



Department  
for Transport

# Rail Vehicle Accessibility: Exemption application

## Tyne and Wear Metro

**Moving Britain Ahead**

The Department for Transport has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the Department's website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact the Department.

Department for Transport  
Great Minster House  
33 Horseferry Road  
London SW1P 4DR  
Telephone 0300 330 3000  
Website [www.gov.uk/dft](http://www.gov.uk/dft)  
General enquiries: <https://forms.dft.gov.uk>



© Crown copyright 2017

Copyright in the typographical arrangement rests with the Crown.

You may re-use this information (not including logos or third-party material) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/> or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk)

Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

# Contents

Foreword	4
1. Exemption application	5
Annex A: Network Map	8
Annex B: Platform step/gap heights across the network	9
Annex C: Wheelchair passenger data	10

# Foreword

The Rail Vehicle Accessibility (Non-Interoperable Rail System) Regulations 2010 (RVAR) set standards for the accessibility features of a rail vehicle operated on particular types of rail systems. The Secretary of State has powers under section 183 of the Equality Act 2010 to allow operators of regulated rail vehicles to continue to operate a vehicle if it does not fully comply with the standards set in the Schedules to these RVAR 2010.

This consultation contains the application from Tyne and Wear Passenger Transport Executive (Trading as “Nexus”) for exemption from one standard set out in Schedule 1, Part 1 (General Requirements) RVAR 2010 for the 'Metrocar' trains operated on its network. This is in relation to:

- *Schedule 1 Part 1 Paragraph 1 (1) Boarding devices:*
  - 1.—(1) *Subject to sub-paragraph (2), when a wheelchair-compatible doorway in a rail vehicle is open at a platform at a station, or at a stop, a boarding device must be fitted by the operator between that doorway and the platform, or the stop, if a disabled person in a wheelchair wishes to use that doorway.*
  - (2) *Sub-paragraph (1) does not apply where the gap between the edge of the door sill of the wheelchair-compatible doorway and the platform, or stop, is not more than 75 millimetres measured horizontally and not more than 50 millimetres measured vertically*

The consultation period shall run until 18 January 2018. To share your views and comments on the application please contact us at: [railvehicleaccess@dft.gsi.gov.uk](mailto:railvehicleaccess@dft.gsi.gov.uk) or

Tyne and Wear Metro RVAR consultation  
Rolling Stock Team  
Department for Transport  
Great Minster House  
33 Horseferry Road  
London SW1P 4DR

# 1. Exemption application

## 1 Full name of applicant and address

Tyne and Wear Passenger Transport Executive (Trading as “Nexus”)  
Nexus House  
St James Boulevard,  
Newcastle upon Tyne ,  
NE1 4AX

## 2 Description of Rail Vehicles

Class 599 Metrocar  
Units 4003 – 4090 but excluding, 4040 and 4083  
Built by Metro Cammell, Birmingham UK  
11th August 1980

## 3 Circumstances in which exemptions are to apply

At all times in passenger service.

## 4 Relevant requirements from which exemption is sought

Nexus is seeking an exemption from the requirement to deploy a manual boarding ramp at all times (and without pre booking required) when wheelchair accessible doors are open in a station and a wheelchair user wishes to board or alight the train. Platform train gaps at all platforms on the network exceed the maximum gap of 75mm horizontally and some exceed the 50mm vertically.

## 5 Background

Metro is part of an international group of Metros which include London Underground and DLR. Details of performance and other measures are regularly shared between the members with the aim of continuous improvement. At a recent meeting it was shown that the Tyne and Wear Metro is 1st from 34 metros for the percentage of stations with step free access.

Metro is a step free system and is used by passengers with a wide range of disabilities. Manual boarding ramps can be pre-booked for use if desired. It is estimated that Metro currently accommodates 48,000 wheelchair journeys per year and pre-booking of assistance only accounts for a very small proportion of these journeys (in an average one-year period there are around 160 requests for assistance with an average of 36 of those requests being for the deployment of a manual boarding ramp) demonstrating the current high level of accessibility currently achieved by Metro.

Compliance with the provisions, given the very small differences in dimensions involved, is unlikely to have any significant effect on a disabled person’s ability to use

Metro.

## 6 **Technical, economic and operational reasons why exemption is sought**

Metro was conceived and constructed in the 1970's using a mixture of ex British Rail and newly constructed infrastructure. It was designed to be very accessible and all stations have step free access albeit in accordance with the standards of the day.

On Metro owned infrastructure the Metro cars have a nominal designed step distance of 110mm on ballasted track and 100mm on concrete slab track (underground stations). The designed step height is 63mm at all stations.

However, Metro also operates over Network Rail infrastructure between Pelaw and South Hylton. On Network Rail infrastructure the nominal gap is 121mm and the height is 48mm.

It can be seen that the step and gap distances are relatively close to the RVAR requirements. Whilst a difference of 25mm in the gap distance for a Metro car on slab track may sound a lot (and is a large percentage of the stipulated distance), to put it into context it is less than the diameter of a £2 coin.

To meet the requirements of clause 1(1) of Part 1 of RVAR it would be necessary to provide a boarding device at all 120 platforms across the Metro system. In this case the device would be a manual ramp.

Whilst provision of ramps is achievable, the deployment of them on an "on demand" basis is impossible due to Driver Only Operation of trains and the majority of stations being completely unstaffed. Station staff are only present at selected town centre stations which have gate lines. They are there to supervise the gates and are not present on platforms.

In the Autumn Statement 2017 the Chancellor confirmed £337m of funding to replace the existing Tyne & Wear Metro rolling stock with modern, energy efficient trains. The specification for the new vehicles is well advanced and includes a requirement on the manufacturer to comply with the accessibility Regulations. This includes overcoming the problem of step and height distances without the use of manual boarding devices.

To meet the RVAR requirements in the interim period it would be necessary to install platform gap fillers at all 120 platforms across the Metro system.

This is likely to be much more difficult on Network Rail owned infrastructure (particularly between Fellgate and Park Lane) which must accommodate a wide range of passenger and freight trains in addition to Metro cars. It also introduces complex financial and operational responsibilities for inspection, maintenance and liability. There is no advantage to Network Rail or other train operators from the installation of gap fillers on its infrastructure.

It is estimated that the cost of installing gap fillers will be £1.6m. The fillers are a proprietary rubber product manufactured in Australia.

Ultimately, funding for a new fleet will come from public funds as would the interim provision of gap fillers (and eventually the costs of removal) at all 120 platforms. It is therefore considered to be an inefficient use of those funds to achieve compliance for a relatively short time in the life of the infrastructure.

Therefore this exemption application applies to all 60 stations on the Tyne and Wear Metro Network as detailed in the attached schematic route map

(Appendix A – Map of the Metro network)

**7 Supplementary information for consideration**

Appendix B – sketch of nominal gap and step distances on Metro and Network Rail infrastructure.

Appendix C - Wheelchair passenger data

**8 Any proposals for later modification of rail vehicles to secure compliance with RVAR within a stated period**

The existing vehicles will remain non-compliant for the rest of their time in passenger service, The specification for the new vehicles is complete and, following the funding decisions, the current programme is:-

November 2017 – Final approval of Specification

January 2018 – Issue Pre –Information Notice

April 2018 – OJEU Pre- qualification Notice issued

July 2018 – Invitation to Negotiate issued

November 2019 – Complete Full Business Case

February 2020 – contract award

April 2020 – Contract start date

April 2022 – first delivery of vehicles.

December 2025 – New fleet fully operational

**9 The measures proposed, if the application is granted, to enable a disabled person to use the rail vehicle.**

Metro has published a Disabled Persons Protection Policy (DPPP) which details numerous features of both the infrastructure and the vehicles. This is a public document approved by ORR and the details are not reproduced here. However it is worth pointing out some key measures:-

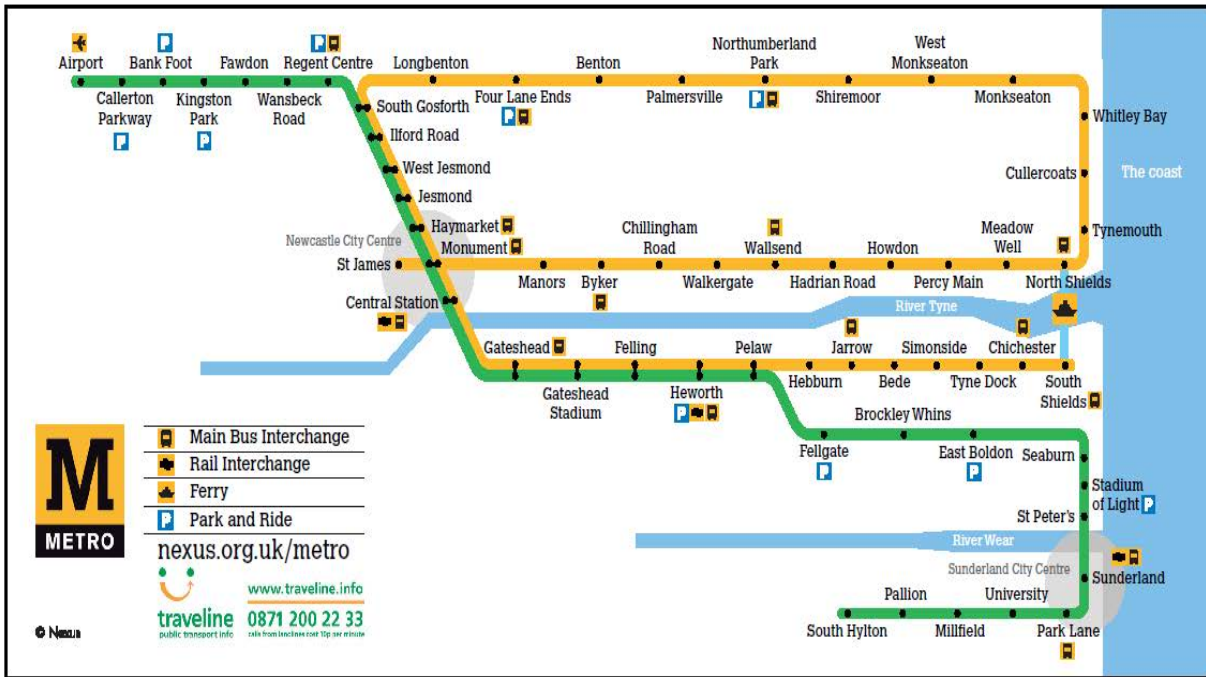
- Provision of a pre booking system for assistance at all stations, plus provision of boarding ramps (if requested at the time of booking) at the 11 licenced Metro stations on Network Rail infrastructure.
- Help points at all stations, where assistance can be requested
- Access details for each station
- 24 hour system wide CCTV monitoring.

In addition, the platform gap and height dimensions are surveyed annually and adjustments made to the track to ensure the standard original design dimensions are maintained.

**10 Unless permanent exemption sought, the period during which exemption is to apply.**

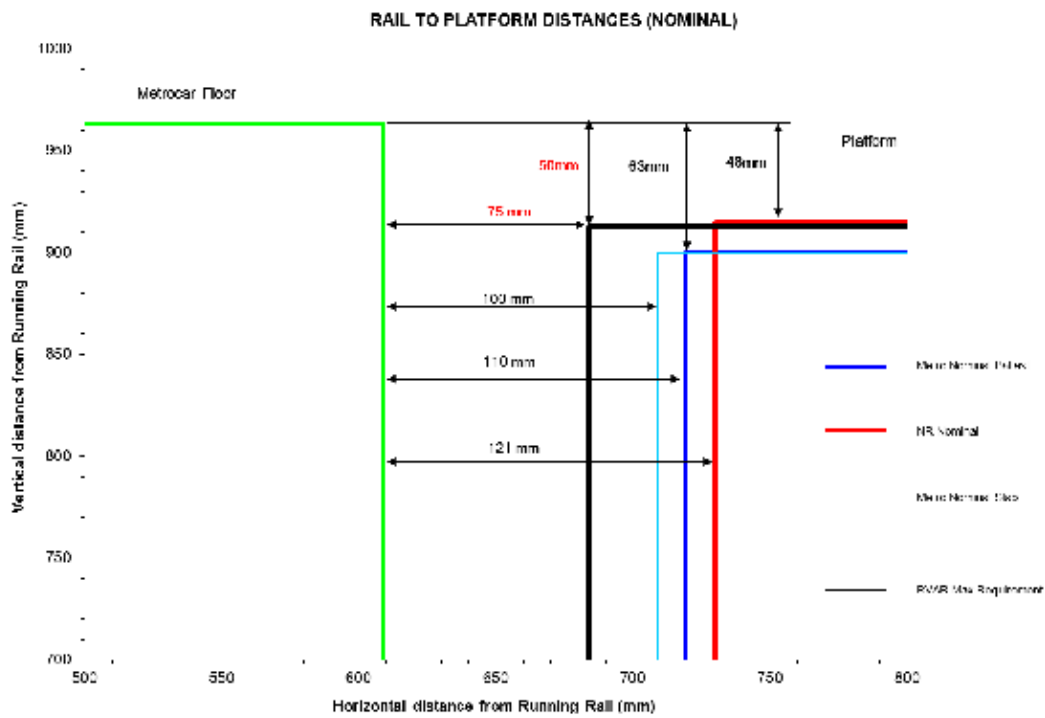
It is anticipated that a new RVAR compliant fleet will be in place by 31st December 2025 therefore it is proposed that the exemption be in force until that date

# Annex A: Network Map





# Annex B: Platform step/gap heights across the network



## Annex C: Wheelchair passenger data

The following data is taken from Konformance survey data and DC Journey notes.

Insufficient detail is available in the data to identify which stops the wheelchair users boarded the Metro or the exact time.

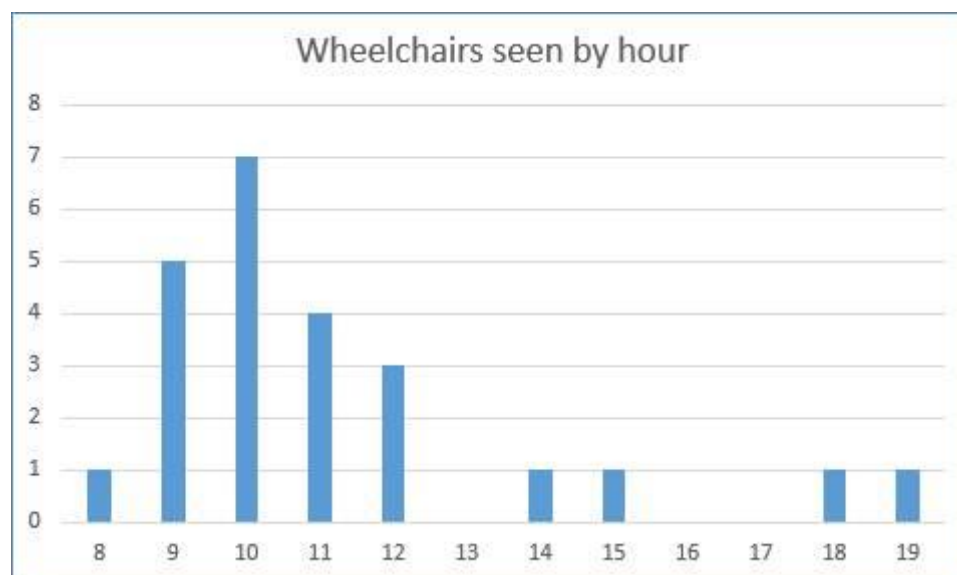
Wheelchair boarders have been recorded between 15th June 2017 and 14th September 2017.

During this time ten researchers recorded a wheelchair passenger boarding on their door. It has been assumed in the figures below that these researchers are the only ones recording wheelchair usage.

7,465 Stations were visited that had boarders.

783 Journeys were completed by the 10 researchers.

Journey start times where wheelchair users were observed ranged from 08:28 to 19:44, with most journeys starting between 08:00 and 12:59



Data from the 2011 Census shows that in Tyne and Wear out of 1,104,825 population in Tyne and Wear, 20,876 use a wheelchair this equates to 1.89% of the population. ([http://www.musculardystrophyuk.org/assets/0001/0981/Stand Up And Be Counted.pdf](http://www.musculardystrophyuk.org/assets/0001/0981/Stand_Up_And_Be_Counted.pdf))

In total the ten researchers observed 18,719 passengers boarding through their doors of which 24 were wheelchair users, this equates to 0.13%. Assuming a patronage of 37,000,000 this equates to 48,100 journeys.

## **DATA LIMITATIONS**

It assumes that researchers who have worked Metro, but not recorded a wheelchair user, have not taken part in the study.

Researchers have consistently recorded the usage throughout the time period.