

Jane Austin  
Western House  
1 Holbrook Way  
Swindon, SN1 1BD

Case Ref: - PRM-IOP-0313

EINUK/62/2019/0002

Date 12<sup>th</sup> December 2019

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

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

Dear Jane Austin

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

### **TGWP Didcot to Bristol Electrification project which includes Reading to Newbury and Swindon to Chippenham**

Further to your application for authorisation received on the 4<sup>th</sup> November 2019 with Technical File references:

197308-A0057 AP20-22 Verification Report Issue 04  
197308-A0079 AP24 Verification Report Issue 03  
197308-A0092 AP25a Verification Report Issue 04  
197308-A0109 AP21 Verification Report Issue 3  
197308-A0118 AP25b Verification Report Issue 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 in service of new energy subsystem, which is titled: TGWP Didcot to Bristol Electrification project which includes Reading to Newbury and Swindon to Chippenham.

The scope of works included within the assessment for TGWP Didcot to Bristol Electrification is as follows:

- Installation of Series 1 Overhead Contact Line System from Didcot to Bristol and installation of ATF feeder with new associated traction power distribution, communications, protection and control for the OLE system

The scope of authorisation is limited to the following:

Area	Interoperability Authorisation Package (AP)	CSM Safety Assessment Report (SAR)	Route Section (RS)	ELR	From	To
Westbury line Jn to Southcote Jn	AP20/22, AP21	EE10	RS1a, RS2	BKE	36m 17ch	37m 62ch
Southcote Jn to Newbury	AP21	EE10	RS2	BHL	37m 62ch	53m 36ch
Reading Feeder Line (Caversham Rd Jn – Oxford Rd Jn)	AP20/22	EE10	RS1a	RFM/RFR	36m 13ch	36m 74ch
Reading West Curve	AP20/22	EE10	RS1a	RWC	0m 00ch	0m 67ch
Didcot Parkway to Chippenham	AP20/22, AP24, AP25b	EE5, EE11	RS3, RS5, RS7C	MLN1	53m 13ch	93m 31ch
Westerleigh Jn to MPCO	AP25a	EE6&7	RS6D	YAT	120m 60ch	121m 28ch
Wotton Bassett Jn to Bristol Parkway	AP24, AP25a	EE5, EE6&7	RS5, RS6D & RS6P	SWB	82m 72ch	111m 79ch

The limits of authorisation are listed below:

Lines	ELR	Track ID	From:	To:
Up Westbury	BKE	1100	36m17ch	37m 62ch
Down Westbury	BKE	2100	36m17ch	37m 62ch
Up Westbury	BHL	1100	37m 62ch	53m 36ch
Down Westbury	BHL	2100	37m 62ch	53m 36ch
Theale Goods Loop	BHL	3300	41m 22ch	41m 54ch
Down Towney Loop	BHL	2500	43m 39ch	44m 11ch
Up Newbury Loop	BHL	1500	52m 77ch	53m 15ch
Down Newbury Loop	BHL	2500	52m 13ch	53m 15ch
Up Newbury Bay	BHL	3600	52m 79ch	53m 06ch
Reading Feeder Main	RFR	3100	36m 13ch	36m 74ch
Reading Feeder Relief	RFR	3200	36m 13ch	36m 74ch
Up West Curve	RWC	1100	00m 00ch	00m 67ch
Down West Curve	RWC	2100	00m 00ch	00m 67ch
Up Main	MLN1	1100	53m 13ch	91m 31ch
Down Main	MLN1	2100	53m 13ch	91m 31ch
Up Relief	MLN1	1200	53m 13ch	53m 20ch
Didcot Goods Loop	MLN1	1500	53m 20ch	53m 55ch
Didcot Relief	MLN1	3200	53m 13ch	56m 32ch
Down Steventon Goods Loop	MLN1	2500	55m 19ch	56m 32ch
Up Relief	MLN1	1200	60m 22ch	64m 00ch
Down Relief	MLN1	2200	60m 22ch	64m 00ch
Up Swindon Goods loop	MLN1	1500	75m 63ch	76m 26ch
Down Swindon Goods	MLN1	2300	76m 26ch	77m 08ch
Up Swindon Reception	MLN1	1300	76m 26ch	77m 08ch
Up Swindon Passenger Loop	MLN1	3401	77m 08ch	77m 40ch
Down Swindon Passenger Loop	MLN1	3403	75m 63ch	77m 40ch
Swindon Platform 2	MLN1	3602	77m 23ch	77m 28ch
Up Relief	MLN1	1200	77m 40ch	78m 43ch
Up Charfield	YAT	1100	120m 60ch	121m 28ch

Down Charfield	YAT	2100	120m 60ch	121m 28ch
Up Wootton Bassett Goods Line	SWB	1300	82m 72ch	83m 65ch
Up Badminton	SWB	1100	83m 07ch	111m 79ch
Down Badminton	SWB	2100	83m 07ch	111m 79ch
Down Goods Loop	SWB	2300	93m 70ch	94m 28ch
Up Goods Loop	SWB	1300	94m 28ch	94m 62ch
Up Passenger Loop	SWB	1300	111m 35ch	111m 73ch
Platform 4 Line	SWB	1301	111m 40ch	111m 73ch
Down Passenger Loop (previously Down Goods Loop)	SWB	2500	111m 35ch	111m 78ch
Down Goods Loop (previously Down REC) <sup>1</sup>	SWB	2300	111m 40ch	111m 73ch
Down Bristol Parkway Relief (previously part of Down Goods Loop)	SWB	3907	111m 73ch	111m 79ch

The restrictions or limitations of used on the structural subsystem are those contained in the declaration of verification W1001B-NPT-STA-ESS-000018 A02 and declaration of control of risk W1001B-NPT-STA-ESS-000017 A01. The Wales and Western System Review Panel (WW SRP) have endorsed this project and are satisfied that any identified hazards both legacy and residual hazards have been adequately closed and/or transferred to the appropriate body before placing in service in accordance with declaration of control of risk W1001B-NPT-STA-ESS-000017 A01. There were no derogations from the TSIs and no derogations from National Notified Technical Rules.

The project demonstrated compliance with CDM/CSM with the following:

- Used Series 1 overhead line equipment that reduces the electrical footprint compared to Mark 3B and removed over 90 reliability issues associated with Mark 3B reducing the probability of site access for repairs / wires down.
- Improved isolation and earthing facilities by using a remotely controlled motorised mechanism, removing the need to attend site and reducing the time needed to take an isolation, leading to improved access times to complete other essential on track maintenance works
- Pioneering the use of a new distribution protection technology to enable better fault detection, isolating fault and re-energising unaffected sections quickly (within 5 seconds), getting trains back moving faster than previously and putting passengers first.

The following Restrictions and Conditions apply

**Restriction 1** This restriction is applied to limit use to trains that meet the terms of the ISV applicability table in terms of number of pantographs, pantograph spacing and authorised speed. Pantograph spacing for overhead contact line

**Design Clause 4.2.13.** Only the pantograph model/manufacturer and train configuration combinations quoted in the Series 1 ISV applicability table may be utilised. Additional pantograph model/manufacturer and train configuration combinations may be demonstrated by further simulation and testing. This requirement is to ensure route compatibility for new rolling stock. Network rail to ensure compliance through their safety management systems.

**Restriction 2** - This restriction is applied to limit the use to trains that meet the terms of the ISV applicability table in terms of the type, width and shape of pantographs.

**Pantograph Gauge Clause 4.2.10** Only pantograph profiles assessed as compliant and detailed in the Series 1 assessment applicability table or as subsequently demonstrated may be utilised. This requirement is to ensure route compatibility for new rolling stock. Network rail to ensure compliance through their safety management systems.

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

A handwritten signature in black ink, appearing to read 'Steve Fletcher', written in a cursive style.

Steve Fletcher

Deputy Director of Engineering & Asset Management

Copies: .

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

Gary Taylor, ORR, Senior Interoperability & Standards Executive, One Kemble Street, London. WC2B 4AN.