EXPLANATORY MEMORANDUM TO

THE RAIL VEHICLE ACCESSIBILITY (LONDON UNDERGROUND METROPOLITAN LINE S8 VEHICLES) EXEMPTION ORDER 2010

2010 No. [Draft]

1. This explanatory memorandum has been prepared by the Department for Transport ("the Department") and is laid before Parliament by Command of Her Majesty.

2. Purpose of the Instrument

2.1 The Order exempts certain specified rail vehicles, which were built for use by London Underground Limited ("LUL") on the Metropolitan Line from five requirements of the Rail Vehicle Accessibility Regulations 1998[1] ("RVAR").

2.2. The Order sets expiry dates for these exemptions except in the case of certain stations where LUL has applied for exemptions without limitation of time from the requirement to provide boarding devices under regulation 23(1) (see **paragraphs 7.18** to **7.26**) and to comply with wheelchair space specifications in regulations 16(1)(b) and 16(1)(d) (see **paragraphs 7.16 and 7.17**)

3. Matters of special interest to the Joint Committee on Statutory Instruments

3.1 The draft affirmative resolution procedure has been chosen for consideration of the Order in accordance with the Rail Vehicle Accessibility Exemption Orders (Parliamentary Procedures) Regulations 2008[2]. These Regulations set out the basis on which the Secretary of State will decide which Parliamentary procedure is to be followed when making an Order under section 47(1) of the Disability Discrimination Act 1995 (“DDA 1995”).

3.2 The Disabled Persons Transport Advisory Committee[3] ("DPTAC") has been consulted in accordance with section 67A(1) of the DDA 1995 and agrees that the use of the draft affirmative resolution procedure is appropriate in this instance.

4. Legislative Context

4.1 Section 46 of the DDA 1995 empowers the Secretary of State to make rail vehicle accessibility regulations to ensure that it is possible for disabled persons, including wheelchair users, to travel in safety and reasonable comfort

[1] S.I. 1998/2456.
[2] S.I. 2008/2975.
[3] DPTAC was established under section 125 of the Transport Act 1985 to advise the Government on the public passenger transport needs of disabled people.

in those vehicles to which the regulations apply. RVAR initially applied to rail vehicles constructed or adapted for passenger use and first brought into use after 31 December 1998. A small number of amendments were made in 2000[4].

4.2 Section 47 of the DDA 1995 enables the Secretary of State to make an order authorising regulated rail vehicles to be used in passenger service even though they do not conform to the requirements of RVAR with which they are required to comply. These orders may impose conditions and restrictions on the exemptions.

4.3 The Secretary of State also has a statutory obligation to consult DPTAC regarding the appropriate parliamentary procedure for making the Order. Following that consultation, the Secretary of State has decided that the draft affirmative resolution procedure is to be adopted.

4.4 The Equality Bill, which is currently being considered by Parliament, will - provided Royal Assent is received - revoke and replace the DDA 1995. The provisions relating to rail vehicle accessibility have therefore been replicated without amendment except to update terminology and simplify the provisions in line with the Government's overall objectives for the Bill.

5. Territorial Extent and Application

5.1 This instrument applies to Great Britain.

6. European Convention on Human Rights

Chris Mole has made the following statement regarding Human Rights:

In my view the provisions of the Rail Vehicle Accessibility (London Underground Metropolitan Line S8 Vehicles) Exemption Order 2010 are compatible with the Convention rights.

7. Policy Background

7.1 The policy objectives of the DDA 1995 are to ensure that all rail vehicles first brought into use after 31 December 1998 are designed in accordance with the specific requirements of the RVAR, so as to enable disabled persons to travel in them in comfort and safety. It also requires all rail vehicles to be accessible by 1 January 2020. However, the Act provides the Secretary of State with a power to exempt specified vehicles from particular requirements. Each application is considered on a case by case basis. The Order grants the exemptions requested in the application, subject to certain conditions.

7.2 In this instance LUL, the operator, is taking delivery of 58 new eight-car S8 trains on the Metropolitan Line. These vehicles are part of a broader

[4] The Rail Vehicle Accessibility (Amendment) Regulations 2000 [S.I. 2000/3215].

replacement programme for its sub-surface lines which includes upgrades to signalling and stations with the aim of increasing capacity and reducing delays. There will also be associated work with at stations as part of LUL's wider "Step Free Access" programme which aims to provide full step-free access at 25 per cent of stations by the end of 2010.

7.3 LUL has identified a small number of areas where compliance with RVAR creates a challenge to its existing operations and has therefore applied for exemptions from five requirements. A copy of LUL's application can be found at **Annex A**. Since the exemptions sought are specific to the physical restrictions of the Metropolitan Line and LUL's operational requirements, they would not apply if the vehicles were used on another network. A number of similar exemptions were granted in 2008[5] for the new Victoria Line trains that have recently entered service.

7.4 The new S8 trains will progressively replace the existing A stock fleet. The A stock vehicles are not subject to RVAR because they were built before RVAR came into force, and they do not therefore meet the RVAR specifications in a number of ways. The S8 fleet will be phased in as new vehicles are delivered. However, the last of the A stock vehicles will not be withdrawn from service on the Metropolitan Line until May 2013 when all the new vehicles will have been delivered. This means the two fleets will operate alongside each other for an interim period causing issues of consistency of service across the fleet during this period. LUL also has a programme of rolling stock replacement on its other sub-surface underground lines - the District, Circle and Hammersmith and City - and some of the exemptions requested are for a period until May 2015 when the last of the older vehicles currently in use on these lines will be replaced.

Audible door closure warnings

7.5 The audible door closure warning on the existing A stock vehicles begins to sound 1.75 seconds before the doors begin to close. This is the standard warning period used on existing LUL trains. However, on vehicles subject to RVAR, such as the new S8 trains, a longer audible door closure warning is required which starts 3 seconds before the doors begin to close. LUL contend that passengers could be confused by vehicles operating on the same route having different durations of audible warning depending on whether they were subject to RVAR or not. Visually-impaired passengers in particular would not know how long they had until the doors closed. This could increase the risk of them being trapped in the doors and potentially increase dwell times (the time between train doors opening and closing at a platform) as the doors would have to be reopened.

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[5] The Rail Vehicle Accessibility (London Underground Victoria Line 09TS Vehicles) Exemption Order 2008 [S.I. 2008/2969].

7.6 Although the S8 vehicles are capable of providing a compliant 3 second warning of door closure, LUL has requested an exemption from this requirement until 30 May 2015 by which time all older rolling stock in use on the Metropolitan Line, and other sub-surface underground lines, will have been replaced. The Order requires LUL to maintain a minimum door closure warning of 1.75 seconds for consistency with the existing, older, A stock vehicles and to maintain existing standards. The S8 stock will revert to a compliant warning after this date.

7.7 Similar exemptions have been granted in respect of new Victoria Line vehicles until 31 December 2013. This period will be used to trial whether an increased, 3 second, warning time can be incorporated on a metro service without compromising safety and frequency of service (which is a core target of the planned upgrades). It is envisaged that the results of this trial will be available well in advance of the 2015 expiry date for the S8 vehicles exemptions and will form part of the consideration regarding the ongoing necessity for an exemption. A further exemption order would be required if the Victoria Line trial shows that the 1.75 second warning needs to be retained beyond the expiry date.

Illumination of door controls

7.8 RVAR requires the illumination of door controls on power-operated doors which acts as a visual notification for deaf people that doors are about to open or close. Specifically, when doors are closing, it prescribes that the illumination shall cease not less than 3 seconds before closure. LUL has requested an exemption, until 30 May 2015, to allow them to continue with door controls where illumination ceases 1.75 seconds before closure, rather than the required 3 seconds. This means that the visual and audible warnings of door closure would commence at the same time (1.75 seconds before the doors start to move). The exemption will apply at all times in passenger service and the Order ensures that the minimum duration of illumination is not less than 1.75 seconds before door closure starts.

7.9 As the interior door controls for customers are hidden when the door is open, LUL has installed a visual indicator in each doorway to signal that the doors are about to close. This indicator is positioned at eye level and will flash as the audible door closure warnings sound.

7.10 With regard to both the exemptions above, LUL has advised that door closure mechanisms on the new trains will be operated by the train driver who is required to ensure that it is safe to close the doors using the platform CCTV cameras via their in-cab monitors (these give an exterior view of the full length of the train at the platform). Drivers are trained to hold the train on the platform if they see that someone is still boarding or alighting and the new S8 trains have an intelligent door system that incorporates obstacle detection and ‘sensitive edge’ anti-drag technologies.

Internal public information announcements

7.11 RVAR requires that, whilst a train is stationary at a station, the passenger information systems inside the saloon shall be used to announce (audibly and visually) the destination of the vehicle and the next stop. This requirement is designed to ensure passengers know whether they are boarding a fast or stopping service. Due to the nature of Metropolitan Line services, LUL has requested an exemption to allow some of this information to be given during transit between some stations instead.

7.12 The new S8 trains will give passenger information in both audible and visual formats within the carriage and could be made compliant with the requirements of RVAR. LUL notes other means by which customers will be given information about the destination of trains including audible station announcements, platform 'next train' display indicators, visual displays on the front and external sides of each carriage and fixed signage such as network maps.

7.13 However, as the majority of the Metropolitan Line trains are used to provide a frequent service with short station stops, LUL suggest that this greatly limits the amount of information that can be given to customers whilst trains are stationary at platforms without affecting the frequency of service. Additionally, some platforms on the line will be shorter than the trains arriving there and LUL wishes to use the customer information systems to ensure that customers move towards an opening door in time for them to alight if they wish to do so.

7.14 The exemption that LUL has requested would apply until 30 May 2015 when LUL expects that the upgrade of rolling stock on all of its sub-surface lines will have been completed. It would only apply at certain non-key stations, predominantly on the stretch between Baker Street and Aldgate where there are no branches or junctions. For key stations, where there are branch lines and junctions, or where there is a choice between fast and stopping services, compliant "next station" and "final' destination" details will both be given during dwell times. The stations at which this exemption applies are listed in schedule 2 of the Order.

7.15 In 2008, LUL was granted a similar exemption from this requirement in respect of its new Victoria Line trains. In that instance however, the exemption applied on the whole of the Victoria Line as there are no branches or fast/stopping services. On the Victoria Line, LUL is conducting a trial with a series of announcements that it believes could be more useful than those currently required by the RVAR including, for example, interchange information. As part of that trial, LUL wants to establish whether passengers find it more useful to have the next station or the terminus announced and the results will inform future policy in this area.

Space between the floor and ceiling in wheelchair space areas

7.16 RVAR mandates that no obstruction other than an overhead luggage

rack, or an openable window, shall be placed in the space between the floor and the ceiling in a designated wheelchair space area. LUL is seeking an exemption to enable it to install horizontal handrails within the four designated wheelchair spaces on its new S8 trains. This is due to the nature of the service (i.e. it is very busy at peak times) and concerns about standing customers falling against or onto wheelchair users due to the lack of an appropriate handrail or other support in this area.

7.17 The Department for Transport has recently completed consultation on revised rail vehicle accessibility regulations which will revoke and replace RVAR and are expected to come into force during 2010. These regulations will allow the installation of handrails in these circumstances, a move which has been supported by all stakeholders, therefore making an exemption from these provisions unnecessary in future. However, since RVAR is still in force, LUL has requested an exemption from the current requirements. The Order does not include a time limit for this exemption but the Secretary of State would have the power to revoke the exemption by a further Order if it was no longer felt to be appropriate.

Wheelchair compatible doorways

7.18 RVAR requires the S8 trains to be wheelchair accessible and each train will have four wheelchair spaces installed which is more than required by RVAR. However, LUL believes that it would be impractical to use manual boarding ramps for wheelchair users to span the gap between the train and the platform giving access these spaces. They contend that this is difficult because of limited space on platforms, the degree of crowding on some platforms during peak hours and the potential impact that using boarding ramps might have on dwell times.

7.19 Although the new S8 train has been designed with a lower floor than the old A stock Metropolitan line trains, LUL notes that this provision alone will not make the vehicles compliant at all platforms. Instead, LUL intends to install platform humps which will be positioned to allow level access to those carriages with wheelchair spaces. The wheelchair spaces will always be in the middle two carriages of each of the S8 trains. This will mean that the wheelchair spaces are always adjacent to the platform humps when the train arrives at the station.

7.20 Level access between platforms and trains is preferred by wheelchair users over the use of manually deployed ramps as this allows for independent travel without the need to involve staff. The installation of platform humps has been trialled successfully at some Northern Line and other stations and is being rolled out across the Victoria Line.

7.21 LUL wish to link the exemption to their "Step Free Access" programme so that work to provide level access between the platform and the train is carried out alongside broader refurbishment work to give step-free access to the platform from street level. This would reduce the risk of a

passenger getting stranded on a platform where there is no step-free route out of the station and minimise the disruption caused by engineering work.

7.22 However, in order to facilitate this, LUL will require exemptions from the requirement to provide level access at wheelchair accessible doorways for all but a small number of stations on the Metropolitan Line, which already have their step and gap dimensions within RVAR standards. These exemptions will last until work to provide step-free routes is completed and the number of exemptions will reduce progressively as each station becomes step-free

7.23 There are 12 stations (i.e. the stations in table 3 of Schedule 1 of the Order) where there is no time limit on the exemption from regulation 23(1). Additionally, there are 9 stations (i.e. the stations in table 2 of Schedule 1) where the exemption will cease to apply when step free access is provided. Although these exemptions are granted without limitation of time, the Secretary of State would have the power to revoke the exemptions by a further Order if it was no longer felt that they were appropriate. Of those which are time limited (i.e. the stations in table 1 of Schedule 1), the last of these expires on 31 December 2013. However, LUL has undertaken to comply with RVAR requirements at an earlier stage if works to provide step-free access are completed ahead of schedule.

7.24 LUL was granted a similar exemption from this requirement for their new Victoria Line trains. However, the Metropolitan Line presents greater challenges than the Victoria Line. Many elements of infrastructure, including platform alignments, were built over 100 years ago when attitudes towards customer accessibility were very different. Some platforms are severely curved or of compromised height where the line is shared with other LUL or National Rail lines. In these circumstances, the platforms must make allowances for the different height, size and shape of trains which use the same track and platforms, and do not conform to LUL standards and the Order recognises this.

7.25 LUL indicates that it is spending £5.5 million to bring 32 Metropolitan line platforms within the required dimensions of RVAR. The application for exemption details the steps LUL has taken to address the problem of train and platform gaps including an independent survey by the Frankham Consultancy Group. This looked at solutions to the problem of compromised height platforms such as platform humps and track adjustments and even changes to service patterns that might result in different types of rolling stock using different platforms.

7.26 Additionally, LUL refer in their application to an agreement reached with Chiltern Railways that platforms will be raised to the LUL standard height of 950mm at stations where the platforms are shared by Metropolitan Line and Chiltern railway trains.

8. Consultation Outcome

8.1 Section 47(3) of the DDA 1995 requires the Secretary of State, as part of his consideration of an application for exemption, to consult DPTAC together with any other appropriate persons. LUL's application was posted on the Department's web site and letters requesting comments sent on 9 September to DPTAC, the Office of Rail Regulation ("ORR") and London TravelWatch (as the relevant passenger authority for LUL's services). Comments were requested by 6 November 2009.

8.2 Three responses were received from the above named organisations and these are attached at **Annexes B**, **C** and **D** respectively. Consultees had no object to the application, although each made comments about specific aspects of the exemptions requested.

Audible door closure warnings & Illumination of door controls

8.3 All responses supported LUL's request for an exemption from the requirements for audible door closure warnings – regulation 4(3)(b) – and the illumination of door controls – regulation 5(2). All highlighted the importance of LUL's trial of the 3 second warning on its new Victoria Line fleet which would inform future provision (see **paragraph 7.7**). ORR noted, in particular, that these exemptions were time limited and, if LUL wished to continue with non-compliant warning times after these periods a clear case would be needed to justify any extension.

Internal public information announcement

8.4 All responses supported the exemption requested for internal public information announcements – regulation 13(4) - although DPTAC was concerned that the extra time between announcements should not be used for standard announcements regarding security or for advertising purposes. These comments have been passed to LUL for consideration.

Space between the floor and ceiling in wheelchair space areas

8.5 All parties supported LUL's application for an exemption to facilitate the addition of a handrail in the space between the floor and the ceiling in wheelchair space areas – regulations 16(1)(b) and (d).

Wheelchair compatible doorways

8.6 A number of comments were received on this aspect of the application and these are summarised below.

8.7 DPTAC recommended that all of the exemptions requested by LUL should be subject to time limits. They indicated that the lack of available manual boarding ramps, both on-board trains and at stations, might be considered as short-sighted. DPTAC believes that ramps should be available for the same ad hoc assistance to mobility impaired customers as is currently

provided to visually-impaired passengers, particularly at those stations which are step-free from pavement to platform.

8.8 The Department agrees with DPTAC that it is unfortunate that, in the past, LUL provided step-free access at some sites on the Metropolitan Line where the platform geometry means that level access to the train cannot currently be provided. We hope that step-free provision across the network will, in future, be better matched to those stations where level access between the train and platform can be achieved. We note, however, that even where independent access for wheelchair users to the train is currently difficult, then the provision of step-free access at those sites still benefits ambulant disabled people and passengers travelling with small children or heavy luggage.

8.9 The Department has sought LUL's response to DPTAC's comments concerning the provision of manual boarding ramps for emergency use at those stations with step-free access to the platform. They have supplied evidence to demonstrate that the introduction of their new, low floor, trains will significantly reduce existing stepping distances at these stations by 190mm. Whilst these would remain non-compliant at some stations it will, nevertheless, be significantly easier for wheelchair users to alight independently or with assistance during an emergency without having to rely on manual handling by the emergency services. They do not, therefore, believe that the provision of boarding ramps for emergencies is necessary.

8.10 As emergency situations are not regulated under RVAR this is an issue for LUL, as the legal duty holders, to satisfy themselves of compliance with health and safety legislation. The Order therefore reflects LUL's original application on this matter. The Department remains of the view, on balance, that the use of manual boarding ramps during normal service on the London Underground network is inappropriate for such a high-frequency and crowded system.

8.11 Without a programme for providing step-free access to the whole of the Metropolitan Line, or for straightening platforms throughout, we see no value in setting artificial end dates for those stations which do not already have specified expiry dates in schedule 1 (tables 2 and 3) to the Order.

8.12 London TravelWatch (LTW) supported the exemption application but noted that the schedule of station works might need to be revised in light of LUL's recent announcement on step free access provision. These issues have been discussed with LUL and they have confirmed that the details in Schedule 1, tables 1 and 2 of the Order, which are linked to the provision of step-free access, are unaffected and that they are committed to the completion of this work.

8.13 London TravelWatch also expressed concern that areas provided for wheelchair users should be well marked out and identified and requested the placement of a large wheelchair symbol on the fabric of the seat back and on the floor of the carriage to clearly identify this area as reserved for wheelchair users. The S8 fleet already complies with the requirement within RVAR for

signage within the wheelchair space. Concerning the additional markings proposed by LTW, the Department notes that similar markings have been applied successfully to Sheffield Supertram vehicles and these comments have been passed to LUL for further consideration.

9. Guidance

9.1 Comprehensive guidance on the application of RVAR has been published[6]. The Department for Transport has worked closely with LUL and DPTAC throughout the design and manufacture stages of the new Metropolitan Line vehicles to ensure that the number of exemptions is minimised.

10. Impact

10.1 An Impact Assessment has not been prepared for this instrument as it has no impact on business, charities or voluntary bodies.

10.2 The impact on the public sector is negligible.

11. Regulating small business

11.1 The Order does not apply to any small businesses.

12. Monitoring & Review

12.1 The Government's policy objective is to ensure that the number of exemptions is minimised and that new and refurbished rail vehicles are as compliant as possible with the requirements of RVAR.

12.2 Since the Order contains some exemptions which are not time limited, the Secretary of State will keep these provisions under review and will consider whether to revoke these in future, in consultation with stakeholders, if it were no longer felt that these were appropriate. Progress on the other obligations the Order places on LUL, in particular the time limits for the completion of platform and other works, will also be closely monitored to ensure the relevant deadlines are met.

13. Contact

Roger Turner at the Department for Transport (Tel: 020 7944 4916 or e-mail: roger.turner@dft.gsi.gov.uk) can answer any queries regarding the Order.

[6] See www.dft.gov.uk/transportforyou/access/rail/vehicles/pubs/rva/rvareg1998.

Introduction

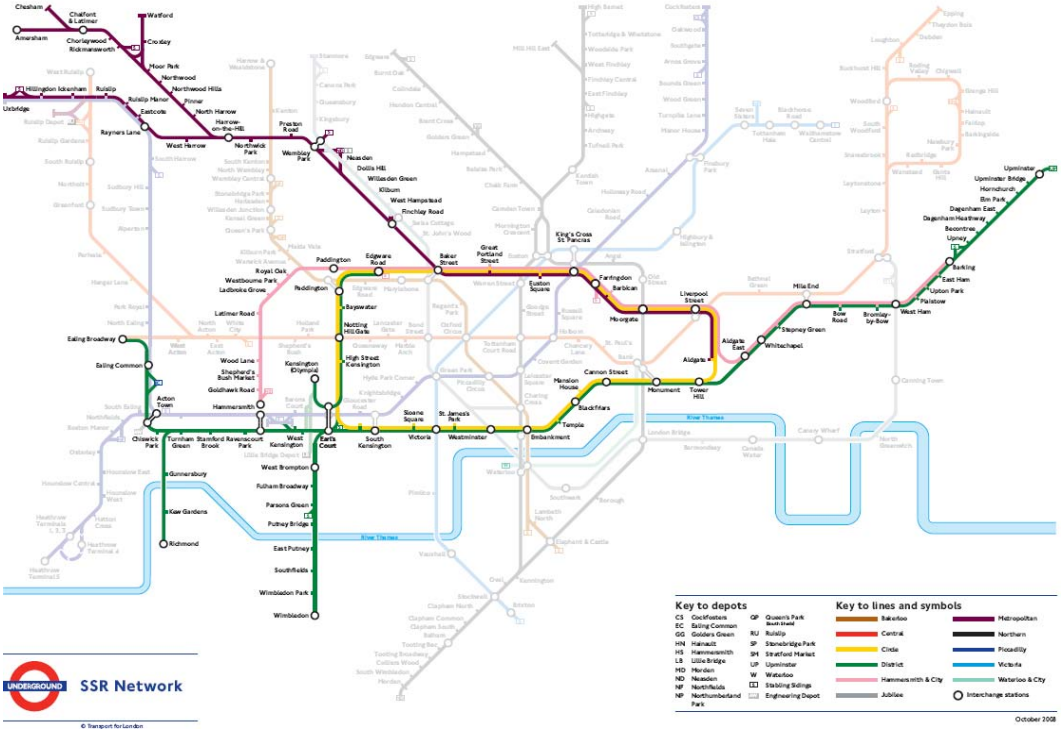
London Underground (LUL) is committed to improving the accessibility of our services for all of our customers.

Our aim is to provide a service that can be accessed by anyone safely, easily and independently, regardless of their age, impairment or encumbrance. We aim to provide the same or equivalent levels of service to all our customers, whilst recognising that customers' individual requirements vary.

London Underground is currently undertaking an extensive investment programme to modernise and improve our stations and trains. One of the largest single investment projects is the Sub Surface Railway Upgrade Project (the Upgrade).

The Sub Surface Railway (SSR), covers over a third of the entire Underground network and is made up of the following four lines:

- Circle line
- District line
- Hammersmith & City line
- Metropolitan line



Following discussion with the Department for Transport, LUL is submitting an exemption application for the new ‘S8’ Metropolitan Line vehicles, as these will be the first to be introduced.

This will be followed by a separate exemption application for the new ‘S7’ vehicles which will be used on all the other 3 SSR lines.

Although both of these applications are likely to request exemptions from the same regulations, separate applications will enable us to include more specific information about the different train formations as well as reflect the different service, timescales and issues on each of the lines.

The Sub Surface Railway Upgrade

In 2006, the SSR network was carrying 370 million passengers a year.

On completion of the Upgrade, LU will be able to operate higher frequency services with reduced journey times compared to 2006 levels. An increase in off-peak and weekend services will also be implemented to meet increasing demand levels at these times. As well as enabling faster journey times, the Upgrade will deliver increased capacity on the SSR lines and improved reliability through essential asset renewal.

Currently there are three different types of rolling stock running on the Sub Surface Railway.

- **'A' Stock:** These are used on the Metropolitan line and are the oldest vehicles in regular use on the Underground Network, coming into service between 1960 - 1962. These vehicles were refurbished between 1994-1997.

- **'C' Stock**: These are used on the Circle line, Hammersmith & City Line and the Edgware Road and Olympia branches of the District line. These vehicles came into service from 1969 and were refurbished between 1991-1994.

- **'D' Stock**: These vehicles have been used on the District line since 1979 and were refurbished between 2004-2008.

As part of the Upgrade, the three existing fleets will be replaced by a single fleet of 191 new trains known as the 'S' Stock. There will however be some slight differences in the layout and formation of the trains. Trains on the Metropolitan Line, the 'S8' trains, will have 8 carriages, whilst the 'S7' trains on the Circle, Hammersmith & City and District Line will have 7 carriages.

To ensure the smooth continuation of service, the new trains will be introduced gradually, replacing the oldest trains first in the following order:

- The Metropolitan line from May 2010, with the last of the old 'A' stock being removed by May 2013.

- The Circle and Hammersmith & City lines from December 2011, with the last of the old 'C' stock being removed by February 2013

- The District line trains will be introduced in 2 batches: First on the Wimbledon to Edgware Road branch from October 2012 – February 2013. Then new 'S7' trains will be introduced on the remainder of the line from May 2013, with the last of the old 'D' stock being removed by May 2015.

There are a number of advantages of having a single fleet:

- All Sub-Surface line trains will have the same benefits and accessibility features, such as door closing alarms, visual contrast within the carriage, and layout of wheelchair spaces. This consistency will enable customers to become familiar with the position and function of facilities within the trains.

- We will be able to move the new ‘S7’ trains quickly and easily between the lines to improve the regularity of service and ensure faster recovery from service disruptions.

- There are also advantages in terms of economies of scale for purchase and maintenance.

While using a single fleet has advantages, it also has complexities. The greatest of these is that each of the lines share tracks with the other lines along part of their route. Extensive work will need to be done on the signalling systems so that both new and old trains can operate together whilst the ‘S’ Stock trains are being introduced and the old vehicles phased out. When the last of the current trains are replaced, a new signalling system will be introduced to allow trains to run more efficiently. In addition to introducing new trains, other works will also take place to ensure that the Upgrade is able to provide an improved service for our customers. These will include:

- Platform extensions and new stopping positions to accommodate the new, longer trains – although this is not possible in some locations

- New signalling system and track side signage to allow trains to run more efficiently, along with a new Signalling Control Centre to improve reliability of the service, covering the whole of the SSR.

- New infrastructure including new cable routes, sub-stations and Conductor rails,

- Track and maintenance depot works to support new trains including work on train berthing positions and stabling

- New train crew accommodation.

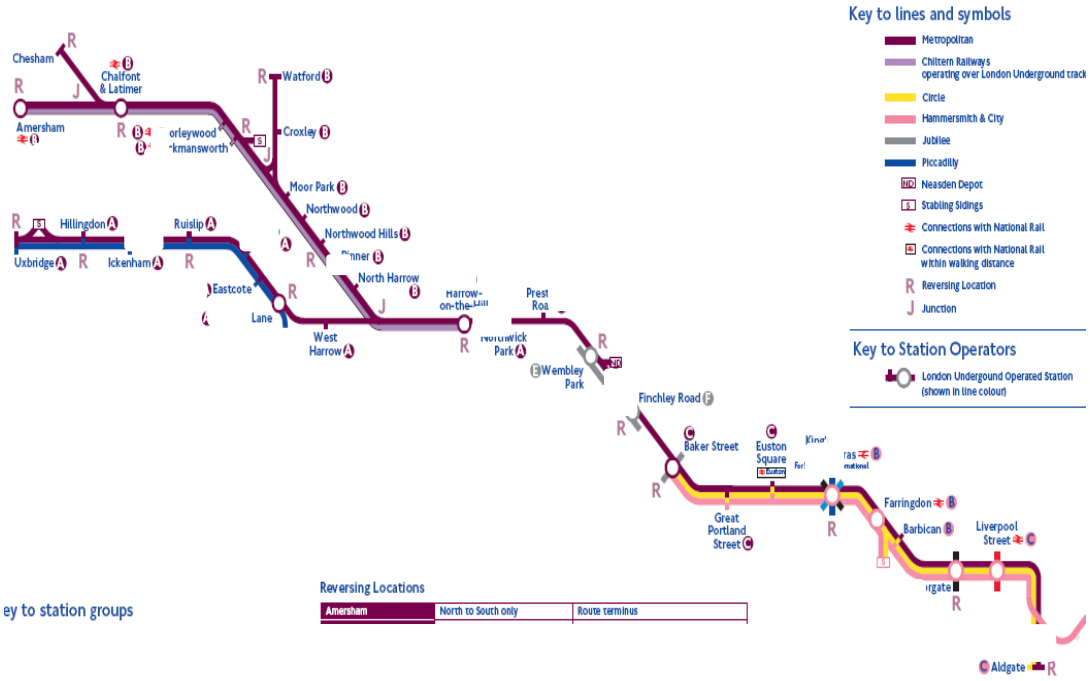
Completion of this work will result in an increase in peak frequency from 28 to 32 trains per hour in the central London section of the Metropolitan line.

- Originally the Upgrade was being delivered in partnership with the Metronet Rail Infraco, which was responsible for the maintenance, upgrading and renewal of the Sub Surface Railway' assets. However, following ongoing financial problems Metronet went into Administration in July 2007 and in May 2008, Metronet Rail transferred into Transport for London.

The Metropolitan Line

The worlds' first underground railway started when the Metropolitan Railway Company opened a line between Bishops Road, Paddington and Farringdon on 10th January 1863.

After many extensions and changes, today's Metropolitan line runs from Aldgate in the East to Amersham, the most westerly station served by the underground, 27miles (43km) outside central London. It also has branches to Chesham, Uxbridge and Watford.



- The Metropolitan line runs for 41½ miles (66.7km) and serves 34 stations. Only 6 miles (9.7km) of the line are underground, which makes the line more like a suburban railway than a typical part of the London Underground. The line includes the longest distance by rail between adjacent underground stations - 3.89 miles (6.26 km) between Chesham and Chalfont & Latimer.

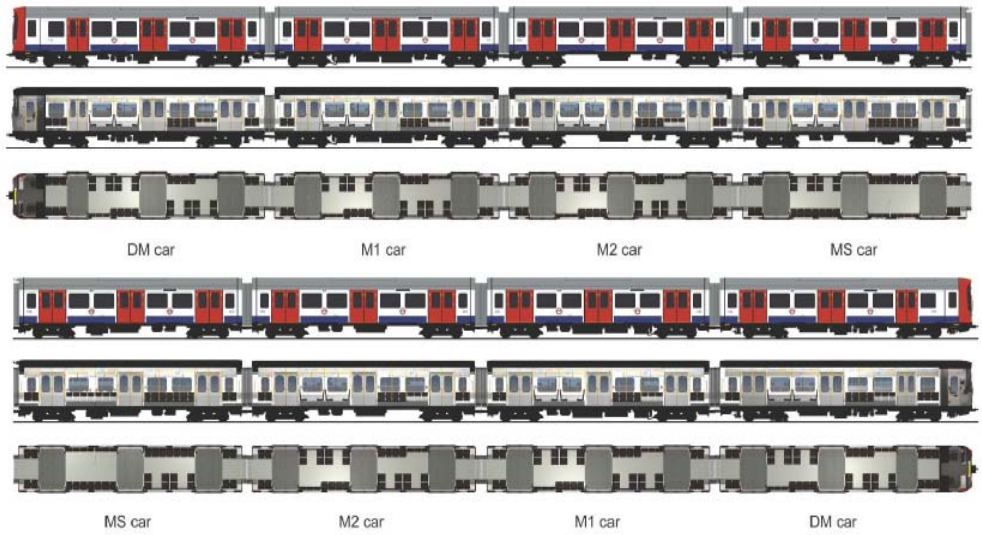
- The line serves a variety of different stations, including small suburban stations and large key central London interchanges. The busiest station on the line is Kings Cross which is used by over 87 million passengers a year.

Although there have been changes over time, the majority of the infrastructure still being used, including the platform alignments, is substantially as it was built in the Victorian era 145 years ago, when attitudes to customer accessibility were very different.

- Currently the 'A' stock fleet is made up of 56 eight-car trains. 44 trains are required to provide a peak service of 22 trains per hour in outer London (6 to Watford, 4 to Amersham and 12 to Uxbridge) of which 14 trains per hour continue beyond Baker Street to Aldgate. In the off-peak 16 trains per hour operate north of Baker Street with 6 trains per hour running through to Aldgate.
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- In 2008 the line carried over 53 ½ million passengers.

- After the Upgrade, the new 'S8' fleet will be made up of 58 eight-car trains. An estimated 52 trains will be used to provide a service of 28 trains per hour in outer London (12 to Watford, 4 to Amersham and 12 to Uxbridge) of which 16 trains per hour will continue beyond Baker Street to Aldgate. In the off-peak 16 trains per hour operate north of Baker Street with between 6 and 12 trains per hour running through to Aldgate.
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The Metropolitan 'S8' trains will have the following permanent eight-car formation with driving motor cars at each end.



DM	Driving Motor Car
M1, M2	Non Driving Motor Car
MS1, MS2	Non Driving Motor Car
M2D	Non Driving Motor Cars fitted with de-icing equipment

Accessibility Features of the S Stock

Accessibility has been a key feature of the new 'S8' train design process, in addition to the requirements of RVAR; London Underground has its own additional stringent standards.

The SSR Upgrade Team along with the LUL Accessibility and Inclusion Team have worked with officials from the Department for Transport (DfT), members of the Disabled Persons Transport Advisory Committee (DPTAC) and Transport for London's own Independent Disability Advisory Group (IDAG) to ensure the correct approach to RVAR compliance.

In September 2008, DfT officials, DPTAC members and representatives of organisations of/for disabled people, including the RNIB, RNID, Guide Dogs, Sense, People First, Transport for All and the National Autistic Society were invited to view and comment on a carriage mock-up. As part of the Upgrade communications programme, the mock up was also open to the public for a week and was visited by over 9,000 people.

In addition to fully complying with all RVAR requirements (apart from the 5 exemptions listed below) the new 'S8' trains incorporate a number of additional accessibility features:

- **Additional Wheelchair Spaces:**
  The 'S8' train has 4 wheelchair spaces, 1 more than required by RVAR.

- **Multi-purpose areas:**
  In addition to the 4 designated wheelchair spaces, the new 'S8' train will have 12 multi-purpose areas, 2 in each carriage apart from the 2 centre cars which contain the wheelchair spaces. The multi-purpose areas will provide space where passengers with luggage, prams, buggies or shopping can stand comfortably. They also contain 3 tip-up seats which passengers can use if the space is not in use.

  These areas will be clearly labelled to differentiate them from the designated wheelchair spaces. The presence of these areas should reduce competition for the wheelchair space from other users.

In addition to this, the cantilever design seating will provide additional storage beneath the seats; this will help to ensure that the wheelchair space is unobstructed so that wheelchair users are able to get easy access. This design also enables guide dogs to lie safely underneath the seats rather than in the route ways.

- **Additional Priority Seating:**
  The new 'S8' trains have 306 seats, 32 of which are priority seats. This exceeds the requirement for 10% of all seating to be designated as Priority seating. All Priority seating is located next to the doors to enable easy access and is clearly labelled

- **Low level floor lighting across door thresholds:**
  Although there is no regulated step on the new 'S8' train, we have recognised the need to assist visually-impaired passengers to identify the gap between the train and the platform. Therefore we have installed low level lighting to illuminate the edge of the vehicle in each doorway to assist all passengers as they board or alight.

- **Visual door closing indicators:**
  As the interior door controls are hidden when the door is open, we have installed an additional visual indicator in each doorway to signal that the doors are about to close. This indicator is positioned at eye-level and will flash as the audible door closure warnings sound. The exterior passenger door controls are visible at all times.

- **Push-button passenger emergency alarms throughout**:
  The RVAR only requires push-button alarms in wheelchair spaces. We felt that this easy-to-use design would benefit all passengers, and so have installed push-button alarms in every doorway, enabling all passengers to easily summon help if required. Each alarm provides visual reassurance of activation and enables direct voice communication to the train operator, who can use the CCTV system to view the area.

Exemptions Requested for the 'S8' Metropolitan Line Trains

We believe that we have designed the most accessible trains possible within the constraints of our service and infrastructure. If granted, we believe that some of the exemptions will enable us to improve the service

we provide to our disabled passengers – meeting the spirit if not the letter of the RVAR.

With this background in mind, London Underground is seeking exemptions from the following provisions of the Rail Vehicle Accessibility Regulations 1998 under Section 47(3) of the Disability Discrimination Act 1995:

- **Regulation 4(3) (b)**
  Audible Door Closure Warnings
- **Regulation 5(2)**
  Visual Door Warning Indicators
- **Regulation 13(4)**
  Announcements to be made whilst at a station
- **Regulation 16(1)(b) and (d)**
  Handrails within the wheelchair space
- **Regulation 23(1)**
- Boarding devices at wheelchair accessible doorways

1. Full name of applicant and address

London Underground Limited
55 Broadway
London
SW1H 0BD

2. Description of Rail Vehicles

Metropolitan line ‘S8 Stock’

Train Formation: 58 x 8 Car permanent formations

Train Numbers:

Driving Motor Cars: 21001 - 21116

Non Driving Motor Car M1: 22001 – 22116

Non Driving Motor Car M2: 23057 – 23116
23001 – 23055 (odd numbers only)

Non Driving Motor Car: 24001 - 24116

Non Driving Motor Cars de-icing: 25002 – 25056 (even numbers)

3. Circumstances in which exemptions are to apply

At all times in passenger service

4. Relevant requirements from which exemption is sought

- Regulation 4(3)(b)
- Regulation 5(2)

4(2) Each passenger doorway in the side of a regulated rail vehicle shall be fitted with an audible warning device which shall emit warning sounds in accordance with paragraph (3) inside and outside the vehicle in the proximity of each control device for that doorway or, if there is no such control device, adjacent to that doorway.

- 4(3) The audible warning device shall:
- 4(3)(b) if the door is operated by a member of the operator's staff, emit a different distinct sound commencing not less than 3 seconds before the door starts to close.

5(2) When power-operated doors are closed by a member of the operator's staff the illumination of each such control device shall cease not less than 3 seconds before the doors start to close.

5. Technical, economic and operational reasons why exemption is sought

The new ‘S8’ trains are capable of complying with the 3 second closure warning required by RVAR.

Audible Warnings

LUL understands the significance and importance of the 3 second duration to disabled passengers, especially those with visual impairments. We have worked closely with the DfT on their “Design and Use of Rail Door Warning Systems for Sensory Impaired People” research. We contributed funding towards Stage 1 of the research and hosted a trial at Charing Cross underground station as part of Stage 2. LUL has used this research to help identify the most appropriate tones for use in the Underground environment to assist visually impaired passengers.

The new ‘S8’ vehicles will use 3 second audible door opening tones which can be heard both inside and outside the vehicle. These will play adjacent to doorways to assist people in locating the controls and/or doorway.

However we have a number of safety and operational concerns about the use of the 3 second door closure warning in the Underground environment. We will be requesting a similar exemption for the new ‘S7’ vehicles which will be used on the Circle, Hammersmith and City and District lines.

These concerns, which are listed below, are the same as those set out in the successful Victoria Line Upgrade (VLU) exemption application.

During the consideration of the VLU exemption, both Houses of Parliament, DfT, DPTAC, HMRI and London TravelWatch all supported the exemption to allow a reduction of the 3 second audible closure warning during mixed fleet[7] running until a trial of its impact had been evaluated.

In November 2008 LUL was granted an exemption until December 2013 in order to undertake and evaluate a trial using the 3 second closure warning once mixed fleet running ends on the Victoria line in 2011.

This trial will provide accurate and quantifiable evidence regarding the impact of the additional time on the operation of the Victoria line and any changes to the safety and behaviour of passengers.

The outputs and lessons learned from the Victoria line trial will be used by the SSR and other future Upgrade and refurbishment projects to create a consistent approach to giving audible door closure warnings.

The majority of vehicles currently in service on the Underground, including the existing 'A', 'C' and 'D' Stock vehicles on the SSR lines give an audible door closure warning starting 1.75 (+/-0.25) seconds before the doors begin to close. This is believed to be sufficient and appropriate for the service provided by London Underground.

LUL are requesting a temporary exemption to maintain consistency while the new vehicles are introduced and running alongside the older trains. The new 'S8' vehicles and existing 'A' Stock vehicles will run alongside each other on the Metropolitan line for up to 3 years during the phased introduction of the new vehicles.

In addition, because of the large overlap of lines between Aldgate and Baker St, they will also be running alongside the 'C' stock trains on the Circle and Hammersmith and City lines until February 2013. The 'S8' vehicles will also be running permanently alongside the new 'S7'

[7] Mixed fleet running refers to the period when 2 or more different types of train stock will be running alongside each other on the Metropolitan Line, following the introduction of the 1st S8 train into service until the withdrawal of the last of the old 'A' & 'C' stock trains.

vehicles once they are introduced on the Circle, Hammersmith and City and District lines.

LUL believes it is important to keep audible warnings consistent across all of the SSR lines until the last of the old vehicles have been replaced. We believe that it is important for passenger safety and confidence that audible warnings are consistent particularly as all the old stock is being replaced by a single fleet of vehicles.

This consistency between the new rolling stock and those currently on the network will preserve the familiarity that our customers have with the meaning of audible tones and thereby minimise the risk of accidents. The use of different warning durations across the single new fleet and three fleets being progressively replaced would cause confusion amongst passengers and increase the risk of accidents and injury, especially amongst passengers moving between lines.

Therefore we are requesting an exemption until May 2015 when the last of the old ‘D’ stock trains will be replaced on the District line by new ‘S7’ vehicles. This will enable us to use the findings from the Victoria line trials.

Although LUL recognises the importance of the audible tones for visually impaired passengers, on the Underground, the audible door closure warning is considered by most passengers as a ‘hustle alarm’. During everyday service, the sounding of the alarm is used as the signal to run and jump onto the train as the doors are closing.

LUL are concerned that extending the warning duration to 3 seconds will encourage additional passengers to attempt to board, increasing the risk of accidents and injury. Such activity often also necessitates the re-opening of the doors which will delay the vehicles, causing service disruption and increased journey time for all passengers.

The current audible warning of 1.75 seconds has been in use on LUL trains for many years and we believe that it is appropriate to the nature of the service we operate.

In operational terms, extending the warning would increase the dwell time at each station, which would have a cumulative effect along the entire journey. This would increase journey times for passengers

across the whole fleet which would greatly reduce the benefit gained from the Upgrade improvements.

Visual Warnings

LUL are also requesting a temporary exemption to reduce the period prior to the closure of the doors when the illumination of the door control device must extinguish, from 3 to 1.75 (+/-0.25) seconds for consistency with the timing of the audible closure tone.

At the majority of platforms, the doors will be operated by the driver; however the visual indicators will still be used to give information to customers.

The customer door open buttons will only be used when there is a significant dwell time or at a terminal station where customer numbers are often low and the trains are stationary at the platform for longer periods. At these locations the doors will be kept shut as much as possible to preserve the temperature within the train, as the new ‘S8’ trains will be the first on the Underground system to have air conditioning.

To enable customers to open the doors, Door Open pushbuttons are provided at each doorway. The interior control is fitted towards the centre of the doorway on the edge of the left hand door (when looking from within the car)



Position of interior door closure buttons

As the interior door controls are hidden when the door is open, we have installed an additional visual indicator in each doorway to signal that the doors are about to close. This indicator is positioned at eye-level and will flash as the audible door closure warnings are sounded. Although this indicator is not a regulated feature, the flash rate of 0.5 second on - 0.5second off, is compliant with the new requirement proposed by DfT as part of the current revision of the RVAR.





Position and close up of additional visual door indicator

The two exterior door controls are fitted to the outside edge of each door and are visible at all times.



Position of interior and exterior door closure buttons

The positioning of the buttons encourages customers outside the train to stand away from the doorway and those inside the train to stand in the middle of the doorway, to influence customer flow.

In addition, the immediate door control surround or “halo" will remain continuously illuminated to indicate that the doors are operable.

The features of the pushbuttons are compliant with the requirements of the RVAR. They are located at appropriate heights, identifiable by touch, surrounded by suitably contrasting bezels and require a force not exceeding 15 Newtons to operate them.

6. The effect which non-compliance would have on a disabled person's ability to use rail vehicles of the description to which the application relates

LUL considers that due to our existing standard operating procedures outlined in Section 7, the shorter audible and visual door closure warnings will have minimal effect on disabled passengers’ ability to board or alight from the train safely.

The new ‘S8’ Stock has an intelligent door system which incorporates both obstacle detection and ‘sensitive edge’ anti-drag technologies.

If an obstruction is detected the doors will open just enough to allow the object to be removed. The obstacle detection will cycle three times before holding on the obstruction until it is removed.

The rubber door edge seals are also fitted with a sensitive edge strip which will detect any opposing force should the train move away with an object trapped in the doors, such as a rucksack strap or dog's lead etc. The sensitive edge is only active once the doors are closed and locked and remains so until the train has left the platform.

Currently an activation of the sensitive edge will always trigger the application of the automatic emergency brake. However the train manufacturer Bombardier are currently conducting a trial to establish whether there is likely to be a significant number of spurious activations that will make the current response operationally unworkable. LUL will keep DfT informed of the outcome of this trial which will influence any future changes to the existing approach.

These intelligent systems will ensure that people won't get trapped in the closing doors.

7. Any measures which could be taken to enable disabled persons to use the rail vehicle if exemption sought is granted

Although it is proposed that the new 'S8' trains will not give the full 3 second closure warning required by RVAR, they will still provide audible and visual closure warnings to assist passengers.

The door closure mechanism on the new 'S8' vehicles is operated by the train driver. Drivers are required to ensure that it is safe to close the doors by using the platform CCTV cameras via their in-cab monitors, which give an exterior view of the full length of the train at the platform. Drivers are trained to hold the train on the platform with the doors open if they see that someone is still boarding or alighting.

At stations where customer service assistants are present on the platform, they will not give the all clear for departure signal if they can see that someone is still boarding or alighting from a train.

All of our staff are trained to identify when passengers may need assistance and receive disability awareness training to enable them to give appropriate assistance when necessary.

Awareness of the barriers faced by disabled customers is a key part of the induction training for all station customer service assistants and train operators. This initial training is supported up by annual disability awareness training which all station staff receive as part of their continuous development programme. This training is reviewed every year to ensure it continues to meet the needs of both customers and staff. It includes sections on invisible disabilities such as hearing impairment and learning difficulties, the social model of disability, communicating with disabled people and discrimination.

Last year we trained more than 13,000 members of frontline staff.

If requested station staff guide visually impaired passengers from the ticket hall to the platform and onto the train or vice versa.

For LUL staff, giving such assistance is an everyday occurrence.

London Underground regularly receives positive feedback and praise, including an award, from visually impaired passengers about the assistance given by staff.

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

The system installed on the new ‘S8’ vehicles is capable of giving a 3 second audible warning before the doors start to close.

As part of the Victoria Line Upgrade, which will be receiving its new vehicles before the SSR, a trial using the 3 second warning duration will be carried out once the last of its current vehicles has left service in 2011. The findings will then be evaluated and acted on prior to the expiry of the exemption in 2013.

The results of this trial will provide accurate information about the impact of using a 3 second audible door closure warning on the operation of the Victoria line and any changes to the safety and behaviour of passengers. If the trial shows that the 3 second warning is safe and does not cause

significant disruption to the service, the 3 second warning will remain in use by the Victoria Line and this precedent will be followed by SSR – subject to the different operational requirements of these 4 lines.

LUL is requesting this exemption to ensure consistency across all lines and as a precaution in case the Victoria line trial shows that the 3 second warning is not appropriate in the Underground environment or causes an additional safety risk. In this situation LUL will be seeking that the current 1.75 second warning be maintained.

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

London Underground is requesting an exemption until 30th May 2015 when the last of the old ‘D’ stock trains are replaced by the new ‘S7’ and ‘S8’ trains.

During the mixed fleet running LUL will monitor the SSR and gather data and statistics on any incidents or accidents relating to the audible door closure warning.
We will then be able to compare this information against the data and statistics obtained during the trial of the 3 second audible door closure warning carried out by the Victoria line to give us a better understanding of the impact on the safety and behaviour of passengers on the Metropolitan line.

1. Full name of applicant and address

London Underground Limited
55 Broadway
London
SW1H 0BD

2. Description of Rail Vehicles

Metropolitan line ‘S8 Stock’

Train Formation: 58 x 8 Car permanent formations

Train Numbers:

Driving Motor Cars:	21001 - 21116
Non Driving Motor Car M1:	22001 – 22116
Non Driving Motor Car M2:	23057 – 23116 23001 – 23055 (odd numbers only)
Non Driving Motor Car:	24001 - 24116
Non Driving Motor Cars de-icing:	25002 – 25056 (even numbers)

3. Circumstances in which exemptions are to apply

At all times in passenger service at the following stations/directions:

Station	Northbound Platforms	Southbound Platforms
Aldgate	No Exemption	No Exemption
Amersham	No Exemption	No Exemption
Baker St	No Exemption	Exemption Requested
Barbican	Exemption Requested	Exemption Requested
Chalfont & Latimer	No Exemption	Exemption Requested
Chesham	No Exemption	No Exemption
Chorleywood	Exemption Requested	Exemption Requested
Croxley	Exemption Requested	Exemption Requested
Great Portland St	Exemption Requested	Exemption Requested
Eastcote	Exemption Requested	Exemption Requested
Euston Square	Exemption Requested	Exemption Requested
Farringdon	Exemption Requested	Exemption Requested
Finchley Road	No Exemption	No Exemption
Harrow on the Hill	No Exemption	No Exemption
Hillingdon	Exemption Requested	Exemption Requested
Ickenham	Exemption Requested	Exemption Requested
Kings Cross	Exemption Requested	Exemption Requested
Liverpool Street	Exemption Requested	No Exemption
Moor Park	No Exemption	No Exemption
Moorgate	Exemption Requested	Exemption Required
North Harrow	Exemption Requested	Exemption Requested
Northwick Park	Exemption Requested	Exemption Requested
Northwood	Exemption Requested	Exemption Requested
Northwood Hills	Exemption Requested	Exemption Requested
Pinner	Exemption Requested	Exemption Requested
Preston Road	Exemption Requested	Exemption Requested
Rayners Lane	No Exemption	No Exemption
Rickmansworth	Exemption Requested	Exemption Requested
Ruislip	Exemption Requested	Exemption Requested
Ruislip Manor	Exemption Requested	Exemption Requested
Uxbridge	No Exemption	No Exemption
Watford	No Exemption	No Exemption
West Harrow	Exemption Requested	Exemption Requested
Wembley Park	No Exemption	No Exemption

4. Relevant requirements from which exemption is sought

Regulation 13(4)

Whilst the vehicle is stationary at a station or tram stop, the systems inside the passenger saloon and on the exterior of the vehicle shall be used to announce the destination of the vehicle, or, if the vehicle is following a circular route, the name and number of the route, and, in the case of systems inside the passenger saloon only, to announce the next stop.

5. Technical, economic and operational reasons why exemption is sought

London Underground (LUL) is seeking an exemption that would allow either the 'next station' or the 'terminus station' information inside the saloon to be given during or after the doors have closed at some of the stations on this line. This is to allow for the provision of other key customer information at those sites during short stations stops, instead.

LUL is committed to providing sufficient timely, accurate and accessible customer information to enable our customers to be confident during their journey, to make informed decisions and to minimise the impact of disruption.

The new 'S8' trains will give customer information in both audible and visual formats within the carriage. Information will be given audibly using the train announcement system and visually using 4 dot matrix indicators within each carriage.

LUL understands that one reason for requiring both pieces of information whilst at a station was to help passengers differentiate between fast and stopping services to the same destination. This type of operation does not occur on most of the Metropolitan Line.

The majority of the Metropolitan Line provides a fast, frequent service with short station stops. This greatly limits the amount of information we are able to give to our customers whilst the trains are stationary at a platform. This includes information about Selective Door Opening

(SDO)[8], which is a key factor on the Metropolitan line – more information about Selective Door Opening is given in Annex A.

The Metropolitan line runs on a direct route between Aldgate and Finchley Road with no branches or junctions, and with all trains stopping at all stations. Given this simple and straight forward route, LUL believes that the 'next station' and 'terminus station' announcements serve the same purpose in providing reassurance to passengers that they are in a train heading in the right direction.

However to the north of Finchley Road the line becomes more complicated as it has branches to 4 different terminus stations:

- Amersham
- Chesham
- Uxbridge
- Watford

In addition between Finchley Road and Moor Park the service has 4 different stopping patterns. Diagrams showing the different stopping patterns can be found in Annex B.

- Local trains[9]: These are mainly trains on the Uxbridge Branch and trains on the Watford branch during off peak hours[10]. These trains stop at all stations.
- Semi fast trains: These are mainly trains on the Watford Branch during peak hours. These trains do not stop between Finchley Road and Harrow on the Hill stations, missing out Wembley Park, Preston Road and Northwick Park stations
- Fast Trains- Peak hours: These are mainly trains on the Amersham and Chesham Branches which do not stop at stations between Finchley Road to Harrow on the Hill and

[8] Selective Door Opening - At a number of stations the new 'S8' trains are longer than the platforms. In order for the trains to stop at these shorter platforms safely, one or more sets of doors at either end of the train will not open.
[9] Also known as 'stopping trains'
[10] Peak times refers to the Monday to Friday morning and evening rush hours. Off peak refers to all other times.

Harrow on the Hill to Moor Park, missing out Wembley Park, Preston Road, Northwick Park, North Harrow, Pinner, Northwood Hills, and Northwood stations.

- Fast Trains – Off Peak hours: These are mainly trains on the Amersham and Chesham Branches which do not stop at stations between Wembley Park to Harrow on the Hill and Harrow on the Hill to Moor Park, missing out Preston Road, Northwick Park, North Harrow, Pinner, Northwood Hills, and Northwood stations.

LUL recognises the impact these variations may have on passengers' confidence that they are boarding or on board the correct train. To ensure that passengers have sufficient appropriate information, we have committed to making sure that all regulated information about both the next station and final destination is given in full within the dwell time at a number of key stations.

•

These key stations will be those prior to a junction or split in service between fast and stopping trains, where action or reassurance may be required:

- Chalfont & Latimer (northbound)
- Finchley Road (northbound)
- Harrow on the Hill (both directions)
- Moor Park (both directions)
- Wembley Park (northbound)

In addition, the following stations have been designated as 'key stations' as they are junction points offering the last opportunity to change with other LUL and Chiltern services:

- Baker Street (northbound)
- Finchley Road (both directions)
- Harrow on the Hill (both directions)
- Liverpool Street (south bound)
- Rayners Lane (both directions)
- Wembley Park (both directions)

Due to longer dwell times, all regulated information will be given at terminus stations:

- Aldgate
- Amersham
- Chesham
- Uxbridge
- Watford

Exemptions are not being requested for these stations or platforms. A diagram showing these stations can be found in Annex C.

We are asking for an exemption for the non key stations. At these stations, the regulated information will be given, but some of it may be given after the doors have closed.

The information will also be given in both audible and visual formats during the journey between the stations in good time to enable passengers to prepare themselves for any action needed.

Customers on the platform will be able to get information about the destination of trains from a range of sources including audible station announcements, platform 'next train' display indicators, visual displays on the front and external sides of each carriage of the vehicle and fixed signage such as network maps.

Currently we are required to give the following information

> "The next station is Kings Cross, St Pancras. This is a Metropolitan line train to Amersham."

Some additional routine pieces of information given by the on train customer information system at stations and between stations to assist and inform passengers on the Metropolitan line [11] include:

- This is Chalfont and Latimer
- Change here for the Northern, Piccadilly and Victoria lines, National and International Rail services.

[11] These messages are indicative and may differ slightly from the final messages used.

- Exit here for the Royal National Institute of Blind People and the British Library
- Change here for the Jubilee line and for fast and semi-fast Metropolitan line trains
- This is an all stations Metropolitan line train to Amersham.
- The next station has a short platform. The rear two doors will not open there. Please use the other doors
- Please mind the gap between the train and the platform.

The exact combination information messages given in the ‘at station’ announcement will be specific to each individual platform and programmed to be announced automatically.

The information given is prioritised according to its usefulness and importance to our customers. Where necessary to maintain the appropriate message length, the system will not give tourist or local information.

The new Victoria line trains were granted a similar exemption from this regulation in November 2008. However due to the simplicity of the Victoria line, with no branches or fast/stopping service variations, the exemption was requested and granted for all stations on the line.

6. The effect which non-compliance would have on a disabled person's ability to use rail vehicles of the description to which the application relates

LU does not believe that this non-compliance would have any effect on a disabled person’s ability to use the Metropolitan line.

We believe that there are a number of other audible and visual sources, both inside the train and on the platform, which enable a disabled passenger to be confident in the direction of the train and next station that the train will call at.

Within the train regulated information will be given in both audible and visual formats during the journey between the stations in good time to enable passengers to prepare themselves for any action needed.

Customers on the platform will be able to get information about the destination of trains from a range of sources including audible station announcements, platform 'next train' display indicators, visual displays on the front and external sides of each carriage of the vehicle and fixed signage such as network maps.

7. Any measures which could be taken to enable disabled persons to use the rail vehicle if exemption sought is granted

LU does not believe that this non-compliance disadvantages customers on the Metropolitan line.

We will give all regulated information at key stations where passengers need to take action or require extra assurance that they are on the correct train. At all other sites, the information will be given, although some parts of the message may be given after the doors close.

In addition all of the regulated information will be provided in both audible and visual formats within the train between stations. The information is also available from a variety of sources on the platform before the train arrives and when it is stationary.

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

The information systems in the new 'S8' trains are capable of complying with this Regulation. However in operational terms to ensure that all announcements were fully compliant with RVAR, we would need to extend dwell times at a significant number of stations which would have a cumulative effect along the entire journey. This would increase journey times for passengers across the whole fleet which would greatly reduce the benefit gained from the Upgrade improvements.

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

London Underground is requesting an exemption until 30th May 2015 when the last of the D stock trains are replaced by the new 'S7' trains.

The Metropolitan line will use any lessons learned by the Victoria Line, whose new trains were granted a similar exemption from this regulation in November 2008. We will monitor feedback to see if there is any significant evidence that this exemption is causing a problem for London Underground Customers.

Annex A: Selective Door Opening (SDO)

At a number of stations the new ‘S8’ trains are longer than the platforms. In order for the trains to stop at these shorter platforms safely, one or more sets of doors at either end of the train will not open. Therefore customers must move further along the train to exit.

This system is already in use on a number of LUL lines including the Northern line and some National Rail services.

The priority for LU at these stations is to ensure that our customers understand which doors will not open at which platforms to avoid confusion and panic when doors do not open as expected. This will also avoid delays to the service caused by passengers using the emergency alarm because the doors don’t open.

The customer information system will be used to inform customers audibly and visually that doors will not open both whilst the train is stationary at the platform and on the approaching journey to an affected station. The SDO message will also be given whilst the train is stationery at the preceding station to enable customers to get on at the correct doors for their stop if possible or to ensure that they begin moving towards the correct doors once on the train as soon as possible.

These messages will be carriage specific, which means that only those customers to whom the message applies will see and hear it. These localised announcements will help to avoid confusion.

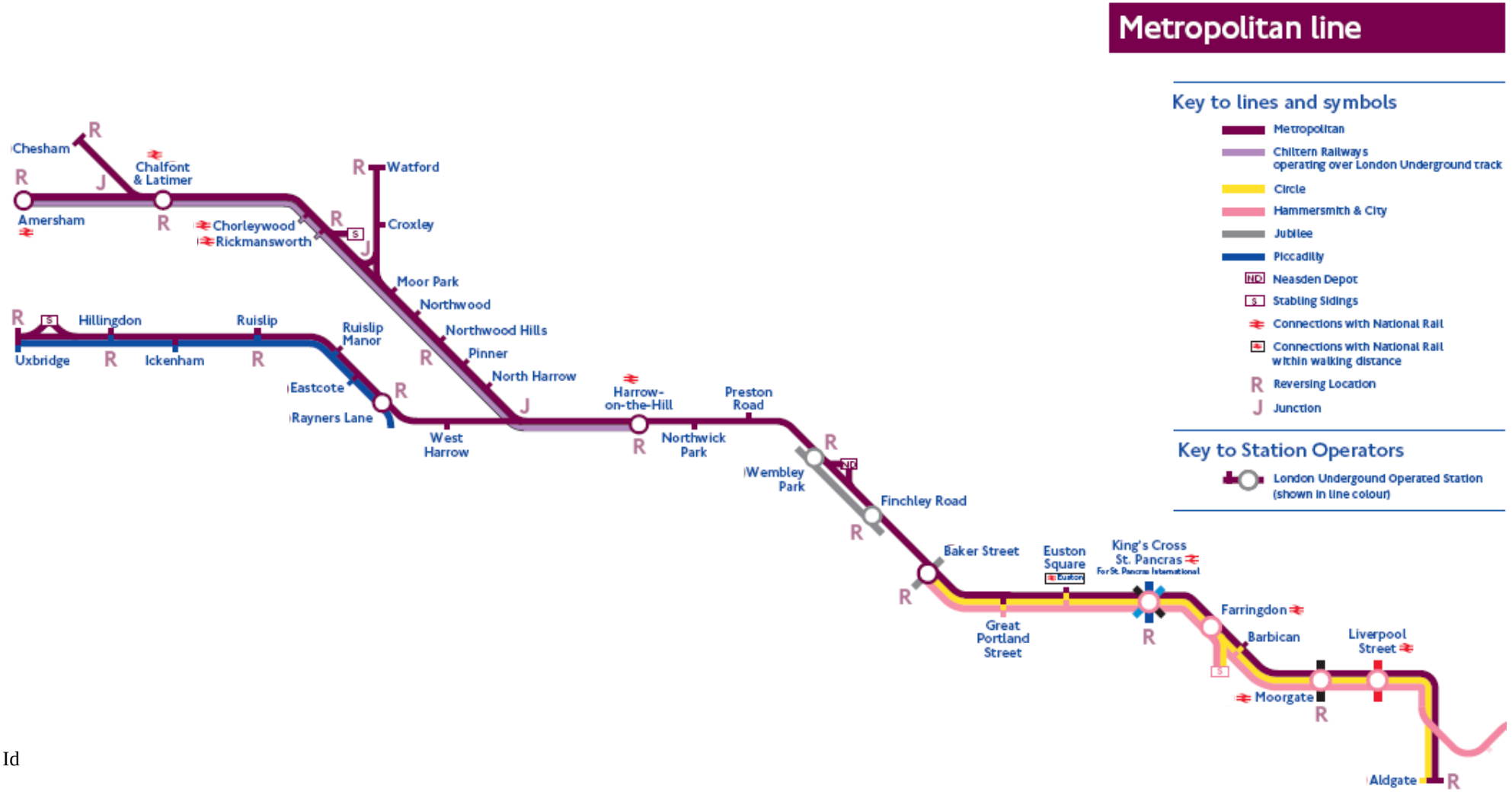
In addition, if a door will not open, a ‘Door Out of Use’ dot matrix indicators above door will be illuminated. These indicators are located above the first four and last four sets of doors of the train (as all the doors in between will open at every station).

Selective Door Opening will be necessary at the following stations:

- Barbican
- Euston Square
- Great Portland Street
- Liverpool St

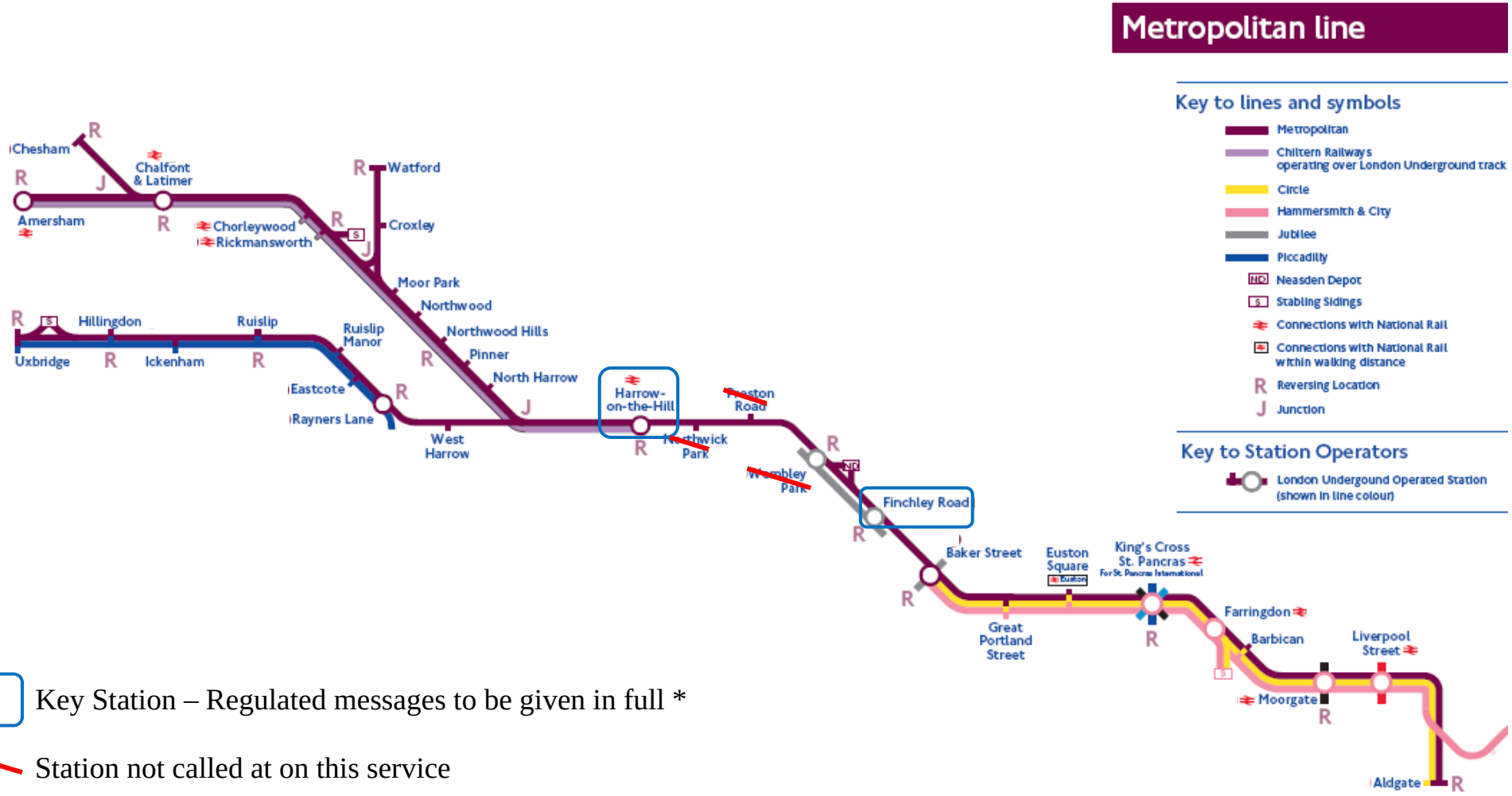
- Moorgate
- Ruislip
- Uxbridge

Annex B: Metropolitan Line – Local Service



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Annex B: Metropolitan Line – Semi Fast Service

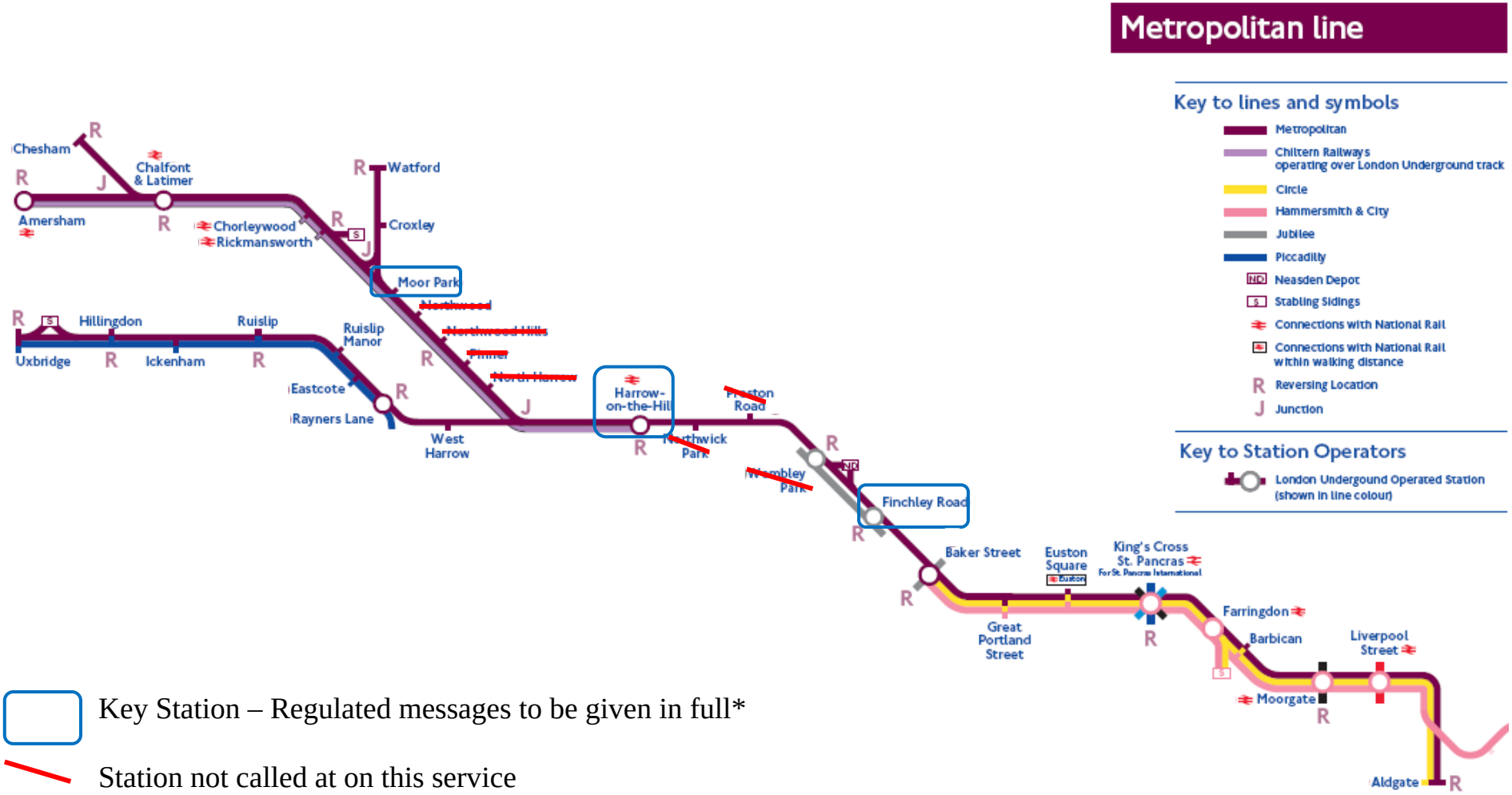


Key Station – Regulated messages to be given in full *

Station not called at on this service

* This diagram show only the Key stations relating to this change in service pattern, full messages will also be given at all other Key stations as shown in Annex C.

Annex B: Metropolitan Line – Fast Service: Peak

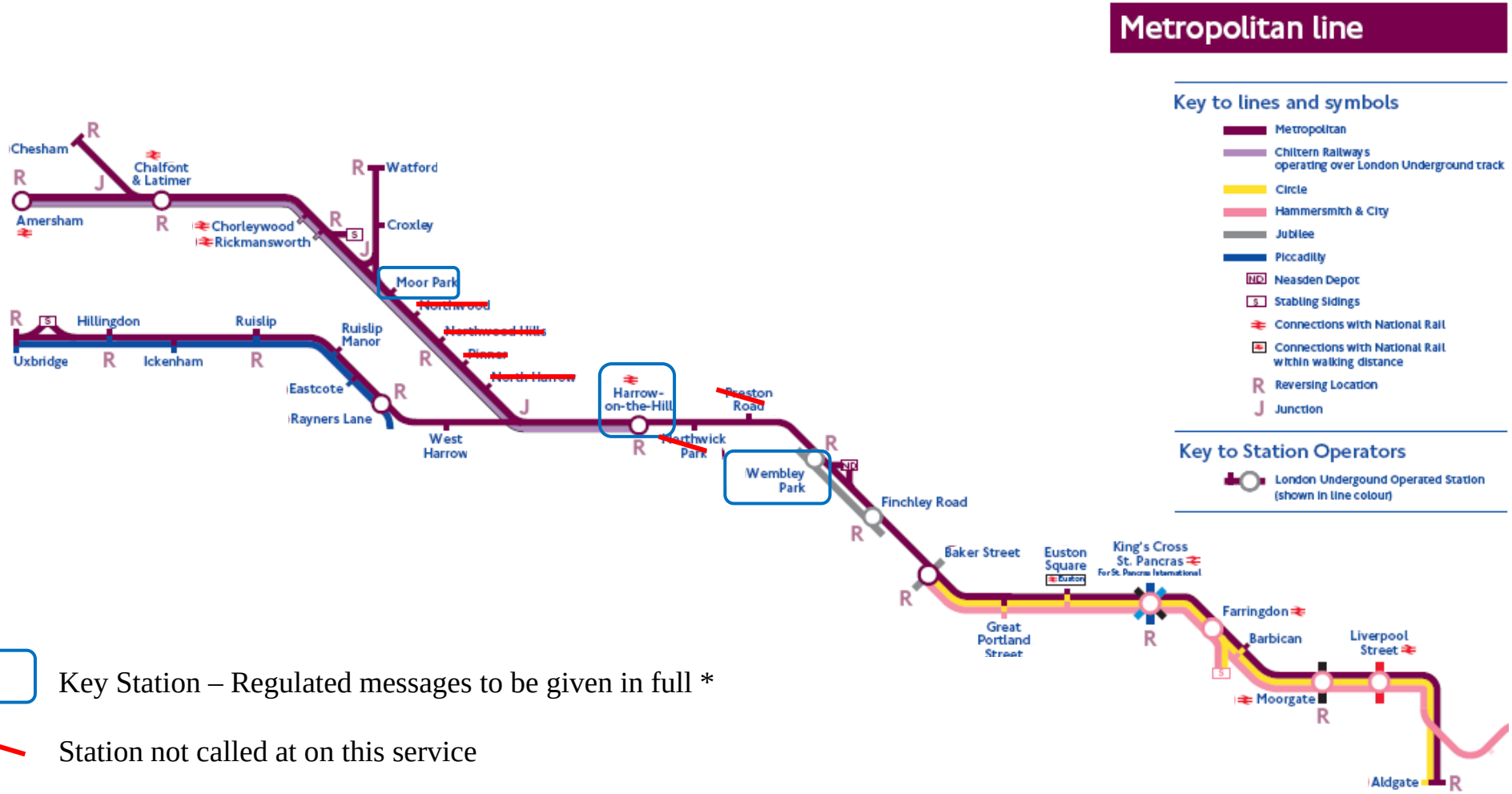


Key Station – Regulated messages to be given in full*

Station not called at on this service

* This diagram show only the Key stations relating to this change in service pattern, full messages will also be given at all other Key stations as shown in Annex C.

Annex B: Metropolitan Line – Fast Service: Off Peak

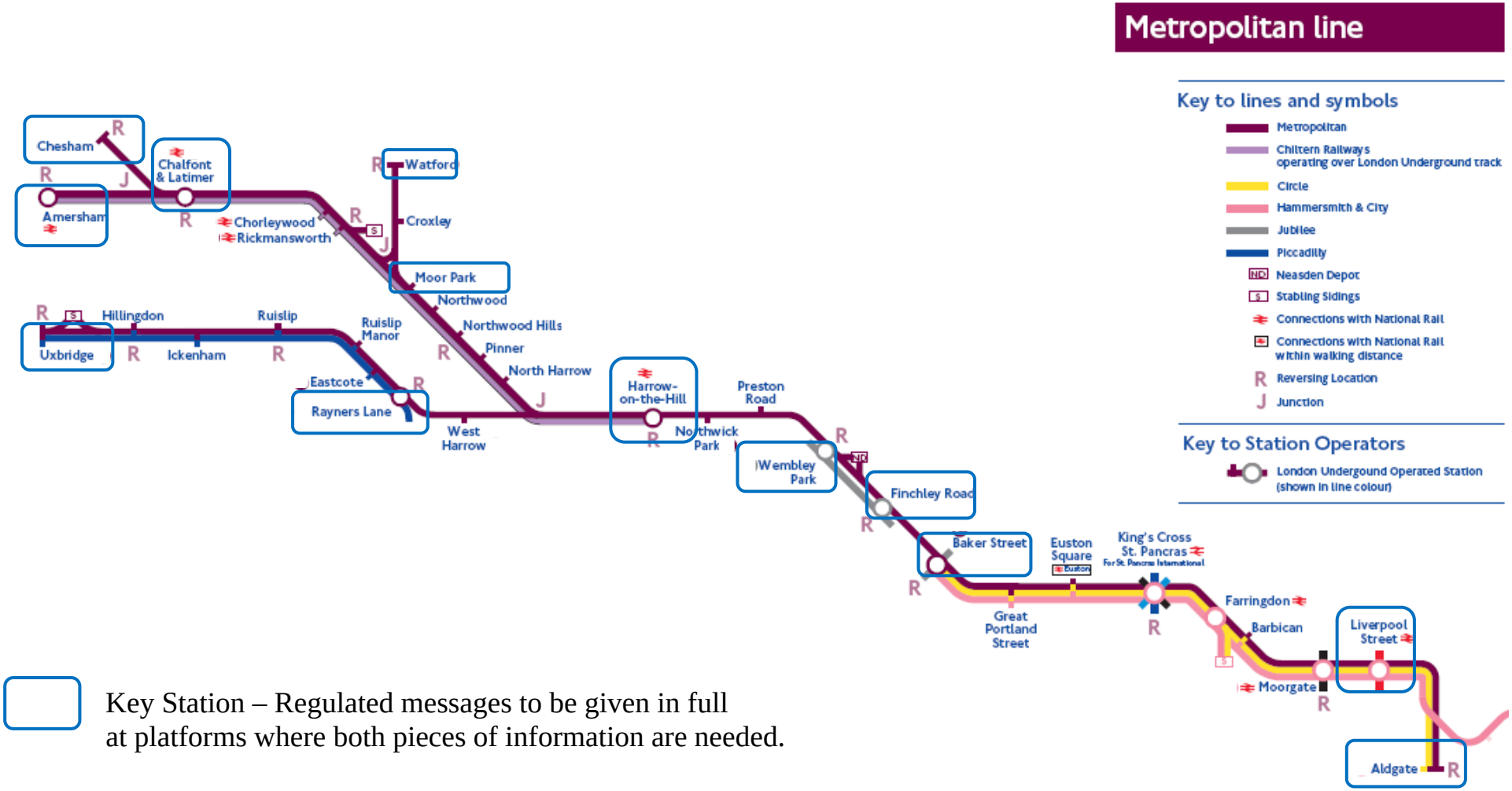


Key Station – Regulated messages to be given in full *

Station not called at on this service

* This diagram show only the Key stations relating to this change in service pattern, full messages will also be given at all other Key stations as shown in Annex C.

Annex C: Metropolitan Line – Key and Terminus Stations: No Exemptions Required



Key Station – Regulated messages to be given in full at platforms where both pieces of information are needed.

1. Full name of applicant and address

London Underground Limited
55 Broadway
London
SW1H 0BD

2. Description of Rail Vehicles

Metropolitan Line ‘S8’ Stock trains

Vehicles numbers: 24001 - 24116

This exemption only applies to the **116** ‘MS’ cars which will be used as the middle two cars in each train. They differ in layout to the other cars in the train as they contain the wheelchair spaces.

The exemption relates specifically to the handrail above the designated wheelchair space in these carriages.



Positions of Designated Wheelchair Spaces

3. Circumstances in which exemptions are to apply

At all times in passenger service

4. Relevant requirements from which exemption is sought

A wheelchair space shall comply with the following specifications:

Regulation 16(1)(b)
'Subject to Regulation 18 there shall be no obstruction of the space between the floor and the ceiling of the regulated rail vehicle, other than an overhead luggage rack or an openable window (if fitted)'

Regulation 16(1)(d)
'No magazine rack or other fitting for the use of other passengers shall be accessible through the space, other than an overhead luggage rack or an openable window (if fitted)'

5. Technical, economic and operational reasons why exemption is sought

LUL are requesting an exemption to install horizontal handrails above the 4 designated wheelchair spaces in each train. We believe that this will provide a safer environment for wheelchair users and other customers.

Due to the nature of our service, and the known behaviour of our customers, it is likely that a wheelchair user travelling in the designated wheelchair space will be surrounded by standing customers at busy times. The Metropolitan line vehicles have been designed to carry between 853 - 1218 standing customers based on 5 or 7 customers per m^2.

We have safety concerns about the high risk of standing customers falling against or onto wheelchair users due to the lack of an appropriate handrail in this location.

We also believe that handrails are necessary to offer appropriate support to customers standing in these areas when they are not occupied by a wheelchair user.

6. The effect which non-compliance would have on a disabled person's ability to use rail vehicles of the description to which the application relates

We believe that if granted, this exemption will actually improve the safety of wheelchair users and other passengers in and around the wheelchair spaces for the reasons given in Section 5.

In recognition of these concerns, we have worked closely with the DfT and DPTAC to identify an appropriate solution for new train designs.

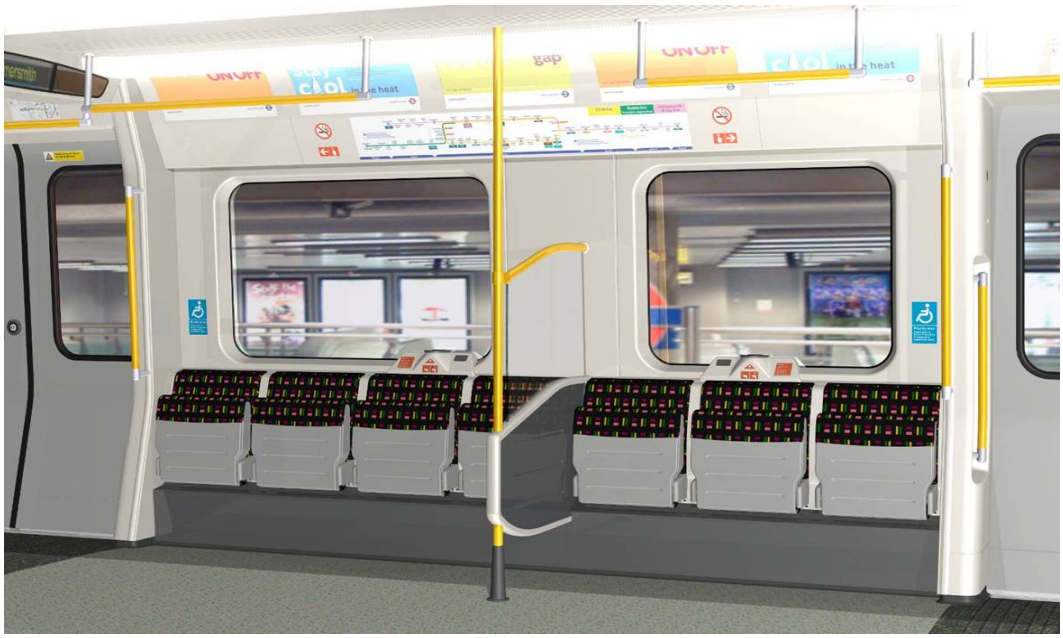
We propose to install a horizontal handrail above the wheelchair space with a clearance of 1950mm between the bottom of the handrail and the floor. The handrail will be positioned 50mm within the wheelchair space from the central aisle.



[12]

The location and design of this handrail is well within the maximum intrusion into the wheelchair space of up to 250mm, which was proposed as part of the recent DfT Consultation on revising the RVAR.

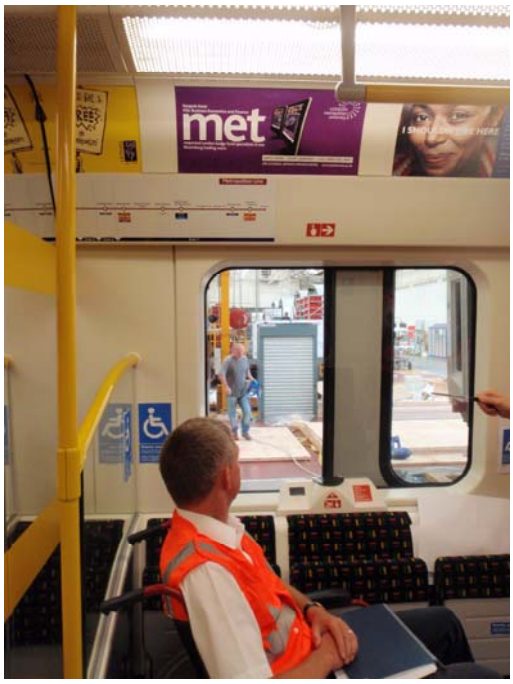
[12] Photographs in this exemption were taken on the 'S8' mock up.



The handrail will comply with all the other relevant requirements of RVAR, having appropriate clearance, dimensions and visual contrast.

We believe that the handrail is sufficiently far enough out of the wheelchair space that standing customers will not encroach on a wheelchair users personal space.

Following consultation with DPTAC and DfT, the handrail only covers 2/3 of the length of the wheelchair space. They have been positioned so that they would not be directly above a wheelchair users head. We believe that this will provide a more comfortable and pleasant travelling experience.





This limited intrusion into the wheelchair space has been recognised and supported as a pragmatic change by the Disabled Persons Transport Advisory Committee (DPTAC). At a presentation to DPTAC and other stakeholders in September 2008, it was felt that this non compliance was actually beneficial rather than detrimental to wheelchair users. DPTAC members stated that the handrails above the wheelchair space are important and should not be removed.

As part of the consultation process for the Victoria Line Upgrade RVAR exemption application, the Her Majesty's Railway Inspectorate (HMRI) response suggested that a similar hand rail should be provided in the wheelchair area; so that when it is unoccupied, standing passengers would have something to hold onto.

LUL's original intention was to install a handrail above the wheelchair space in the new VLU vehicles. However during the design process it was discovered that this would not be possible.

The significantly lower headroom in the smaller VLU vehicles meant that there was a high risk of passengers hitting their heads when getting up out of the tip up seats.

Instead, an additional vertical handrail has been installed opposite the wheelchair space in the VLU vehicles. However this solution is not believed to be as effective as the horizontal handrail.

The larger size and increased headroom of the new 'S8' vehicles on the Metropolitan line allows for the inclusion of a horizontal hand rail without increasing the risk of injury to customers rising from the tip up seats in that area.

7. Any measures which could be taken to enable disabled persons to use the rail vehicle if exemption sought is granted

We believe that this exemption would improve disabled people's ability and confidence in using our service.

The wheelchair space is clearly signed and includes additional information about the priority that wheelchair users have for the use of this space. We believe that this signage along with a customer information campaign will ensure that all customers are aware of the prime purpose of the wheelchair space.

This will ensure that as far as possible the space is recognised as intended for the use of wheelchair users and encourage standing

customers or those previously using the tip up seating to provide sufficient space for a wheelchair user when necessary.

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

Due to the service provided by London Underground and the number of customer who use it, it is unlikely to be possible to provide a safe environment for all customers without the inclusion of this grab rail.

Technically this handrail could be removed; however we believe that this would compromise passenger safety.

We believe that this will shortly cease to be a non compliance following the current revision of the RVAR. However this application has been submitted in case this particular revision does not proceed.

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

This is a request for a permanent exemption.

1. Full name of applicant and address

London Underground Limited
55 Broadway
London
SW1H 0BD

2. Description of Rail Vehicles

Metropolitan Line ‘S8’ Stock trains Vehicles numbers: 24001 - 24116

This exemption only applies to the **116** ‘MS’ cars which will be used as the middle two cars in each train. They differ in layout to the other cars in the train as they contain the wheelchair spaces. The exemption relates specifically to the wheelchair compatible doorways in these carriages.



Position of Designated Wheelchair Accessible Doorways

3. Circumstances in which exemptions are to apply

At all times in passenger service, when a Metropolitan line ‘S8’ train stops at a Metropolitan line platform where:

a) there is no step-free route from the platform out of the station,
b) there is no step-free route between that platform and platforms for other LUL lines or national rail services: or
c) it is not physically possible to bring the dimensions of the step and/or gap within the maximum permitted tolerances.

A phased programme of deadlines for compliance is set out below.

Station	Platform	Exemption requested until
Hillingdon	1	31 August 2013
Hillingdon	2	31 August 2013
Rayners Lane	1	31 August 2013
Rayners Lane	2	31 August 2013
Ruislip	2	31 August 2013
Uxbridge	1	31 August 2013
Uxbridge	2	31 August 2013
Uxbridge	3	31 August 2013
Uxbridge	4	31 August 2013
Harrow on the Hill	1	30 November 2013
Harrow on the Hill	3	30 November 2013
Harrow on the Hill	4	30 November 2013
Harrow on the Hill	5	30 November 2013
Harrow on the Hill	6	30 November 2013
Moor Park	1	30 November 2013
Moor Park	2	30 November 2013
Barbican	1	30 November 2013
Barbican	2	30 November 2013
Euston Square	2	30 November 2013*
Liverpool Street	2	30 November 2013
Moorgate	1	30 November 2013
Moorgate	2	30 November 2013
Moorgate	3	30 November 2013
Moorgate	4	30 November 2013
Euston Square	1	31 December 2013*

*Different dates as there will be step free access to Platform 1 only.

Untimed temporary exemptions are requested until such time as the platforms below are made step-free:

Station	Platform
Croxley	1
Croxley	2
Moor Park	3
Moor Park	4
North Harrow	1
North Harrow	2
Northwick Park	2
Northwood	1
Northwood	2
Northwood Hills	1
Northwood Hills	2
Preston Road	1
Preston Road	2
Ruislip	1
Watford	1
Watford	2

Untimed temporary exemptions are requested until such time as the platforms below are made step-free and an appropriate solution is identified for compromise height (LUL) platforms:

Station	Platform
Eastcote	1
Eastcote	2
Ickenham	1
Ickenham	2
Ruislip Manor	1
Ruislip Manor	2

Untimed temporary exemptions are requested until such time as the platforms below are made step-free and an appropriate solution is identified for severely curved platforms:

Station	**Platform**
Northwick Park	1
Rickmansworth	1
West Harrow	1
West Harrow	2

Untimed temporary exemptions are requested for the platforms below until such time as an appropriate solution is identified for severely curved platforms:

Station	**Platform**
Aldgate	2
Aldgate	3
Baker Street	1
Baker Street	2
Baker Street	3
Baker Street	4
Chesham	1
Farringdon	1
Farringdon	2
Finchley Road	1
Finchley Road	4
Great Portland St	1
Great Portland St	2
Rickmansworth	2

4. Relevant requirements from which exemption is sought

Regulation 23(1)

When a wheelchair-compatible doorway in a regulated rail vehicle is open at a platform at a station or a tram stop a boarding device must be fitted between that doorway and the platform or stop if a disabled person in a wheelchair wishes to use that doorway, unless the gap between the edge of the door sill of that doorway and the edge of the platform or stop is not more than 75 millimetres measured horizontally and not more than 50 millimetres measured vertically.

5. Technical, economic and operational reasons why exemption is sought

London Underground is requesting a series of temporary exemptions to enable us to provide useful level access between the train and platform within the constraints of the infrastructure on the Metropolitan line.

London Underground's aim is to provide a 'turn up and go' service which allows passengers the greatest level of independent access without the need for staff intervention and assistance. However, this is made more difficult because most of our stations and tunnels are over 100 years old and were never designed to give level access. These stations are often difficult to alter due to their physical layout and constraints, especially as many are underground.

LUL understands the importance of a seamless accessible route from the street through the station and on to the train. We recognise that, in addition to access barriers between the street and platforms, the step and gap between the platform and train can cause a significant problem for many passengers. Therefore, we have invested a great deal of time and money to investigate and develop appropriate permanent solutions.

The new 'S8' train has been designed with a lower floor than the old 'A' Stock Metropolitan line trains. This will improve access at all platforms by reducing the vertical step between the train and platform at standard LUL height platforms; however this will not make the vehicles compliant at all platforms, so additional works will

be required at a number of platforms to bring the step and gap within the dimensions allowed.

LUL does not believe that Manual Boarding Ramps (ramps) are an appropriate solution at our stations. Instead we are proposing to use permanent physical improvement works to provide permanent, reliable and independent access to customers. A more detailed explanation of why we do not believe ramps are appropriate is given in Section 7.

LUL has a programme of Step-free Access works which will undertake major infrastructure works, such as the installation of lifts, to make accessible routes through stations without the need to use stairs or escalators.

Currently, 57 of our stations are step-free from street to platform. In addition, Green Park will be made step-free as part of our Olympic & Paralympic access programme, and 9 more will be made step-free as part of the Crossrail and Thameslink projects. Currently 11 stations on the Metropolitan line are step-free from street to platform.

We have spent over £120 million over the last 3 years and will continue to invest in step free access schemes within our funding constraints. In addition further step free access works are included in a number of major station enhancement projects, both as part of Crossrail and the Thameslink upgrade. This includes stations such as Tottenham Court Road, Bond Street, Blackfriars, Paddington and Whitechapel.

A map showing current and planned Step-free Stations on the Metropolitan line can be found in **Annex A**.

It is our intention to link the two programmes of work together so that the works to give level access between the train and platform will take place at the same time as works to provide step-free access between the platform and street. This will enable us to provide a fully seamless step-free route from the train through the station and out to the street.

We believe that the most effective use of our resources is to focus on those platforms which will give maximum benefit to disabled customers. We are therefore proposing to carry out level access work at platforms with:

a) existing or planned step-free access,
b) step-free interchange routes between platforms, or
c) potential turning or terminus points.

This solution takes account of the reality that regrettably many underground stations are not currently accessible to all passengers, especially wheelchair users and others with mobility impairments.

This approach was agreed with DfT and DPTAC during the development of the Victoria Line Upgrade (VLU) exemption in 2008, and was supported as a pragmatic response by all involved during the debates in Parliament.

In addition we have given a commitment that as we increase the number of Step-free stations, we will include level access between the platform and train as an integral part of the plans – subject to the restrictions set out in this application.

To enable us to identify the platforms where useful level access should be provided we have used the categorisation system set out below.

Category 1: Existing step-free stations and platforms

The step and gap will be brought within the required dimensions before the introduction of the 1st vehicle into passenger service, except at platforms with additional infrastructure constraints – further details are given below.

The following 16 platforms at 7 stations will have step-free access and level access between the street and train prior to the introduction of the 1st 'S8' train in 2010. We will therefore not be requesting exemptions for these platforms:

Station	Platform
Amersham	1

Amersham	2
Amersham	3
Chalfont & Latimer	1
Chalfont & Latimer	2
Chorleywood	1
Chorleywood	2
Kings Cross	1
Kings Cross	2
Liverpool Street	1
Pinner	1
Pinner	2
Wembley Park	1
Wembley Park	2
Wembley Park	5
Wembley Park	6

Category 2: Planned step-free stations and platforms

Level access between the platform and train will be achieved as part of, or at the same time as overall step-free station works, except where there are additional infrastructure constraints – further details are given below.

Category 3: Existing or planned step-free interchange between platforms or stations and platforms regularly used as termination or reversing points

Level access between the platform and train will be achieved following removal of the old ‘A’ and ‘C’ stock vehicles, except where there are additional infrastructure constraints – further details are given below.

NB: It is LUL's intention to make these platforms compliant earlier than the date given in this application if it is confirmed that there will be no safety or infrastructure concerns during mixed fleet running[1].

Category 4: Stations and platforms with no existing or planned step-free routes or interchange or where trains do not terminate or reverse

A temporary exemption will be requested for platforms in this category until such time as there is a step-free access route from the platform out of the station or between platforms except where there are additional infrastructure constraints – further details are given below.

A list of platforms in Category 4 is given in **Annex A**.

In total LUL is spending over £5½ million to bring the 32 Metropolitan line platforms, which will give most benefit to customers and are technically possible, within the required dimensions of RVAR.

However, unlike the Victoria line stations where all the platforms are straight, set at a single height and only served by a single type of train, the varied nature of the platforms served by the Metropolitan line trains pose a much greater challenge. Our ability to bring the step and gap within the required dimensions is affected by a number of variations: Metropolitan line platforms are set at 3 different heights:

- LUL Standard height
- Compromise height (BR)
- Compromise height (LUL)

NB Compromise Height platforms are those which are also used by other LUL or National Rail lines. These platforms are set at a non standard LUL height to make allowance for the different height, size and shape of trains which use the same track and platforms. They are so called as they are set at a compromised height between the different types of train that use them.

Metropolitan line platforms also vary in relation to radius of curve:

[1] Mixed fleet running refers to the period when 2 or more different types of train stock will be running alongside each other on the Metropolitan Line, following the introduction of the 1st S8 train into service until the withdrawal of the last of the old 'A' & 'C' stock trains.

- Straight
- Curved
- Severely Curved

In addition some platforms are both curved or severely curved **and** set at a compromise height. Details about the nature of each platform type and the investigative work undertaken by LUL in respect of level access solutions are given below.

Due to this variety, a single level access solution for all platforms is not a viable option. LUL has therefore invested significant resources to investigate different solutions and taken a platform by platform approach.

Our work has meant that we have identified feasible solutions for those platforms which are:

- LUL Standard height or Compromise height (BR), which are also
- Straight or Curved

However, despite this work, no appropriate solution has been found for Compromise height (LUL) or severely curved platforms, where we do not believe that it is physically possible to bring the step and/or gap within the maximum permitted dimensions at this time.
We are therefore also requesting temporary exemptions for severely curved and compromise height (LUL) platforms in Categories 1, 2 & 3 as set out in the following sections.

Straight and Standard Height Platforms

These are platforms which are set at the standard LUL platform height of 950mm above the track and which are straight. In technical terms straight means having a radius of more than 1000m along the length of the platform.



Photograph showing straight platform at Barbican[2]

A list of the straight and standard height platforms in Categories 1, 2 & 3 is given in Annex B.

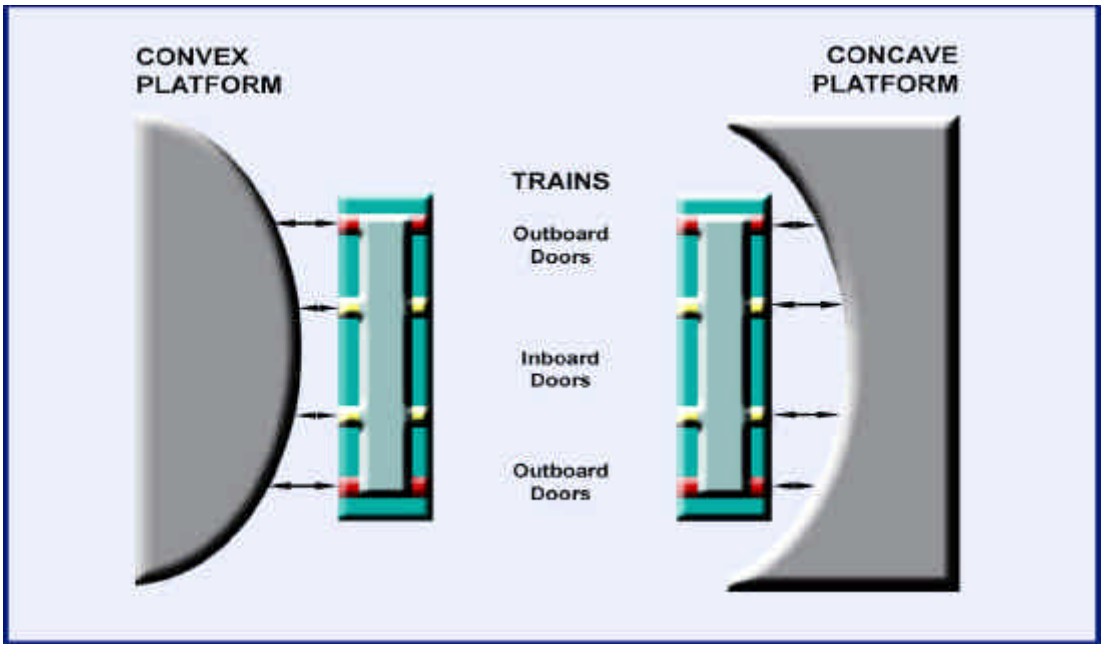
The lower floor of the new 'S8' trains will bring the majority of these platforms within vertical compliance. A mixture of localised track and platform works will make these platforms both vertically and horizontally compliant.

These platforms will be made compliant in line with the dates set out in this application.

Curved Platforms

These are platforms where the radius is between 601m and 1000m. A list of the curved platforms in Categories 1, 2 & 3, with their radius is given in Annex C:

[2] Still images taken from video footage shot from the driver's cab of a Metropolitan line train.



The effect of platform curvature and door position on stepping distance[3]

At curved platforms, the standard LUL platform clearance offsets are increased as the train needs to sit further away from the platform at certain points to stop it from hitting the platform as it passes through. This increases the horizontal gap between the platform and some doors along the length of the train.

At trains on the inside of a curve (concave platforms), the gap is largest at doorways at the centre of the carriage with smaller gaps at doorways at the ends of the carriage. This is referred to as ‘centre throw’.

At trains on the outside of a curve (convex platforms), the gap is largest between the ends of the carriage and the platform, with a smaller gap at the centre of the carriage. This is referred to as ‘end throw’.

As the degree of the curve increases, the greater the ‘throw’ and the larger the gap needed to stop the train striking the platform. The consequence of this is that the step at the doorways gets larger.

LUL has tried to minimise the impact of these ‘throws’ by positioning the wheelchair compatible doorways over the bogies (fixed wheel axles) at the ends of 2 carriages in the middle of the train which will give the smallest gap in most cases.

[3] Diagram from DfT Significant Steps Research Report. This is for illustrative purposed only and it should be noted that the ‘S8’ vehicles only have 3 doors.

We have investigated a variety of solutions to make these platforms compliant. These solutions depend on the exact dimensions and characteristics of each platform and vary by location, on a door specific basis.

These platforms will be made compliant using a mixture of localised track and platforms works in line with the dates set out in **Annex C**.



Photograph showing curved platform at Kings Cross[4]

[4] Still images taken from video footage shot from the driver's cab of a Metropolitan line train.

Severely Curved Platforms

These are platforms where the radius of the platform is less than 600m. A list of the severely curved platforms is given in **Annex D**.



Photograph showing severely curved platform at Great Portland St[5]

These platforms have the same issues as curved platforms, however due to the more extreme curvature and the increased risk of the train striking the platform, the gap between the train and the platform is larger at some points than at curved platforms.

Due to the increased gap, the track and platform solutions being used for curved platforms are not appropriate for severely curved platforms. Therefore we have investigated additional solutions, including:

Static Gap Fillers

These are sections of material which can be attached to either the edge of the platform or train to reduce the horizontal gap. They are strong enough to stand on but are deformable so that they can move without damaging the train if hit. However these are not suitable to bridge the size of the gap at severely curved platforms.

[5] Still images taken from video footage shot from the driver's cab of a Metropolitan line train.

Active Gap Fillers

LUL employed an independent external company, Creactive Design, to undertake a detailed study of active, platform-based, mechanical gap fillers and create potential concept designs. For example a metal structure which is built into the platform and automatically deploys when the train stops.

This study found that there is no appropriate ‘off the shelf’ solution currently available. Discussions based on this study within LUL concluded that, although a potential solution could be developed, it would take a significant length of time, as we would need to further investigate the potentially significant impacts on safety, our ability to incorporate such devices into existing platform structures, operational systems and passenger behaviour etc. Concerns were also raised about the negative impact on dwell times, as it was estimated that the additional time needed for any such device to be deployed and retracted safely could be significant. Therefore, there is no current viable solution within LUL for severely curved platforms.

As stated earlier, LUL does not believe that Manual Boarding Ramps are an appropriate solution at our stations. A more detailed explanation of why we do not believe manual boarding ramps are appropriate is given in Section 7.

As there is currently no appropriate solution available, we are requesting temporary exemptions, until such a time as compliant solution for severely curved platforms can be identified or developed.

LUL is happy to share the contents of the Creative Design Report with DfT if required.

Compromise Height Platforms (BR)

These are platforms that are used by both Metropolitan line trains and mainline National Rail services. A list of the compromise height platforms (BR) in Categories 1, 2 & 3 is given in Annex E.

This affects the western section of the Metropolitan line between Harrow on the Hill and Amersham, where the platforms are also used by the Chiltern National Rail Service. Some platforms in this category are no longer used by other services, but are still set at the non LUL standard height.

These platforms are set at a height of 915mm to take account of the different height of the Metropolitan Line and Chiltern trains.



Metropolitan Line ‘A’ Stock Train at Amersham



Chiltern Class 165 ‘Turbo’ Train at Amersham

We have worked with Chiltern to agree an appropriate solution, and will be raising the height of these platforms to the LUL Standard Height of 950mm. This will also improve the stepping distances for Chiltern trains, although they will still not be within the required RVAR dimensions.

These platforms will be made compliant in line with the dates set out in **Annex E**.

Compromise Height Platforms (LUL)

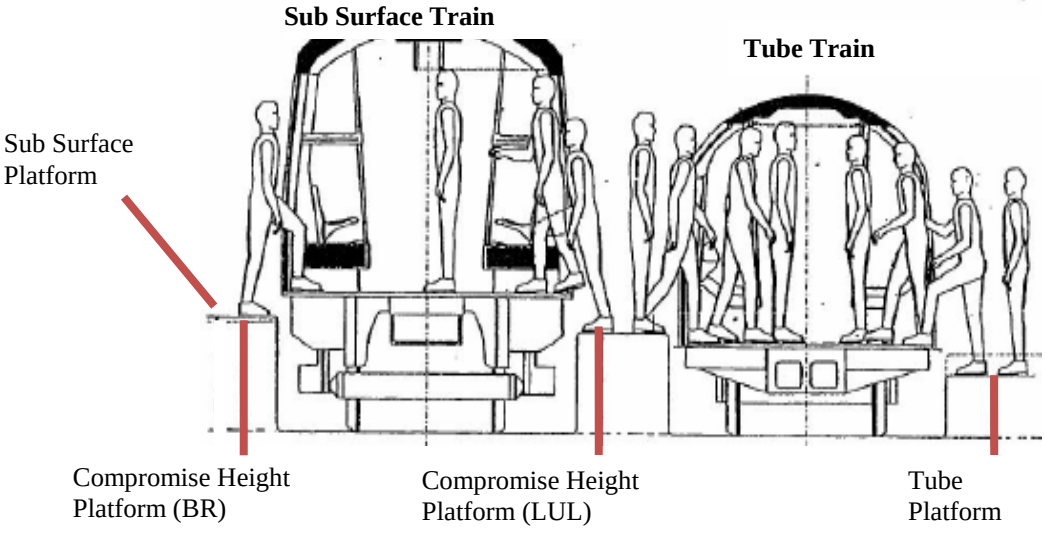
These are platforms that are used by both Metropolitan line and other LUL lines using smaller “Tube” trains. This mainly affects the western section of the Metropolitan line between Rayners Lane and Uxbridge, where the platforms are also used by the Piccadilly line. The Metropolitan line also shares island platforms with the Jubilee line at Wembley Park and Finchley Road. A list of the compromise height platforms (LUL) is given in **Annex F**.

Rayners Lane to Uxbridge

These platforms are set at a height of 840mm to take account of the different height of the ‘Sub Surface’ Stock vehicles used on the Metropolitan line and the ‘Tube Stock’ vehicles used on the Piccadilly line.



As shown in the diagram below, passengers have to step up into the larger Metropolitan line trains and step down in to the smaller Piccadilly line trains.



This means that if the platform was raised to provide level access between the platform and the Metropolitan line train, the step down between the platform and the Piccadilly line trains would be increased. This would have additional safety implications: - for example the increased risk of people hitting their heads on the low door frame of the Piccadilly line trains.

If the platform was lowered, to provide level access between the platform and the Piccadilly line, the step between the Metropolitan line trains and platform would increase to 270mm for an existing ‘A’ stock Metropolitan line train and 140mm for a new ‘S8’ train.

In 2008 London Underground commissioned an independent external company, Frankhams Consultancy Group to investigate the options and impacts at shared compromise height platforms to achieve RVAR compliance.

The Frankhams Report concluded that whilst technical solutions to achieve compliance for one rolling stock type were already available, e.g. platform humps or track adjustments, such changes would have a significant negative impact upon safety and operations of the other rolling stock using that platform. The Frankhams Report further concluded that service pattern changes, which would effectively segregate rolling stock so that they do not use the same platforms, would be the only feasible way of achieving RVAR compliance at those sites. Such service segregation would permit the usual technical solutions to be used.

In 2005 London Underground undertook a comprehensive analysis of service patterns in West London, concentrating on the Sub Surface and Piccadilly lines. The study analysed the relative merits of the current service plans versus more radical service pattern changes, such as the swapping of Piccadilly and District branches to Uxbridge and Ealing Broadway respectively, with a view to shaping the upgrade plans which were in development at the time. A number of options also considered service changes to the Uxbridge branch, including options which would permit technical solutions to be introduced to achieve RVAR compliance.

The more radical of these options, involving running District line trains to Uxbridge and diverting Piccadilly line trains away from this branch (i.e. service segregation which would remove the dual stock issue) were judged to represent poor value for money in the assessment. It is

important to note that 'poor value for money' takes into account a number of criteria, including; the social disbenefit of making the change (i.e. who benefits and who is disadvantaged); the capital costs; the revenue implications and the operational impacts.

Continuing to run Piccadilly line trains on the Uxbridge branch, but terminating this service at Rayners Lane, with only Metropolitan line trains running beyond Rayners Lane fared slightly better in the analysis.

However, this option would require works to provide the necessary reversing capacity for the Piccadilly line at Rayners Lane. In order to do this LUL would need to invoke the Rayners Lane Specified Right[6] within the PPP contract.

An option for a major layout change at Rayners Lane was included as a Specified Right in the Metronet PPP contract. This would have enhanced the station to have 4 platforms (two island platforms) with improved interchange and reversing capability. Piccadilly line trains would serve the central platforms and Metropolitan line trains the outside platforms, giving an opportunity to provide RVAR compliance and step-free cross-platform interchange between stock types. The project would also have facilitated enhanced frequencies on both Piccadilly and Metropolitan services on the Uxbridge branch – although terminating all Piccadilly line trains at Rayners Lane was not assumed.

Analysis was undertaken to invoke the Specified Right, which was estimated to have a capital cost of approximately £55million. Due to funding constraints the proposal did not receive assent to progress. Subsequently, a reduced proposal for Rayners Lane has remained in scope, which solely prepares the current layout for the introduction of the new 'S8' trains.

[6] Specified Right – this is a clause within the Public Private Partnership (PPP) contract relating to a project or piece of work that LUL may wish to have undertaken in the future, but for which the Infraco was not obliged to give a price at the time of signing the contract. The Infraco will not be paid for the Specified Right until LUL decides that the work should be undertaken – at which point the Infraco are obliged to undertake the work as set out in the Specified Right attached to the contract.

Two other aspects of TfL's Transforming the Tube programme may provide an opportunity to provide level access on this branch. However, at this time, the projects have too many uncertainties and dependencies to determine this accurately. These projects are:

- The S-Stock re-signalling project. Originally, the Sub Surface Upgrade included new rolling stock, a new control centre, other required infrastructure works and a new signalling system. With the collapse of Metronet in 2007 the opportunity was taken to terminate the signalling contract with a view to re-tendering. This process is ongoing, and a contract is due to be signed by the end of 2010. Part of this process will include more detail regarding interface issues between the new 'S7' & 'S8' vehicles[7] and current and future Piccadilly line vehicles where there is dual operation.

- The Piccadilly Line Upgrade and Public Private Partnership (PPP) Restated Terms process. Under the PPP Contract, the responsibility for the maintenance, upgrading and renewal of the Piccadilly line's assets is undertaken by the Tube Lines Infraco. The PPP is a 30 year contract with review periods every 7½ years. LUL and Tube Lines are currently involved in this process, which is due to conclude with the signing of Period 2 contracts by the end of 2010. Tube Lines are contracted to deliver new rolling stock and new signalling systems for the Piccadilly line during Period 2 of the PPP, which runs from mid 2010 until the end of 2017. There is some uncertainty at this time regarding the specifics of the signalling upgrade.

As stated earlier, LUL does not believe that Manual Boarding Ramps are an appropriate solution at our stations. A more detailed explanation of why we do not believe manual boarding ramps are appropriate is given in Section 7.

To take account of all of these uncertainties, LUL is requesting a temporary exemption until 31 August 2013, for platforms at the 4 stations on the Uxbridge branch which have current or planned step free access or interchange (Hillingdon, Rayners Lane, Ruislip and Uxbridge)**.**

[7] The Piccadilly line trains will run also alongside the new 'S7' trains on the District lines at some stations on the Earls Court to Ealing Broadway or Richmond branches.

This will allow sufficient time for the existing work streams to conclude (end 2010), with 6 months of contingency (mid 2011), and time to prepare our response and undertake necessary works to provide long term solutions (24 months).

Although included in this temporary exemption request for the compromised height platforms on the Uxbridge – Rayners Lane branch, LUL did consider whether it might be appropriate to use manual boarding ramps at Uxbridge as it is a terminus station with existing step-free access. It was thought that its location at the western end of the Metropolitan line may offer potentially longer dwell times and less crowded platforms which could be suitable for ramps. However, this option has been ruled out due to a combination of factors:

- Although it does not have the same passenger numbers as a central London station, the Uxbridge station is very busy in the evening peak with commuters out of London. At these times, as the platforms can be very crowded it would be unsuitable and potentially unsafe to deploy ramps. It was felt that it would not be appropriate to put restrictions on the times of day when ramps could or could not be deployed and that if they were to be used, ramps should be consistently available at all times of the day.

- The use of a ramp at Uxbridge could give people a false impression and expectations of their use at other stations on the Metropolitan line and network as a whole. This inconsistency could lead to confusion and additional stress if disabled passengers were able to board the train at Uxbridge using a ramp but then find they were unable to alight at their desired destination where ramps would not be available.

- The change in roles, responsibilities and additional training necessary for LUL staff at Uxbridge station and within their wider station group to safely operate the manual boarding ramps would have a significant impact on our staffing levels and costs as well as severely limiting staff flexibility.

- LUL stations are divided into Station Groups for organisational and staffing purposes. Uxbridge is part of the Harrow-on-the-Hill Group which also includes Hillingdon, Ickenham, Ruislip, Ruislip Manor, Eastcote, Rayners Lane, West Harrow, Harrow-on-the-Hill, Northwick Park and Preston Road. In addition to staff permanently rostered at each station, every Station Group has a ‘reserve group’

who cover shifts as required at all stations within their group to ensure staff levels are maintained. In order to ensure that appropriately trained members of staff were always available at Uxbridge, all of the staff permanently rostered there as well as the reserve group would have to be trained on the safe use of ramps. There is a risk that the use of ramps may require increased staff levels to prevent the permanent diversion of reserve group staff away from the other stations within the Harrow-on-the-Hill group.

- Manual Boarding Ramps are in direct conflict with the LUL approach of providing permanent physical improvement works and structures which give reliable, independent 'turn up and go' access. The only way to avoid the need for customers to book in advance and maintain the 'turn up and go' service at Uxbridge would be to place an additional member or members of staff on the platforms at all times to ensure current services are also maintained.

Although it is not currently possible to make the new 'S8' Metropolitan line trains compliant with RVAR requirements on the Rayners Lane to Uxbridge Branch, the lower floor means that there will be a significantly smaller step up in to the S8 trains than into the current 'A' stock trains.

LUL is happy to share the contents of the Frankhams Consultancy Group Report and the 'West London Study' with DfT if required.

Wembley Park & Finchley Road

Although these island platforms are shared with the Jubilee line, the service is segregated on line specific platforms (i.e. the Jubilee line uses one side of the platform, and the Metropolitan uses the other side).

At Wembley Park, level access will be provided from the introduction of the first vehicle in service, therefore no exemption is required.

The platforms at Finchley Road are severely curved and so cannot be made compliant as explained earlier.

1. **The effect which non-compliance would have on a disabled person's ability to use rail vehicles of the description to which the application relates**

LUL has sought to minimise the effect of these exemptions on disabled peoples' ability to travel.

Whilst LUL understands that the size of the step and gap between the train and platform will cause a problem for a number of disabled people, in particular some wheelchair users, we believe that this approach, which broadly follows the approach used for the Victoria Line Upgrade, is the most appropriate way forward at this time. An overview of mitigating steps is outlined in Section 7 of this application.

The lower floor design of the new 'S8' train will improve access at all platforms by reducing the vertical step, even if it does not bring it within the dimensions required by the RVAR. This will benefit a large number of disabled passengers, however we are aware that, regrettably, some disabled people, in particular wheelchair users, will not be able to board the trains at severely curved and/or compromise height platforms (between Rayners Lane and Uxbridge), unless they are able to navigate the step and gap.

The majority of the exemptions we have applied for relate to platforms in Category 4, which do not currently have a step free route through the station or any useful interchange. We do not believe that these exemptions will further adversely affect a disabled person's ability to use the rail vehicles in these locations. Any future plans to make these platforms step free will include works to bring the step and gap within the permitted dimensions, unless there are any additional infrastructure constraints such as severe curves.

At platforms where work is planned, we do not believe that phasing these works so that they take place at the same time as the works to make the stations step free will have a significant effect on disabled peoples' ability to travel, because of existing access barriers between the street and platforms.

Furthermore, we believe that joining up the two work programmes will prevent passengers from getting stranded on platforms at stations where there is no step-free route from the platform, thereby

avoiding the confusion, inconvenience and distress that a passenger could experience in these circumstances.

In the event of service failure or an emergency, passengers will be 'detrained' using the appropriate operational procedure and evacuation equipment.

2. Any measures which could be taken to enable disabled persons to use the rail vehicle if exemption sought is granted

LUL is requesting a series of temporary exemptions to take account of the different issues relating to the varied nature of platforms and stations on the Metropolitan line.

The number of locations affected by this exemption will reduce as works are carried out to make stations step-free.

At stations where work is planned, the exemptions will enable LUL to undertake platform works at the same time as the whole station works. This will enable us to provide appropriate, accessible and sustainable solutions to give greater independent access for disabled passengers.

As these temporary exemptions relate to stations which do not have a step-free route through the station, LUL does not believe that it would be appropriate to provide any interim measures to give level access to the platform. Such measures would increase the risk of passengers being stranded on the platform after getting off a train only to find that there is no accessible route from the platform out of the station.

For the same reason, we do not believe that it would be appropriate to provide interim measures to give level access to platforms in Category 4.

As explained earlier in this application, we do not believe that there are any appropriate permanent or temporary solutions currently available that would give access at severely curved and/or compromise height (LUL) platforms.

LUL does not believe that manual boarding ramps are appropriate or safe to be used in the Underground environment due to the constraints of the infrastructure and intensity of the service.

In particular, we are concerned about the impact that deploying these ramps would have on the safety of our staff, disabled passengers and other passengers. LUL differs from the National Rail network in that it has narrower platforms, and generally a higher density of users, which makes the use of ramps a greater hazard.



Photograph showing densely packed Metropolitan line platform at Kings Cross [8]

As LUL services also usually have considerably shorter dwell times at the platform than National Rail services, it is likely that the introduction of ramps would increase this dwell time, delaying that train and also those behind it. Any increase in dwell times would have a significant impact on the overall service and would reduce the benefits of the Upgrade Programme.

The use of ramps will have a significant impact on our staffing levels and costs. It would also mean a significant change to the existing roles and responsibilities of our station staff.
In addition, we do not believe that ramps would offer an appropriate solution to all passengers who may struggle with the step and gap as they are likely only to be deployed for wheelchair users.

[8] Still images taken from video footage shot from the driver's cab of a Metropolitan line train.

Instead, we are advocating the use of permanent physical improvement works and structures such as 'platform humps' and track lowering/raising to provide permanent, reliable and independent 'turn up and go' access to customers without the need for staff intervention or assistance.

As explained earlier, due to its status as a step-free terminus station, LUL did consider the use of manual boarding ramps at Uxbridge station. However due to the concerns outlined in Section 6 it was not considered to be an appropriate solution.

In this area, and others like it, we recognise that the Underground offers limited travel opportunities to a number of disabled people. However Transport for London (TfL) - of which London Underground is a part – does operate a number of other transport modes which cover the area served by the Metropolitan line, although it is acknowledged that these may not offer a directly comparable service.

A summary of some of the journey options available is shown below:

TfL Bus Services

All of London's buses are now low-floor with designated wheelchair spaces and priority seats. Most buses are equipped with a state-of-the-art information system, iBUS that will provide next stop information in visual and audible formats as well as real-time passenger information at bus stops and on board buses.

TfL Assisted Travel services

Door-to-door services, such as Dial-a-Ride and Taxicard, offer subsidised personal travel for older and disabled people who find it difficult or impossible to use mainstream public transport. TfL has provided a significant level of funding to increase the provision of these door-to-door services for the people who require them. It has also implemented "Capital Call" which provides services with private hire vehicles in areas poorly served by black cabs.

TfL's Public Carriage Office regulates taxi and private hire trade in London and ensures that all 20,000 black cabs are accessible for wheelchair users.

Although these alternative modes may not provide directly comparable services and journey times, some users may be able to reduced the additional journey time for some longer journeys - such as Uxbridge to Kings Cross - by using assisted travel to the nearest station with step-free and level access, for example Pinner or Wembley Park. From here they could continue their journey by Underground.

To ensure that customers are both aware of the benefits of the new vehicles and any access limitations, customer information about the improved accessibility of the Metropolitan line trains and stations will form a significant part of the extensive overarching Metropolitan Line Upgrade information and communication campaign.

In addition an ‘accessibility’ specific campaign will run alongside, giving more detailed information to customers about both improvements to the service and any ongoing access limitations. As well as existing customers, this information campaign will target disabled Londoners who live or work near Metropolitan line stations who may not previously have been able to access the Metropolitan line.

We will use this information campaign to give customers and local people more detailed information about the timescales and accessibility improvements at individual stations.

Customers will also be able to get information about the accessibility of individual platforms, including information about the size of the step and gap in the following ways:

- Step-Free Tube Guide: this guide is designed for people who need specific information about the size of the steps and gaps between the train and the platform, and information on which stations are step-free from street to platform. Detailed information on step-free stations on the Metropolitan line will be included in this guide.

- TfL Journey Planner website: this contains options to ‘personalise’ a journey search by a number of accessibility criteria, including ‘wheelchair accessible vehicles’. TfL Journey Planner will be updated as appropriate to ensure that suitable journey planning information for the Metropolitan line stations

will be given. This information can also be obtained by phone from the TfL Customer Service Centre.

- Station staff will be provided with specific instructions, and where necessary local training, to ensure that they are able to provide suitable assistance to customers requiring an accessible journey, including alternative journey options.

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

At stations where work is planned, the temporary exemptions will enable LUL to phase the platform works in line with the whole station works.

Our medium and long term solutions will provide an appropriate, accessible and sustainable solution to give greater independent access for disabled passengers at these stations.

The number of locations affected by this exemption will reduce as works are carried out to give level access between the platform and trains.

London Underground has not applied for a permanent exemption for platforms where compliance is not currently possible as we are aware that technology and circumstances change. Consideration of future compliance methods will be a key factor to any future plans.

The temporary exemption for stations between Rayners Lane and Uxbridge will enable us to further investigate appropriate solutions once we know the outcome of the SSR re-signalling project, the Piccadilly Line Upgrade and Public Private Partnership (PPP) Restated Terms process for Period 2.

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

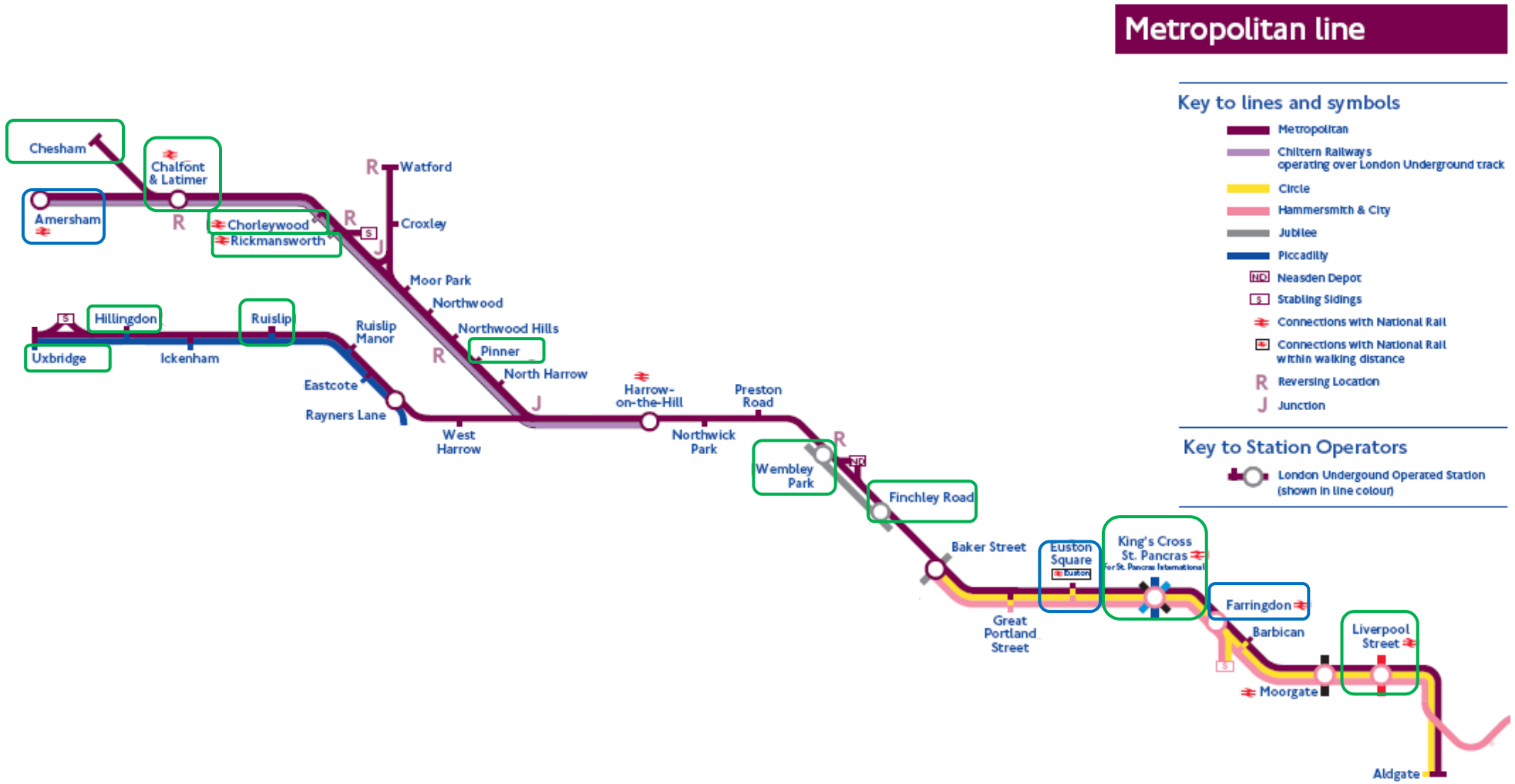
London Underground is requesting temporary exemptions in line with the timescale set out in Section 3.

Annex A: Platforms in Category 4

Platforms with no existing or planned step-free routes or interchange and/or where trains do not terminate or reverse. LUL are requesting exemptions for these platforms until such time as step-free access is provided, subject to the restrictions of severe curvature and compromise height (LUL) as set out in this application.

Station	Platform
Croxley	1
Croxley	2
Eastcote	1
Eastcote	2
Ickenham	1
Ickenham	2
Moor Park	3
Moor Park	4
North Harrow	1
North Harrow	2
Northwick Park	1
Northwick Park	2
Northwood	1
Northwood	2
Northwood Hills	1
Northwood Hills	2
Preston Road	1
Preston Road	2
Rayners Lane	1
Rickmansworth	1
Ruislip	1
Ruislip Manor	1
Ruislip Manor	2
Watford	1
Watford	2
West Harrow	1
West Harrow	2

Annex A: Current and planned Step-free Stations on the Metropolitan line



Current Step Free Stations
Planned Step free Stations

Annex B: Straight and Standard Platforms in Categories 1, 2 & 3

Station	Platform No.	Platform Category	Platform Type	Step Free Station Status	Date by which platform will be RVAR compliant
Barbican	1	3*	Straight & Standard	31 December 2017	30 November 2013
Barbican	2	3*	Straight & Standard	31 December 2017	30 November 2013
Euston Square	1	2	Straight & Standard	31 December 2013	31 December 2013**
Euston Square	2	3	Straight & Standard	Interchange only	30 November 2013**
Harrow on the Hill	3	3	Straight & Standard	Interchange only	30 November 2013
Harrow on the Hill	4	3	Straight & Standard	Interchange only	30 November 2013
Harrow on the Hill	5	3	Straight & Standard	Interchange only	30 November 2013
Harrow on the Hill	6	3	Straight & Standard	Interchange only	30 November 2013
Liverpool Street	1	1**	Straight & Standard	Current	By 1st train in service
Liverpool Street	2	3**	Straight & Standard	Interchange only	30 November 2013
Moorgate	1	3	Straight & Standard	Interchange only	30 November 2013
Moorgate	2	3	Straight & Standard	Interchange only	30 November 2013
Moorgate	3	3	Straight & Standard	Interchange only	30 November 2013
Moorgate	4	3	Straight & Standard	Interchange only	30 November 2013
Pinner	1	1	Straight & Standard	Current	By 1st train in service
Pinner	2	1	Straight & Standard	Current	By 1st train in service
Wembley Park	6	1	Straight & Standard	Current	By 1st train in service

* Barbican station will be made step free as part of the Crossrail project in 2017; however the platforms also provide useful interchange. Therefore they have been included in Category 3 to give earlier compliance.
**Different dates for Euston Square and Liverpool Street platforms as there will only be step free access to Platform 1 at these stations.

Annex C: Curved Platforms in Categories 1, 2 & 3

Station	Platform No.	Platform Category	Platform Type	Step Free Station Status	Date by which platform will be RVAR compliant
Chorleywood	2	1	Curved & Compromise Height (BR)	Current	By 1st train in service
Kings Cross	1	1	Curved	Current	By 1st train in service
Kings Cross	2	1	Curved	Current	By 1st train in service
Moor Park	1	3	Curved & Compromise Height (BR)	Interchange only	30 November 2013
Wembley Park	1	1	Curved	Current	By 1st train in service
Wembley Park	2	1	Curved & Compromise Height (LUL)	Current	By 1st train in service

Annex D: Severely Curved Platforms in Categories 1, 2 & 3

Station	Platform No.	Platform Category	Platform Type	Step Free Station Status	Exemption Duration Requested
Aldgate	2	3	Severely Curved	Interchange only	Untimed *
Aldgate	3	3	Severely Curved	Interchange only	Untimed *
Baker Street	1	3	Severely Curved	Interchange only	Untimed *
Baker Street	2	3	Severely Curved	Interchange only	Untimed *
Baker Street	3	3	Severely Curved	Interchange only	Untimed *
Baker Street	4	3	Severely Curved	Interchange only	Untimed *
Chesham	1	1	Severely Curved	Current	Untimed *
Farringdon	1	2	Severely Curved	31 Dec 10	Untimed *
Farringdon	2	2	Severely Curved	31 Dec 10	Untimed *
Finchley Road	1	3	Severely Curved & Comp Height (LUL)	Interchange only	Untimed *
Finchley Road	4	3	Severely Curved & Comp Height (LUL)	Interchange only	Untimed *
Great Portland St	1	3	Severely Curved	Interchange only	Untimed *
Great Portland St	2	3	Severely Curved	Interchange only	Untimed *
Rickmansworth	2	1	Severely Curved & Comp Height (BR)	Current	Untimed *
Uxbridge	4	1	Severely Curved & Comp Height (LUL)	Current	31 August 2013*
Uxbridge	1	1	Severely Curved & Comp Height (LUL)	Current	31 August 2013*

*Temporary exemption until such time as an appropriate solution is identified for severely curved platforms

Annex E: Compromise Height Platforms (BR) in Categories 1, 2 & 3

Station	Platform No.	Platform Category	Platform Type	Step Free Station Status	Date by which platform will be RVAR compliant
Amersham	1	2	Compromise Height (BR)	28-Oct-10	By 1st train in service
Amersham	2	2	Compromise Height (BR)	28-Oct-10	By 1st train in service
Amersham	3	2	Compromise Height (BR)	28-Oct-10	By 1st train in service
Chalfont & Latimer	1	1	Compromise Height (BR)	Current	By 1st train in service
Chalfont & Latimer	2	1	Compromise Height (BR)	Current	By 1st train in service
Chorleywood	1	1	Compromise Height (BR)	Current	By 1st train in service
Chorleywood	2	1	Compromise Height (BR) & Curved	Current	By 1st train in service
Harrow on the Hill	1	3	Compromise Height (BR)	Interchange only	30 November 2013
Moor Park	1	3	Compromise Height (BR) & Curved	Interchange only	30 November 2013
Moor Park	2	3	Compromise Height (BR)	Interchange only	30 November 2013
Rickmansworth	2	1	Compromise Height (BR) & Severely Curved	Current	Untimed *

*Temporary exemption until such time as an appropriate solution is identified for severely curved platforms

Annex F: Compromise Height Platforms (LUL) in Categories 1, 2 & 3

Station	Platform No.	Platform Category	Platform Type	Step Free Station Status	Exemption Duration Requested
Finchley Road	1	3	Severely Curved & Comp Height (LUL)	Interchange only	Untimed *
Finchley Road	4	3	Severely Curved & Comp Height (LUL)	Interchange only	Untimed *
Hillingdon	1	1	Compromise Height (LUL)	Current	31 August 2013**
Hillingdon	2	1	Compromise Height (LUL)	Current	31 August 2013**
Rayners Lane	1	4	Compromise Height (LUL)	†	31 August 2013**†
Rayners Lane	2	3	Compromise Height (LUL)	Interchange only	31 August 2013**
Ruislip	2	1	Compromise Height (LUL)	Current	31 August 2013**
Wembley Park	5	1	Compromise Height (LUL)	Current	By 1st train in service
Wembley Park	2	1	Compromise Height (LUL) & Curved	Current	By 1st train in service
Uxbridge	1	1	Comp Height (LUL) & Severely Curved	Current	31 August 2013**
Uxbridge	2	1	Compromise Height (LUL)	Current	31 August 2013**
Uxbridge	3	1	Compromise Height (LUL)	Current	31 August 2013**
Uxbridge	4	1	Comp Height (LUL) & Severely Curved	Current	31 August 2013**

*Temporary exemption until such time as an appropriate solution is identified for severely curved platforms
** Temporary exemption to allow further information to be gathered in relation to the Uxbridge – Rayners Lane Branch
†No step-free access or interchange, but will be included in investigations as may form part of potential solutions

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Mr Roger Turner
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5 November 2009

Exemption Application – London Underground – Metropolitan Line

DPTAC thank London Underground (LUL) for attending our meeting to discuss their various exemption applications for the sub-surface railway underground. It was a very instructive session and DPTAC acknowledge the huge amount of work that has been put in by LUL in partnership with the Department for Transport (DfT) and the various groups representing disabled people LUL have consulted. We also congratulate LUL on the very small number of exemptions that we have to comment on.

Regulation 4(3) (b) – Audible Door Closure Warnings. We understand the unique problems encountered by LUL with reference to dwell time pressures and the fact that many customers use the audible door closure warning as a 'hustle alarm' rather than the warning for which it's intended in the regulations.

With this in mind, DPTAC are happy to accept an exemption until 30th May 2015, after which LUL have promised to provide data and statistics about the usability from which we can judge any need for change.

Regulation 5(2) – Visual Door Warning Indicators. For the reasons mentioned in the presentation, DPTAC are happy to accept this exemption until the 30th of May 2015, at which time we would expect to hear more on the lessons learned.

Regulation 13(4) – Announcements at Stations. DPTAC are happy to accept this exemption, providing the extra time is not used for standard announcements regarding security or LU advertising.

Regulation 16(1) (b) and (d) – Handrails within the Wheelchair Space. DPTAC believe that this exemption will be covered under the new RVAR provisions, but until that time we accept this exemption. The safety of standing passengers is paramount and the likelihood of passengers without handholds falling onto a wheelchair user makes this exemption desirable.

Regulation 23(1) – Boarding devices. Whilst DPTAC fully understand LUL's reasoning behind asking for this exemption, we have concerns for a number of reasons and will be recommending a time limited exemption. Our concerns are as follows:

1. Even if a booking system is not in place, the absence of an on-train ramp for both casual and emergency provision would seem to be short-sighted.
2. Many disabled people do not see the need to pre-book their travel and we believe that non-provision of any ramps at stations would, in the long-term, cause greater difficulty for LUL by way of extended dwell times than skeleton provision of ramps would. Anecdotally, LUL users with visual impairments are extremely complimentary about assistance provision when provided ad hoc, and it would seem to make sense to use the same system for mobility impaired passengers, especially at stations which are step-free from pavement to platform.
3. Whilst DPTAC understand that LUL do not wish to have ramps on every platform, we believe they should consider having a ramp available for the same ad hoc assistance provision that is currently used for passengers with visual impairment.

However, DPTAC are very impressed with the work that has been done on station humps and realise that mainstream mobility provision does lie in this direction rather than in duplicating the overground rail booking system which has very poor results.

Further, DPTAC believe that LUL should stay committed and undertake their promise in their document 'Unlocking London for All', which laid out a number of core principles and made a number of key promises. We want DPTAC in league with LUL and others to lead the field in equality and inclusion and be an exemplar of excellent practice.

Yours sincerely,



Ann Bates
Chair DPTAC Rail Working Group

From: Turner, Giles [mailto:Giles.Turner@orr.gsi.gov.uk]
Sent: 02 December 2009 16:21
To: Roger Turner
Subject: RE: RVAR EXEMPTION ORDER - LUL S8 METROPOLITAN LINE FLEET

Dear Mr Turner

Thank you for the opportunity to comment on LUL's application for exemptions from RVAR for the S8 Metropolitan Line fleet.

ORR does not have concerns over the safety implications of granting these exemptions, nor the enforceability of the legislation with these exemptions in place.

ORR does expect that, when LUL conducts its review of the exemption from the 3 second warning time, the default position should be to revert to the standard and if LUL wishes to continue with the non-standard warning time it should be clearly justified.

Regards

Giles Turner

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5th November 2009

Roger Turner
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Rail Technical and Professional
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Dear Mr. Turner

Disability Discrimination Act: Section 47 Exemption Application by London Underground Ltd

Thank you for letter of 9th September 2009, regarding the proposed Section 47 Exemption Application by London Underground Ltd.

In considering these requests for exemption we have recognised that London Underground operates a very high frequency railway carrying large numbers of passengers.

1. *Regulation 4(3) (b) Audible Door Closure Warnings*
2. *Regulation 5(2) Visual Door Warning Indicators*

We are happy to support these temporary exemptions whilst new trains are introduced. However, this should not be taken as support for a permanent exemption. We would like to be involved in the review which will occur at the end of the period.

3. *Regulation 13(4) Announcements to be made whilst at a station*

We accept the operational reasons for this exemption.

4. *Regulation 16 (1) (b) and (d) Handrails within wheelchair space*

We support the provision of handrails in the area reserved for wheelchairs as passengers are likely to be standing in this area during their journey. We support this exemption.

We believe it is vital that the disabled area is well marked out and identified; would it be possible to place a clear large wheelchair symbol on the fabric of the

back seat and on the floor of the carriage to clearly identify this area as reserved for wheelchair users

5. *Regulation 23 (1) Boarding devices at wheelchair accessible doorways*

London TravelWatch accepts the operational problems London Underground would have regarding the provision of boarding ramps. We support the exemptions sought. However, we have learnt recently that London Undergrounds plans for step free access has been revised. Therefore the schedules should be updated to reflect their new plans.

Yours sincerely

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