balise Group / Buffer Stop)
HLL / MLN1	Up Airport	HEATHROW	ACTON	Terminal 4 <sup>1</sup> Plat 1 & Plat 2 to Acton Up Main	Plat 1 26629m Plat 2 26644m	bs1ba  bs2ba	9440.00m	BG001314 LT_SN204_N_
HLL / MLN1	Up Airport	HEATHROW	ACTON	Terminal 4 <sup>1</sup> Plat 1 & Plat 2 to Acton Up Relief	Plat 1 26629m Plat 2 26644m	bs1ba  bs2ba	8806.00m	BG001313 LT_SN202_N_
HLL / MLN1	Up Airport	HEATHROW	ACTON	Terminal 5 <sup>1</sup> Plat 3 & Plat 4 to Acton Up Main	Plat 3 26179m Plat 4 26183m	bs3ba  bs4ba	9440.00m	BG001314 LT_SN204_N_
HLL / MLN1	Up Airport	HEATHROW	ACTON	Terminal 5 <sup>1</sup> Plat 3 & Plat 4 to Acton Up Relief	Plat 3 26179m Plat 4 26183m	bs3ba  bs4ba	8806.00m	BG001313 LT_SN202_N_
AWL / MLN1	Down Poplar	ACTON WELLS	STOCKLEY JUNCTION	Acton Wells Jun to Stockley Jun Down Relief	6255.02m	BG001995 NR_SN177DN	19913.43m	BG001991 LT_8218B_N_
AWL / MLN1	Down Poplar	ACTON WELLS	STOCKLEY JUNCTION	Acton Wells Jun to Stockley Jun Down Main	6255.02m	BG001995 NR_SN177DN	19838.92m	BG001479 LT_8206B_N_
WEL / MLN1	Up Greenford	GREENFORD	ACTON	Greenford to Acton Up Relief	11748.55m	BG001835 NR_SN6155	8806.00m	BG001313 LT_SN202_N_
WEL / MLN1	Up Greenford	GREENFORD	ACTON	Greenford to Acton Up Main	11748.55m	BG001835 NR_SN6155	9440.00m	BG001314 LT_SN204_N_
HAN / MLN1	Up West Loop	GREENFORD	STOCKLEY JUNCTION	Greenford to Stockley Jun Down Main	11748.55m	BG001835 NR_SN6155	19838.92m	BG001479 LT_8206B_N_
HAN / MLN1	Up West Loop	GREENFORD	STOCKLEY JUNCTION	Greenford to Stockley Jun Down Relief	11748.55m	BG001835 NR_SN6155	19913.43m	BG001991 LT_8218B_N_

Note<sup>1</sup>: These lines are owned by Heathrow Airport Holdings, with Network Rail Infrastructure Limited acting as Contracting Entity and Infrastructure Manager on their behalf.