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Your Ref L-4390/ORR/001 (A0)

Case Ref PRM-IOP-0288

Identification Number
UK/51/2021/0052

Date 27 July 2021

Contact: Giles Turner

Dear Mr Martinez,

**THE RAILWAYS (INTEROPERABILITY) REGULATIONS 2011, AS AMENDED
FIRST AUTHORISATION OF CLASS 777 MERSEY ELECTRIC MULTIPLE UNIT 777053**

I refer to your application for authorisation, received on 18 June 2021. Following review of your application, I can confirm that ORR grants a first authorisation under regulation 4(1)(a) of The Railways (Interoperability) Regulations 2011, as amended. This authorisation is for the placing in service of the Class 777 Electric Multiple Unit numbered 777053, composed of individual vehicles numbered in accordance with Appendix 1.

The restrictions or limitations of use on the structural subsystem are those referenced on the UK Declaration of Verification UK/00000000101052/2021/000001 dated 18 June 2021 and contained in section 8 of your technical file, reference BU_4099883a.

Constraints and restrictions:

- 01 The Stadler Mersey units have been assessed for operation on the European Union railway system. Specific cases have been considered for Great Britain only.
- 02 The Stadler Mersey units have been assessed for operation in the predefined formation shown in the following table:

Class	Description	Consist
777	Electric Multiple Unit (EMU)	4 – car

- 03 Class 777 units have been assessed for operation at a maximum speed of 75 mph (120 km/h).
- 04 The Class 777 units have been assessed for rescue operation at a speed of 20mph (30km/h).
- 05 The Class 777 units have been assessed for operation in single unit configuration and for operation in multiple formations of up to two units (8 cars).
- 06 The Class 777 have been assessed for operation with the P8 wheel profile (which is identified in GM/RT2466).
- 07 The Class 777 are intended to operate on 3rd rail electrified infrastructure (so compliance with Clause 5.2 of GM/RT2130 has been assessed).
- 08 In accordance with LOC & PAS TSI Clause 4.1.3, the Class 777 units have been assessed as a:
 - Unit designed to carry passengers.
 - Unit fitted with a driver's cab.
 - Unit fitted with traction equipment.
 - Electric unit, defined as a unit supplied with electric energy by electrification system(s) specified in the Energy TSI (750V DC only).
- 09 In accordance with LOC & PAS TSI Clause 4.1.4, the Class 777 units have been classified as "Category A passenger rolling stock" for fire safety.
- 10 Material properties have been assessed in accordance with LOC & PAS TSI Clause 4.2.10.2.1. The Class 777 units are classified as Operation Category 4 and Design Category N in accordance with EN45545-1. Passenger seats have been assessed in accordance with GMRT2130 and BS6853 (Category 1a).
- 11 In accordance with LOC & PAS TSI Section 4.2.6.1. The Class 777 units have been assessed for operation in the following environmental conditions:
 - Temperature – EN50125-1:2014 Clause 4.3 climatic zone T1.
 - Snow, Ice and hail – EN50125-1:2014 Clause 4.7 (nominal conditions).

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 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 may apply to the ORR for a determination of type in accordance with Commission Implementing Decision 2018/1614 as amended by Regulation 20 of The Railways (Interoperability) (Miscellaneous Amendments and Revocations) (EU Exit) Regulations 2020.

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



Steve Fletcher
Deputy Director Engineering and Asset Management

cc:

Ian Jones	Head of Interoperability, Safety and Standards DfT
Nigel Bunce	ORR HM Inspector of Railways
Richard Byrne	ORR HM Inspector of Railways
Sarah Cairns	ORR HM Principal Inspector of Railways
Pete Gracey	ORR Head of Interoperability and Rail Vehicle Engineering
Ian Prosser	ORR Director, Railway Safety
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Appendix 1: vehicle numbers

Unit	DTS(B)	DTS(B) EVN	MS(C)	MS(C) EVN	MS(D)	MS(D) EVN	DTS(A)	DTS(A) EVN
777053	427053	947004270536	428053	947004280535	429053	947004290534	430053	947004300531