

Mr Steve Leigh
Program Manager
Network Rail Telecoms
The Quadrant, Level 2 Caldecotte,
Eldergate
Milton Keynes
Buckinghamshire
MK9 1HA

Your Ref : OP158365
R00001

Case Ref : PRM-IOP-0333

EIN Number : As listed

Date: 10th February 2020

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

Dear Steve,

**THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED
TYPE AUTHORISATION OF GSMR V4.0 FITTED TO THE VEHICLES LISTED IN
THIS LETTER IN CONFORMITY WITH EUROPEAN REGISTER OF AUTHORISED
TYPE REFERENCE 11-095-0001-5-001.**

I refer to your application for type authorisation, received on 5th February 2020. Following review of your application, I can confirm that ORR grants an authorisation under regulation 9 of the Railways (Interoperability) Regulations 2011, as amended.

This authorisation is for the placing in service of V4.0 GSM-R Cab Mobile sub system fitted with an interference resistant transceiver. In addition, there is an option to replace the current GSM-R antenna with a combined GSM-R/GPS antenna and to fit and additional LTE antenna.

- GSM-R Cab Mobile Type - GSM-R V4.0 Cab Mobile SVR400+ with NR4.0 software (Build 1127) which incorporate an ETSI TS 102 933 V 2.1.1 compliant transceiver.
- GSM-R/GPS antenna (Fitment of combined GSM-R/GPS antennae is optional)
 - Huber & Suhner – SWA-0825/360/5/30/DFRX30
 - Polomarconi – BGLD1/S
- LTE antenna (Fitment of LTE antennae is optional)
 - Huber & Suhner – SWA-0825/360/5/30/MIMO
 - Panorama Antennas – TRNM-7-60-NJ
 - Polomarconi – T01811814
 - Huber & Suhner – Sencity Rail MIMO Antenna 1399.17.0222

This conforms to European Register of Authorised Types (ERATV) type 11-095-0001-5-001

This authorisation applies to the following inclusive.

Operator	Class	Vehicle	Cab	V4.0 Installation Date	V4.0 Serial Number	Transceiver Type	EIN
Freightliner	66	66413	A	13/11/2019	06906427	Triorail	UK/51/2020/0001
Freightliner	66	66414	A	28/01/2020	06908364	Triorail	UK/51/2020/0001
Freightliner	66	66415	A	18/11/2019	06884032	Triorail	UK/51/2020/0001
Freightliner	66	66416	A	11/11/2019	06906437	Triorail	UK/51/2020/0001
Freightliner	66	66418	A	21/11/2019	06166858	Triorail	UK/51/2020/0001
Freightliner	66	66420	A	15/01/2020	06908371	Triorail	UK/51/2020/0001
Freightliner	66	66501	A	19/11/2019	06167059	Triorail	UK/51/2020/0001
Freightliner	66	66502	A	16/01/2020	06911275	Triorail	UK/51/2020/0001
Freightliner	66	66504	A	21/01/2020	06171086	Triorail	UK/51/2020/0001
Freightliner	66	66506	A	31/01/2020	06908353	Triorail	UK/51/2020/0001
Freightliner	66	66509	A	22/11/2019	06081383	Triorail	UK/51/2020/0001
Freightliner	66	66512	A	22/11/2019	06908363	Triorail	UK/51/2020/0001
Freightliner	66	66516	A	15/11/2019	06906445	Triorail	UK/51/2020/0001
Freightliner	66	66517	A	14/11/2019	06906435	Triorail	UK/51/2020/0001
Freightliner	66	66519	A	23/01/2020	06908355	Triorail	UK/51/2020/0001
Freightliner	66	66520	A	25/11/2019	06166433	Triorail	UK/51/2020/0001
Freightliner	66	66522	A	23/01/2020	06908369	Triorail	UK/51/2020/0001
Freightliner	66	66524	A	22/01/2020	06190928	Triorail	UK/51/2020/0001
Freightliner	66	66538	A	12/11/2019	06884027	Triorail	UK/51/2020/0001
Freightliner	66	66540	A	16/01/2020	06908370	Triorail	UK/51/2020/0001
Freightliner	66	66543	A	12/11/2019	06906433	Triorail	UK/51/2020/0001
Freightliner	66	66544	A	19/11/2019	06166434	Triorail	UK/51/2020/0001
Freightliner	66	66545	A	18/11/2019	06906446	Triorail	UK/51/2020/0001
Freightliner	66	66546	A	12/11/2019	06879029	Triorail	UK/51/2020/0001
Freightliner	66	66550	A	14/11/2019	06884036	Triorail	UK/51/2020/0001
Freightliner	66	66553	A	17/01/2020	06908358	Triorail	UK/51/2020/0001
Freightliner	66	66558	A	15/12/2019	06168726	Triorail	UK/51/2020/0001
Freightliner	66	66560	A	29/01/2019	06914023	Triorail	UK/51/2020/0001
Freightliner	66	66561	A	27/01/2020	06912770	Triorail	UK/51/2020/0001
Freightliner	66	66564	A	27/01/2019	06908372	Triorail	UK/51/2020/0001
Freightliner	66	66565	A	27/01/2020	06912772	Triorail	UK/51/2020/0001
Freightliner	66	66569	A	22/01/2020	06908387	Triorail	UK/51/2020/0001
Freightliner	66	66572	A	29/01/2020	06912771	Triorail	UK/51/2020/0001
Freightliner	66	66585	A	12/11/2019	06884034	Triorail	UK/51/2020/0001
Freightliner	66	66588	A	30/01/2020	06914009	Triorail	UK/51/2020/0001
Freightliner	66	66589	A	28/01/2020	06166005	Triorail	UK/51/2020/0001
Freightliner	66	66591	A	07/12/2019	06168510	Triorail	UK/51/2020/0001
Freightliner	66	66592	A	12/11/2019	06906434	Triorail	UK/51/2020/0001
Freightliner	66	66594	A	22/01/2020	06908375	Triorail	UK/51/2020/0001
Freightliner	66	66598	A	15/11/2019	06906436	Triorail	UK/51/2020/0001
Freightliner	66	66602	A	28/11/2019	06155627	Triorail	UK/51/2020/0001
Freightliner	66	66603	A	11/11/2019	06906465	Triorail	UK/51/2020/0001
Freightliner	66	66604	A	18/11/2019	06077340	Triorail	UK/51/2020/0001
Freightliner	66	66605	A	24/01/2020	06908391	Triorail	UK/51/2020/0001

Freightliner	66	66606	A	12/11/2019	06906442	Triorail	UK/51/2020/0001
Freightliner	66	66607	A	22/01/2020	06911272	Triorail	UK/51/2020/0001
Freightliner	66	66614	A	21/01/2020	06908383	Triorail	UK/51/2020/0001
Freightliner	66	66617	A	24/01/2020	06911276	Triorail	UK/51/2020/0001
Freightliner	66	66618	A	22/11/2019	06908368	Triorail	UK/51/2020/0001
Freightliner	66	66952	A	31/01/2020	06914007	Triorail	UK/51/2020/0001
Freightliner	66	66510	A	22/11/2019	06737511	Funkwerk	UK/51/2020/0001
Freightliner	66	66534	A	25/11/2019	06737509	Funkwerk	UK/51/2020/0001
Freightliner	66	66562	A	25/11/2019	06737866	Funkwerk	UK/51/2020/0001
Freightliner	66	66567	A	22/11/2019	06737490	Funkwerk	UK/51/2020/0001
Freightliner	70	70011	A	18/11/2019	06401305	Triorail	UK/51/2020/0002
Freightliner	86	86604	A	19/11/2019	06249041	Triorail	UK/51/2020/0003
Freightliner	86	86604	B	19/11/2019	06166856	Triorail	UK/51/2020/0003
Freightliner	86	86607	B	25/11/2019	06908354	Triorail	UK/51/2020/0003
Freightliner	86	86607	A	25/11/2019	06908367	Triorail	UK/51/2020/0003
Freightliner	86	86638	A	18/11/2019	06170779	Triorail	UK/51/2020/0003
Freightliner	86	86638	B	18/11/2019	06166855	Triorail	UK/51/2020/0003
Freightliner	90	90042	A	19/11/2019	06261652	Triorail	UK/51/2020/0004
Freightliner	90	90043	A	18/11/2019	06239152	Triorail	UK/51/2020/0004
Freightliner	90	90048	A	18/11/2019	06126214	Triorail	UK/51/2020/0004
Freightliner	90	90049	A	18/11/2019	06063684	Triorail	UK/51/2020/0004
Govia Thameslink Railway	171	171201	A	21/11/2019	06908350	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171201	B	21/11/2019	06907905	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171401	B	20/11/2019	06908347	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171401	A	20/11/2019	06907899	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171721	A	21/11/2019	06906462	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171721	B	21/11/2019	06907907	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171723	B	11/11/2019	06907876	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171723	A	11/11/2019	06907872	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171801	B	22/11/2019	06908349	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171801	A	23/11/2019	06907908	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171803	B	13/11/2019	06879023	Triorail	UK/51/2020/0005
Govia Thameslink Railway	171	171803	A	13/11/2019	06905451	Triorail	UK/51/2020/0005
Govia Thameslink Railway	313	313201	A	29/01/2020	06908376	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313201	B	29/01/2020	06908343	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313203	B	30/01/2020	06283486	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313203	A	30/01/2020	06907910	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313204	B	12/11/2019	06907890	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313204	A	12/11/2019	06907889	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313212	B	22/11/2019	06907866	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313212	A	22/11/2019	06907880	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313214	B	14/11/2019	06906451	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313214	A	14/11/2019	06906452	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313219	A	31/01/2020	06908342	Triorail	UK/51/2020/0006
Govia Thameslink Railway	313	313219	B	31/01/2020	06908379	Triorail	UK/51/2020/0006
Govia Thameslink Railway	365	365508	B	18/11/2019	06906407	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365508	A	18/11/2019	06906409	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365511	B	28/01/2020	06906422	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365511	A	28/01/2020	06909290	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365528	B	26/11/2019	06909307	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365528	A	26/11/2019	06911269	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365530	A	12/11/2019	06906460	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365530	B	12/11/2019	06906416	Triorail	UK/51/2020/0007

Govia Thameslink Railway	365	365532	B	19/11/2019	06906457	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365532	A	19/11/2019	06907871	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365538	A	25/11/2019	06121150	Triorail	UK/51/2020/0007
Govia Thameslink Railway	365	365538	B	25/11/2019	06906415	Triorail	UK/51/2020/0007
Govia Thameslink Railway	377	377106	B	25/11/2019	06906430	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377106	A	24/12/2019	06311797	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377117	B	31/01/2020	06911290	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377117	A	31/01/2020	06911279	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377119	A	15/11/2019	06907885	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377119	B	12/11/2019	06907863	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377122	B	15/01/2020	06914024	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377122	A	15/01/2020	06912765	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377133	A	18/11/2019	06906448	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377133	B	18/11/2019	06904071	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377205	B	26/11/2019	06906424	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377205	A	26/11/2019	06907870	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377206	A	30/01/2020	06911297	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377206	B	30/01/2020	06911299	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377207	B	19/11/2019	06907898	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377207	A	19/11/2019	06905450	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377209	B	20/11/2019	06146645	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377209	A	20/11/2019	06121156	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377214	B	12/11/2019	06906456	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377214	A	12/11/2019	06906447	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377301	B	11/11/2019	06907877	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377301	A	11/11/2019	06907875	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377305	A	26/11/2019	06906431	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377305	B	26/11/2019	06911296	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377308	B	25/11/2019	06908346	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377308	A	25/11/2019	06907906	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377309	A	30/01/2020	06911288	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377309	B	29/01/2020	06911298	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377310	B	20/11/2019	06154585	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377310	A	20/11/2019	06907903	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377315	B	18/11/2019	06906449	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377315	A	18/11/2019	06906450	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377427	B	19/11/2019	06905452	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377427	A	19/11/2019	06907894	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377463	A	26/11/2019	06909284	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377463	B	26/11/2019	06227407	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377603	A	20/11/2019	06906428	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377603	B	20/11/2019	06884035	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377606	B	13/11/2019	06221430	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377606	A	13/11/2019	06208972	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377621	A	29/01/2020	06906463	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377621	B	29/01/2020	06909294	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377707	A	21/11/2019	06906420	Triorail	UK/51/2020/0008
Govia Thameslink Railway	377	377707	B	21/11/2019	06906455	Triorail	UK/51/2020/0008
Govia Thameslink Railway	387	387102	B	26/11/2019	06909279	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387102	A	26/11/2019	06911267	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387107	A	28/01/2020	06907874	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387107	B	28/01/2020	06907895	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387110	B	25/11/2019	06222250	Triorail	UK/51/2020/0009

Govia Thameslink Railway	387	387110	A	25/11/2019	06906419	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387114	B	11/11/2019	06907873	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387114	A	12/11/2019	06906414	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387116	B	18/11/2019	06905455	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387116	A	18/11/2019	06907904	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387119	A	19/11/2019	06907881	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387119	B	19/11/2019	06906412	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387204	A	22/11/2019	06906423	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387204	B	22/11/2019	06907869	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387217	B	13/11/2019	06906453	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387217	A	13/11/2019	06907879	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387222	B	21/11/2019	06220046	Triorail	UK/51/2020/0009
Govia Thameslink Railway	387	387222	A	21/11/2019	06218578	Triorail	UK/51/2020/0009
Govia Thameslink Railway	455	455805	B	22/11/2019	06180505	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455817	B	12/11/2019	06906444	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455817	A	12/11/2019	06907878	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455829	A	30/01/2020	06906464	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455829	B	30/01/2020	06908352	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455830	A	31/01/2020	06906458	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455830	B	31/01/2020	06909295	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455844	B	22/11/2019	06906429	Triorail	UK/51/2020/0010
Govia Thameslink Railway	455	455844	A	22/11/2019	06906454	Triorail	UK/51/2020/0010
Merseyrail	507	507002	A	27/01/2020	06737894	Funkwerk	UK/51/2020/0011
Merseyrail	507	507002	B	27/01/2020	06737888	Funkwerk	UK/51/2020/0011
Merseyrail	507	507003	A	26/11/2019	06737504	Funkwerk	UK/51/2020/0011
Merseyrail	507	507003	B	26/11/2019	06737867	Funkwerk	UK/51/2020/0011
Merseyrail	507	507030	B	20/11/2019	06737874	Funkwerk	UK/51/2020/0011
Merseyrail	507	507030	A	20/11/2019	06737513	Funkwerk	UK/51/2020/0011
Merseyrail	508	508104	B	30/01/2020	06737889	Funkwerk	UK/51/2020/0012
Merseyrail	508	508104	A	30/01/2020	06737884	Funkwerk	UK/51/2020/00112
Merseyrail	508	508117	B	22/11/2019	06737890	Funkwerk	UK/51/2020/00212
Merseyrail	508	508117	A	22/11/2019	06737882	Funkwerk	UK/51/2020/00312
Merseyrail	508	508120	B	22/11/2019	06737879	Funkwerk	UK/51/2020/00412
Merseyrail	508	508120	A	22/11/2019	06737508	Funkwerk	UK/51/2020/00512
Merseyrail	508	508139	A	29/11/2019	06737516	Funkwerk	UK/51/2020/00612
Merseyrail	508	508139	B	29/11/2019	06737885	Funkwerk	UK/51/2020/00712
Merseyrail	508	508140	A	10/01/2020	06737891	Funkwerk	UK/51/2020/00812
Merseyrail	508	508140	B	10/01/2020	06737878	Funkwerk	UK/51/2020/00912
South Western Railway	158	158881	B	19/11/2019	06737482	Funkwerk	UK/51/2020/00913
South Western Railway	158	158881	A	19/11/2019	06737497	Funkwerk	UK/51/2020/00913
South Western Railway	158	158882	A	20/11/2019	06831537	Funkwerk	UK/51/2020/00913
South Western Railway	158	158882	B	20/11/2019	06737484	Funkwerk	UK/51/2020/00913

The restrictions or limitations of use on the structural subsystem are those referenced in the Determination of Type.

The rolling stock 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 declaration of conformity to an authorised type of railway vehicle, documentation recording any alterations, and maintenance manuals in relation to the subsystem, keeping them up to date and making them available to the ORR in accordance with Regulation 19.

If you are not the owner of the authorised subsystem you shall within 60 days, in accordance with Regulation 19(3), transfer the declaration of conformity to an authorised type of railway vehicle, documentation recording any alterations, and maintenance manuals in relation to the subsystem 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 declaration of conformity to an authorised type of railway vehicle, documentation recording any alterations, and maintenance manuals in relation to the subsystem 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.

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.

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 - ORR Deputy Director, Railway Planning and Performance.

Cc

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