

RVAR and PRM TSI Compliance

| | |
|-----------|-----------|
| Formation | Class 153 |
| Operator | TFW |
| Issue | Two |

| |
|-------------------------|
| Compliance Achieved |
| Dispensation Required |
| Non-Compliance Accepted |
| Not applicable |

| Accessibility Standards | | | | | Vehicle Designation: | | NTSN 2021 | | |
|-------------------------|--|-------------------------|--|----------------------|----------------------|--|---|-----------------------|-------------------|
| Regulation No. | Requirement(s) | Clause No. | Requirement(s) | Clause No. | Operator: | Compliance Status | | Clause No | |
| Doors | | | | | | | | | |
| 4(1) | Each passenger doorway in the side of a regulated rail vehicle shall be indicated clearly by doors (excluding any window in or control device on the doors) rendered to contrast with the exterior of the vehicle to each side of that doorway. | 4.2.2.4.2.1 para 3 | External doors shall be painted or marked on the outside in a way that gives a contrast to the rest of the vehicle body-side. | 4.2.2.3.2 para 3 | | Refer to TFW Livery Drawing CR-CO-2305268. | Compliance Achieved | 4.2.2.3.2 para 3 | |
| 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. | 4.2.2.4.2.1 paras 7-10 | When a door is enabled for opening a signal shall be given that is clearly audible to persons inside and outside the train. This alert signal shall sound for a minimum of five seconds unless the door is operated, in which case it may cease after 3 seconds. This requirement is not applicable for external audible signals on high speed Class 1 and Class 2 trains. When a door is automatically or remotely opened by the driver or other member of the traincrew, the alert signal shall sound for a minimum 3 seconds from the moment that the door starts to open. When a door that is automatically or remotely closed, is about to operate, an audible alarm shall be given to persons inside and outside the train. The alarm shall sound for a minimum of 2 seconds before the door starts to close and shall be different in tone to that used when the door is released. The alarm shall continue to sound while the door is closing. The sound source for door warnings shall be located in the area local to the control device or, if there is no such control device, adjacent to the doorway. | 4.2.2.3.2 paras 7-10 | | All external passenger doors shall be marked on the outside in a way that gives a contrast to the rest of the vehicle body-side surrounding them. When a door is released for opening a signal shall be given that is clearly audible and visible to persons inside and outside the train. This alert signal shall last for a minimum of five seconds unless the door is operated, in which case it may cease after 3 seconds. When a door is automatically or remotely opened by the driver or other member of the traincrew, the alert signal shall sound for a minimum 3 seconds from the moment that the door starts to open. When a door that is automatically or remotely closed, is about to operate, an audible and visible alert signal shall be given to persons inside and outside the train. The alert signal shall start a minimum of 2 seconds before the door starts to close and shall continue to sound while the door is closing. The sound source for door warnings shall be located in the area local to the control device or, if there is no such control device, adjacent to the doorway. | Compliance Achieved | 4.2.2.3.2 paras 7-10 | |
| 4(3) | The audible warning device shall:- | | | | | | | | |
| 4(3)(a) | (a) emit a distinct sound for a period of not less than 3 seconds commencing when the door becomes openable by a passenger; | 4.2.2.4.2.1 paras 7 & 8 | When a door is enabled for opening a signal shall be given that is clearly audible to persons inside and outside the train. This alert signal shall sound for a minimum of five seconds unless the door is operated, in which case it may cease after 3 seconds. This requirement is not applicable for external audible signals on high speed Class 1 and Class 2 trains. When a door is automatically or remotely opened by the driver or other member of the traincrew, the alert signal shall sound for a minimum 3 seconds from the moment that the door starts to open. | 4.2.2.3.2 paras 7-8 | | Door sounders fitted: EAO part number - 56-0213.MA.2371 - as fitted on the Angel/Porterbrook Class 156 units. See Drawing No. PB-CO-2121342 and PB-CO-2121343. | Compliance Achieved | 4.2.2.3.2 paras 7-8 | |
| 4(3)(b) | (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. | 4.2.2.4.2.1 para 9 | When a door that is automatically or remotely closed, is about to operate, an audible alarm shall be given to persons inside and outside the train. The alarm shall sound for a minimum of 2 seconds before the door starts to close and shall be different in tone to that used when the door is released. The alarm shall continue to sound while the door is closing. | 4.2.2.3.2 para 9 | | Door sounders fitted: EAO part number - 56-0213.MA.2371 - as fitted on the Angel/Porterbrook Class 156 units. See Drawing No. PB-CO-2121342 and PB-CO-2121343. | Compliance Achieved | 4.2.2.3.2 para 9 | |
| Door Controls | | | | | | | | | |
| 4(4) | In this regulation "sound" includes the spoken word. | 4.2.2.4.2.1 | Passenger door audible warnings - Door enabled for opening • Characteristic - A slow pulse multi tone (0-2 pulses per second) of 2 combined tones • Frequencies - 3000Hz +/-500Hz - and: - 1750Hz +/-500Hz • Sound Pressure level 70 dB LAeq,T +/-2 measured on the centre point of the vestibule at a height of 1.5m above the floor level. (T = total duration of the sound event) Passenger door audible warnings - Door close warning • Characteristic - A fast pulsed tone (6-10 pulses per second) • Frequency - 1900Hz +/-500Hz • Sound Pressure level 70 dB LAeq,T +/-2 measured outside the vehicle, 1.5m away from the bodyside door centreline at 1.5m above the platform level. Internal measurement as open alarm. (T = total duration of the sound event) | 4.2.2.3.2 para 12 | | Passenger door audible alert signals shall be according to the specification in appendix G Door opening Characteristics - A slow pulse multi tone (up to 2 pulses per second) of 2 tones emitted sequential. - Frequencies 2 200 Hz +/- 100 Hz and 1 760Hz +/- 100Hz - Sound Pressure level - To be either: an adaptive audible warning device set at 5 dB LAeq,T min above ambient up to a max of 70 dB LAeq, T (+6/-0) - or a non-adaptive device set at 70 dB LAeq, T (+6/-0) - Internal measurements on the centre point of the vestibule at a height of 1.5m above floor level. (T = Total duration of the sound event) using measurement array (horizontal and then vertical) and averaged readings. - External measurement, 1.5m away from the body side door centreline at 1.5m above the platform level. (T=Total duration of the sound event) using measurement array (horizontal) and averaged readings. Door close - Characteristics - A fast pulsed tone (6-10 pulses per second) - Frequency - 1 900 Hz +/- 100 Hz - Sound Pressure level - to be provided by either: an adaptive audible warning device set at 5 dB LAeq,T min above ambient up to a max of 70 dB LAeq, T (+6/-0) - or a non-adaptive device set at 70 dB LAeq, T (+6/-0) - Internal measurements on the centre point of the vestibule at a height of 1.5m above floor level. (T = Total duration of the sound event) using measurement array (horizontal and then vertical) and averaged readings. - External measurement, 1.5m away from the body side door centreline at 1.5m above the platform level. (T=Total duration of | Sounders comply with 2008 PRM TSI rather than 2014. | Dispensation Required | 4.2.2.3.2 para 12 |
| N/A | | 4.2.2.4.2.1 para 1 | External passenger access, automatic and semi-automatic, doors shall incorporate devices that detect if they close on a passenger where a passenger is detected the doors shall automatically stop and remain free for a limited period of time. | | | Non compliance accepted in targeted compliance of 11/03/2010 | Dispensation Required | | |
| N/A | | 4.2.2.4.2.1 para 2 | All exterior passenger doorways shall have a minimum clear useable width of 800mm when open. | 4.2.2.3.2 para 1 | | Non compliance accepted in targeted compliance of 11/03/2010. Only 600mm useable width between handrails at No 2 end (where cab was inserted when single car units were created in 1991-92). 700mm useable width without handrails. Compliant 805mm useable width at No 1 end. | Dispensation Required | 4.2.2.3.2 para 1 | |
| 5(1) | No control device to enable a passenger to open or close a power-operated door other than a device to which paragraph (3) below applies, shall be fitted to a regulated rail vehicle unless: | | | | | | | | |
| 5(1)(a) | (a) the centre of the control device is not less than 700mm and not more than 1200mm vertically above an imaginary horizontal line extended from the door sill of the relevant doorway; | 4.2.2.4.2.1 last para | The centre of exterior door controls, operable from the platform, shall be not less than 800 mm and not more than 1200 mm measured vertically above platforms, for all platforms at which the train will stop. The centre of internal door controls for the exterior door shall be not less than 800mm and not more than 1200mm measured vertically above the vehicle floor level. | 4.2.2.3.2 para 15 | | Internal Close 1195mm Internal Open 1080mm External Open 880-935mm | Compliance Achieved | 4.2.2.3.2 para 15 | |
| 5(1)(b) | (b) the control device is operable by the palm of the hand exerting a force not exceeding 15 Newtons; | 4.2.2.4.2.2 1st para | If pushbuttons are provided for operation of doors then each pushbutton shall have visual indication, on or around the push button, when enabled and shall be operable by a force not greater than 15 Newtons. | 5.3.2.1 para 1 | | EAO Series 56 | Compliance Achieved | 5.3.2.1 para 1 | |
| 5(1)(c) | (c) the control device or its immediate surround is illuminated continuously whenever it is operable; | 4.2.2.4.2.2 1st para | If pushbuttons are provided for operation of doors then each pushbutton shall have visual indication, on or around the push button, when enabled and shall be operable by a force not greater than 15 Newtons. | 5.3.2.1 para 1 | | Illuminated while operable | Compliance Achieved | 5.3.2.1 para 1 | |
| 5(1)(d) | (d) the control device contrasts with the surface on which it is mounted; and | 4.2.2.4.1 2nd para | Door controls, whether manual or pushbuttons, shall contrast with the surface on which they are mounted. | 4.2.2.3.1 para 3 | | Internal pushbuttons are unchanged. External pushbuttons EAO part no. 72-014082.1 | Compliance Achieved | 4.2.2.3.1 para 3 | |
| 5(1)(e) | (e) the control device is identifiable by touch. | 4.2.2.4.2.2 2nd para | Such pushbuttons shall be identifiable by touch (for example: tactile markings) and shall indicate the functionality. | 5.3.2.1 para 2 | | Internal pushbuttons are unchanged. External pushbuttons EAO part no. 72-014082.1 | Compliance Achieved | 5.3.2.1 para 2 | |
| 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. | 4.2.2.4.2.2 1st para | If the door closure is remotely activated by traincrew, the visual indication shall cease not less than 2 seconds before the door starts to close. | 4.2.2.3.2 para 9 | | | Compliance Achieved | 4.2.2.3.2 para 9 | |
| 5(3) | Subject to paragraph (4) below, no control device which opens a door automatically as a passenger approaches that door shall be fitted to a regulated rail vehicle unless: | | | | | | | | |
| 5(3)(a) | (a) the door starts to open before any part of a passenger reaches a distance of less than 500 mm, measured horizontally, from the vertical centre line of the door surface; | 4.2.2.4.3.1 para 1 | Internal automatic and semi-automatic doors shall incorporate devices that prevent passengers becoming trapped during operation of the doors | 4.2.2.3.3 para 1 | | | Not applicable | | |
| 5(3)(b) | (b) the door, once opened, remains open for a period of not less than 5 seconds before it closes; and | 4.2.2.4.3.1 para 1 | Internal automatic and semi-automatic doors shall incorporate devices that prevent passengers becoming trapped during operation of the doors | 4.2.2.3.3 para 1 | | | Not applicable | | |
| 5(3)(c) | (c) if, after the door starts to close, the edge of the door comes in to contact with any part of a passenger the door opens again. | 4.2.2.4.3.1 para 1 | Internal automatic and semi-automatic doors shall incorporate devices that prevent passengers becoming trapped during operation of the doors | 4.2.2.3.3 para 1 | | | Not applicable | | |

| 5(4) | If a control device, to which paragraph (3) above applies, incorporates a photocell device positioned above the door, the requirement imposed by paragraph (3)(a) above will be complied with if the distance from the vertical centre line of the door is measured horizontally from any single point on that line not more than 300 millimetres above the floor. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | | | | | | | | | | | | | | | | |
|---|---|--|---|---|--|--|-----------------------|---|-----|-----|-----|---|-----|-----|-----|---|-----|-----|-----|-------------------|---|---|-----------------------|---------|
| N/A | | 4.2.2.4.1 1st para | To latch or unlatch a manually operated door, for use by the public, the control device shall be operable by the palm of the hand exerting a force not exceeding 20 Newtons. | 4.2.2.3.1 para 2 | To latch or unlatch a manually operated door, for use by the public, the control device shall be operable by the palm of the hand exerting a force not exceeding 20 N. | | Not applicable | | | | | | | | | | | | | | | | | |
| N/A | | 4.2.2.4.1 4th para | If both open and closed pushbuttons are fitted one above the other, the top button shall always be the open control. | 4.2.2.3.1 para 5 | If both open and closed door control devices are fitted one above the other; the top device shall always be the open control | Non compliance accepted in targeted compliance of 11/03/2010. Closed button over open existing buttons used. | Dispensation Required | 4.2.2.3.1 para 5 | | | | | | | | | | | | | | | | |
| Steps | | | | | | | | | | | | | | | | | | | | | | | | |
| 6(1) | Steps for use by passengers at any external doorway of a regulated rail vehicle shall comply with the following requirements: | | | | | | | | | | | | | | | | | | | | | | | |
| 6(1)(a) | (a) the surface of each tread shall be covered in slip-resistant material; | 4.2.2.12.2 1st para | All steps for access and egress shall be slip resistant... | 4.2.2.11.2 para 1 | All steps for access and egress shall be slip resistant. | Treadplate Design as per targeted compliance of 11/03/2010 | Compliance Achieved | 4.2.2.11.2 para 1 | | | | | | | | | | | | | | | | |
| 6(1)(b) | (b) across the front edge of each tread there shall be a band of colour which shall be not less than 45mm and not more than 50mm deep and shall contrast with the remainder of the tread; | 4.2.2.12.2 2nd para | The first and the last step shall be indicated by a contrasting band with a depth of 45mm to 50mm extending the full width of the steps on both the front and the top surfaces of the step nosing. | 4.2.2.11.2 para 4 | As a minimum the first and the last step shall be indicated by a contrasting band with a depth of 45mm to 55mm extending a minimum of 80% of the width of the steps on the top surface of the step nosing. A similar band shall indicate the front surface of the last step when entering the unit. | See drawing PB-CO-2121344 | Compliance Achieved | 4.2.2.11.2 para 4 | | | | | | | | | | | | | | | | |
| 6(1)(c) | (c) the rear of each step shall be closed by a vertical riser fixed to the rear of the tread and the front edge of the tread above or of the floor of the vehicle; | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | | | | | | | | | | | | | | | | |
| 6(1)(d) | (d) each step shall be illuminated by a light placed within or immediately adjacent to the step; | 4.2.2.5 | Vehicle access steps shall be illuminated to a minimum of 75 Lux, measured across 80% of the width of the step by a light placed within or immediately adjacent to it. | Not applicable | No equivalent requirement | | Not applicable | | | | | | | | | | | | | | | | | |
| 6(1)(e) | (e) each step shall be not more than 200mm high measured vertically from the surface of the tread to an imaginary line extended horizontally from the surface of the next tread or floor of the vehicle and not less than 300mm deep measured from the front of the tread to its rear; and | 4.2.2.12.2 paras 2 - 4 | Internal steps for external access shall have a maximum height of 200mm and a minimum depth of 240mm (going) between the vertical edges of the step. The rising height of each step shall be equal. The first and the last step shall be indicated by a contrasting band with a depth of 45mm to 50mm extending the full width of the steps on both the front and the top surfaces of the step nosing. The height of each step may be increased to a maximum of 230mm if it can be demonstrated that this achieves a reduction of one in the total number of steps required. (For example, if a vertical distance of 460mm is to be traversed, it can be demonstrated that using steps of up to 230mm reduces the number of steps required from 3 to 2.) An external access step, fixed or movable, shall have a maximum height of 230 mm between steps and a minimum depth of 150 mm. If a step board is fitted and it is an extension of a door sill outside the vehicle, and there is no change in level between the step board and the floor of the vehicle, this shall not be considered to be a step for the purposes of this specification. A minimal drop in level, with a maximum of 60 mm, between the floor surface of the vestibule and that of the exterior of the vehicle, used to guide and seal the door is also permissible and shall not be considered as a step. | 4.2.2.11.2 para 2 4.2.2.11.2 para 5 4.2.2.11.2 para 6 | Internal steps for external access shall have a minimum depth of 240mm between the vertical edges of the step and a maximum height of 200mm. The height of the step may be increased to a maximum of 230mm if it can be demonstrated that this achieves a reduction of one in the total number of steps required. An external access step, fixed or movable, shall have a maximum height of 230mm between steps and a minimum depth of 150 mm. If a step board is fitted and it is an extension of a door sill outside the vehicle, and there is no change in level between the step board and the floor of the vehicle, this shall not be considered to be a step for the purposes of this specification. A minimal drop in level, with a maximum of 60mm, between the floor surface at door sill and that of the exterior of the vehicle, used to guide and seal the door is also permissible and shall not be considered as a step. | Non compliance accepted in targeted compliance of 11/03/2010. Step-board is too narrow. Some 65mm below door sill, so considered a step under TSI | Dispensation Required | 4.2.2.11.2 para 2 4.2.2.11.2 para 5 4.2.2.11.2 para 6 | | | | | | | | | | | | | | | | |
| 6(1)(f) | (f) the surface of each tread shall be not less than 45mm wide. | 4.2.2.12.2 para 1 | All steps for access and egress shall have an effective clear width as large as the doorway width. | 4.2.2.11.2 para 1 | All steps for access and egress shall have an effective clear width as large as the doorway width. | | Compliance Achieved | 4.2.2.11.2 para 1 | | | | | | | | | | | | | | | | |
| 6(2) | Paragraph (1)(e) and (f) do not apply if there is not more than one step outside an external doorway. | 4.2.2.12.2 para 4 | If a step board is fitted and it is an extension of a door sill outside the vehicle, and there is no change in level between the step board and the floor of the vehicle, this shall not be considered to be a step for the purposes of this specification. A minimal drop in level, with a maximum of 60 mm, between the floor surface of the vestibule and that of the exterior of the vehicle, used to guide and seal the door is also permissible and shall not be considered as a step. | 4.2.2.11.2 para 6 | If a step board is fitted and it is an extension of a door sill outside the vehicle, and there is no change in level between the step board and the floor of the vehicle, this shall not be considered to be a step for the purposes of this specification. A minimal drop in level, with a maximum of 60mm, between the floor surface at door sill and that of the exterior of the vehicle, used to guide and seal the door is also permissible and shall not be considered as a step. | | Compliance Achieved | 4.2.2.11.2 para 6 | | | | | | | | | | | | | | | | |
| 6(3) | Subject to paragraph (4), inside a regulated rail vehicle there shall be no step between an external passenger doorway and that part of the passenger saloon to one side of that doorway for as far as and including either the vestibule of the next external passenger doorway on the same side of that vehicle if there is no other such doorway. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | No internal steps | Not applicable | | | | | | | | | | | | | | | | | |
| 6(4) | Paragraph (3) shall not apply to stairs leading to any upper passenger saloon of a regulated rail vehicle. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | | | | | | | | | | | | | | | | |
| N/A | No equivalent requirement | 4.2.2.9 para 1 | Internal steps (other than those for external access) shall have a maximum height of 200mm and a minimum depth of 280 mm, measured at the central axis of the stairs. The first and the last step shall be indicated by a contrasting band with a depth of 45mm to 50mm extending the full width of the steps on both the front and the top surfaces of the step nosing. For double deck trains it is permitted to reduce this value to 270mm for the stairs accessing the upper deck. | 4.2.2.8 para 1 4.2.2.8 para 2 | Internal steps (other than those for external access) shall have a maximum height of 200mm and a minimum depth of 280 mm, measured at the central axis of the stairs. For double deck trains it is permitted to reduce this value to 270mm for the stairs accessing the upper deck. As a minimum the first and the last step shall be indicated by a contrasting band with a depth of 45mm to 50mm extending the full width of the steps on both the front and the top surfaces of the step nosing. | | Not applicable | | | | | | | | | | | | | | | | | |
| N/A | No equivalent requirement | 4.2.2.12.1 (as amended by GB specific case in 7.4.1.3.2) | 7.4.1.3.2 Specific case for Rolling Stock operating in Great Britain "P" As fig is a negative value the first step as defined in clause 4.2.2.12.1 will need to be removed when operating on GB lines. Under these circumstances the first useable step on GB lines GB shall comply with the following table: <table border="1"> <thead> <tr> <th></th> <th>δh mm</th> <th>δv+ mm</th> <th>δv- mm</th> </tr> </thead> <tbody> <tr> <td>on a straight level track</td> <td>200</td> <td>230</td> <td>160</td> </tr> <tr> <td>on a track with a curve radius of 300m, standard case</td> <td>200</td> <td>230</td> <td>160</td> </tr> <tr> <td>on a track with a curve radius of 300m, Eurostar case</td> <td>255</td> <td>230</td> <td>160</td> </tr> </tbody> </table> | | δh mm | δv+ mm | δv- mm | on a straight level track | 200 | 230 | 160 | on a track with a curve radius of 300m, standard case | 200 | 230 | 160 | on a track with a curve radius of 300m, Eurostar case | 255 | 230 | 160 | 4.2.2.11.2 para 7 | Access to the vestibule of the vehicle shall be achieved with a maximum of 4 steps of which one may be external | Non compliance accepted in targeted compliance of 11/03/2010. UK railway infrastructure is variable. | Dispensation Required | 7.3.2.6 |
| | δh mm | δv+ mm | δv- mm | | | | | | | | | | | | | | | | | | | | | |
| on a straight level track | 200 | 230 | 160 | | | | | | | | | | | | | | | | | | | | | |
| on a track with a curve radius of 300m, standard case | 200 | 230 | 160 | | | | | | | | | | | | | | | | | | | | | |
| on a track with a curve radius of 300m, Eurostar case | 255 | 230 | 160 | | | | | | | | | | | | | | | | | | | | | |
| N/A | No equivalent requirement | 4.2.2.12.2 para 5 | Access to the vestibule of the vehicle shall be achieved with a maximum of 4 steps of which one may be external | 4.2.2.11.2 para 7 | Access to the vestibule of the vehicle shall be achieved with a maximum of 4 steps of which one may be external | No steps | Compliance Achieved | 4.2.2.11.2 para 7 | | | | | | | | | | | | | | | | |
| Floors | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | The floors of areas used by passengers in a regulated rail vehicle shall comply with the following requirements: | | | | | | | | | | | | | | | | | | | | | | | |
| 7(a) | (a) all floors shall be slip-resistant; | Not applicable | No equivalent requirement | 4.2.1.4 para 1 | All floor coverings, ground surfaces and stair tread surfaces shall be slip resistant. | Refer to TFW schedule of finishes RA/18/001-018. | Compliance achieved | 4.2.1.4 para 1 | | | | | | | | | | | | | | | | |
| 7(b) | (b) the floor of a vestibule adjoining a doorway in the side of a vehicle shall contrast with the adjacent floor in the passenger saloon of that vehicle; | 4.2.4.2.2.1 para 6 | From the inside of the vehicle the position of external doorways shall clearly be marked by use of contrast on the flooring adjacent to the doorway, as compared with the rest of the flooring of the vehicle. | 4.2.2.3.2 para 6 | From the inside of the vehicle the position of external doorways shall clearly be marked by use of contrasted adjacent flooring. | Refer to TFW schedule of finishes RA/18/001-018. | Compliance achieved | 4.2.2.3.2 para 6 | | | | | | | | | | | | | | | | |
| 7(c) | (c) the floor across the width of the doorway between the jambs shall be marked by a strip which shall contrast with adjoining floor surface, run parallel to the edge of the door sill, be not less than 50 millimetres broad measured from the edge nearer that door sill to the edge further from it and be not more than 100 millimetres from that door sill measured from the edge of that door sill to the edge of the strip further from that door sill. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | | | | | | | | | | | | | | | | |
| Seats | | | | | | | | | | | | | | | | | | | | | | | | |
| 8(1) | Not less than 10% of the seats in a regulated rail vehicle or 8 seats (whichever is the lesser number) shall be designated by signs complying with paragraph (6) as priority seats for the use of disabled persons. | 4.2.2.2.2.1 para 1 | Not less than 10 percent of the seats by fixed trainset or individual vehicle, and by class shall be designated as priority seats for the use of PRM. | 4.2.2.1.2.1 para 1 | Not less than 10 per cent of the seats by fixed trainset or individual vehicle, and by class shall be designated as priority seats for the use of persons with disabilities and persons with reduced mobility. | Refer to Drawing No. PB-CO-2121046 (Seating Layout). Total number of seats - 56 + 3xcompliant tip up seats Number of Priority Seats - 6 | Compliance achieved | 4.2.2.1.2.1 para 1 | | | | | | | | | | | | | | | | |
| 8(2) | No priority seat may be capable of being tipped up or folded whilst the regulated rail vehicle is used for carriage. | 4.2.2.2.2.1 para 5 | Priority seats shall not be tip-up seats. | 4.2.2.1.2.1 para 6 | Priority seats shall not be tip-up seats | Noted. No priority seats are tip-up seats | Compliance Achieved | 4.2.2.1.2.1 para 6 | | | | | | | | | | | | | | | | |
| 8(3) | Each priority seat and the space available to its user shall comply with the specifications shown in diagram B1 and in diagram B2, B3 or B4 in the Schedule. | 4.2.2.2.2.1 para 6 | Each priority seat and the space available to its user shall comply with the diagrams shown in the figures 1 to 4. | 4.2.2.1.2.1 para 7 | Each priority seat and the space available to its user shall comply with the figures H1 to H4 from Appendix H | Refer to Drawing No. PB-CO-2121046 (Seating Layout). Chapman seats have had new cushions fitted. Height varies 425mm to 430mm. | Dispensation Required | 4.2.2.1.2.1 para 7 | | | | | | | | | | | | | | | | |
| 8(4) | Any armrest fitted to a priority seat shall be movable to the extent required to permit unrestricted access by a disabled person to that seat or any other priority seat to which access may be gained past that seat. | 4.2.2.2.2.1 para 4 | When seats are fitted with armrests, priority seats shall be fitted with movable armrests, this excludes armrests placed along the vehicle bodyside. The movable armrest shall move into a position in line with the seat back cushion to enable unrestricted access to the seat or to any adjacent priority seats. | 4.2.2.1.2.1 para 5 | When seats of a certain type are fitted with armrests, priority seats of the same type shall be fitted with movable armrests. This excludes armrests placed along the vehicle body side or along a partition wall in case of compartments. The movable armrest shall move into a position in line with the seat back cushion to enable unrestricted access to the seat or to any adjacent priority seats. | Refer to Drawing No. PB-CO-2121046 (Seating Layout). (Note that the existing GA units do not have any armrests) | Compliance Achieved | 4.2.2.1.2.1 para 5 | | | | | | | | | | | | | | | | |

| | | | | | | | | |
|---|--|--|--|--------------------------------------|--|---|-----------------------|----------------------------------|
| 8(5) | If tables or trays (whether fixed or folding) are fitted for the use of passengers at not less than 10% of the seats (other than priority seats) in a regulated rail vehicle a similar table or tray shall be fitted for the use of persons in each priority seat. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 8(6) | There shall be a sign on or near to a priority seat indicating that disabled persons have priority for the use of that seat. | 4.2.2.2.1 para 2 | The priority seats and vehicles containing them shall be identified by signs complying with Annex N Clauses N.3 and N.8 and shall state that other passengers should make such seats available to those who are eligible to use them. | 4.2.2.1.2.1 para 2 | The priority seats and vehicles containing them shall be identified by signs complying with appendix N. It shall be stated that other passengers shall make such seats available to those who are eligible to use them when required. | Refer to drawing PB-CO-2121650. | Compliance Achieved | 4.2.2.1.2.1 para 2 |
| 9 - Tramcar request-stop controls - Not applicable | | | | | | | | |
| Interior Transparent Surfaces | | | | | | | | |
| 10(1) | Subject to paragraph (2) any transparent surface in the interior of a regulated rail vehicle shall: | | | | | | | |
| 10(1)(a) | (a) be separated from an area in which a disabled person can walk, or go in a wheelchair, by a seat, table or other fitting; or | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 10(1)(b) | (b) bear a coloured marking which shall be not less than 140mm and not more than 160mm high and extend horizontally across the whole width of the panel at a height of 1,500mm measured vertically from the floor to the bottom edge of that marking; or | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 10(1)(c) | (c) be bounded on any side which is not attached to the floor, wall or ceiling of the vehicle by a handrail which shall comply with Regulation 11(2). | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 10(2) | Where such a surface is a door it shall comply with paragraph (1)(b). | 4.2.2.4.3.1 para 8 | If more than 75% of a door's surface is made of a transparent material, it shall be marked with a minimum of two prominent bands made of signs, logos, emblems or decorative features. They shall be at a height between 1500mm and 2000mm for the upper band, and between 850mm and 1000mm for the lower band, contrasting with the background over the entire width of the door. These bands shall be a minimum of 100mm high. | 4.2.2.3.3 para 6 | If more than 75% of a door's surface is made of a transparent material, it shall be clearly marked with visual indicators | | Not applicable | |
| Handrails and handholds | | | | | | | | |
| 11(1) | A handrail shall be fitted in the following positions: | | | | | | | |
| 11(1)(a) | (a) in every regulated rail vehicle as close as practicable on either side of the interior of an external doorway extending vertically from a point not more than 700mm above the floor to a point not less than 1200mm above the floor; and | 4.2.2.10 para 4 | A vertical handrail shall also be provided for stepping on and off the train. Doorways with up to two entrance steps shall be provided with vertical handrails on both sides of the doorway, fitted internally as close as practicable to the vehicle outer wall. They shall extend from 700mm to 1200mm above the threshold of the first step. | 4.2.2.9 para 4 4.2.2.9 para 5 | External doorways shall be provided with handrails on both sides, fitted as close as practicable to the vehicle outer wall. Exception can be made for one side of the doorway if it is fitted with a device such as an on-board lift. Those handrails shall be: vertical handrails that shall extend from 700mm to 1200mm above the threshold of the first step for all external doorways | Long vertical handrails on both sides of each external doorway | Compliance Achieved | 4.2.2.9 para 4 4.2.2.9 para 5 |
| 11(1)(b) | (b) in a tramcar at intervals of not more than 1050mm in the longitudinal plane of the vehicle | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 11(2) | Any handrail in a regulated rail vehicle shall comply with the following requirements: | | | | | | | |
| 11(2)(a) | (a) a handrail shall have a circular cross section with a diameter of not less than 30mm and not more than 40mm; | 4.2.2.10 para 1 | All handrails fitted to a vehicle shall be round in section with an outside diameter of 30mm to 40mm | 4.2.2.9 para 1 | All handrails fitted to a vehicle shall be round in section with an outside diameter of 30mm to 40mm | Refer to drawing PB-CO-2121335 for new handrail | Compliance Achieved | 4.2.2.9 para 1 |
| 11(2)(b) | (b) if a handrail is curved, the radius of the surface of the handrail inside the curve shall not be less than 50mm; | 4.2.2.10 para 1 | If a handrail is curved, the radius to the inside face of the curve shall be a minimum of 50mm. | 4.2.2.9 para 2 | If a handrail is curved, the radius to the inside face of the curve shall be a minimum of 50mm | Refer to drawing PB-CO-2121335 for new handrail | Compliance Achieved | 4.2.2.9 para 2 |
| 11(2)(c) | (c) there shall be a clear space of not less than 45mm between any part of the regulated rail vehicle and all parts of the handrail other than its mountings; | 4.2.2.10 para 1 | All handrails fitted to a vehicle ... shall have a minimum clear distance of 45mm to any adjacent surface. | 4.2.2.9 para 1 | All handrails fitted to a vehicle ... shall have a minimum clear distance of 45mm to any adjacent surface | Refer to drawing PB-CO-2121335 for new handrail | Compliance Achieved | 4.2.2.9 para 1 |
| 11(2)(d) | (d) a handrail shall have a slip-resistant surface; | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 11(2)(e) | (e) a handrail shall contrast with the parts of the regulated rail vehicle adjacent to that handrail. | 4.2.2.10 para 2 | All handrails shall contrast with their background. | 4.2.2.9 para 3 | All handrails shall contrast with their background | Refer to TFW schedule of finishes RA/18/001-018. | Compliance Achieved | 4.2.2.9 para 3 |
| 11(3) | Subject to paragraph (4) a handhold shall be fitted to the top of the back of each seat which faces towards an end of a regulated rail vehicle and which is next to a gangway in a passenger saloon and shall comply with the following requirements: | 4.2.2.2.1 para 1 | Handholds or vertical handrails or other items that can be used for personal stability, whilst using the aisle, shall be provided on seat backs of all aisle-side seats unless the seat touches the back of another seat facing in the opposite direction which is fitted with a handhold or touches a partition. | 4.2.2.1.1 para 1 | Handholds or vertical handrails or other items that can be used for personal stability, whilst using the aisle, shall be provided on all aisle-side seats unless the seat, when in the upright position, is within 200mm of: - the back of another seat facing in the opposite direction which is fitted with a handhold or a vertical handrail or other items that can be used for personal stability - a handrail or a partition | Refer to drawing no. PB-CO-2121046 | Compliance Achieved | 4.2.2.1.1 para 1 |
| 11(3)(a) | (a) the surface of a handhold (excluding the mountings to the seat) shall be rounded; | 4.2.2.2.1 para 4 | The handholds or other items shall not have sharp edges. | 4.2.2.1.1 para 4 | The handholds or other items shall not have sharp edges | Refer to drawing PB-CO-2121335 for new handrail | Compliance Achieved | 4.2.2.1.1 para 4 |
| 11(3)(b) | (b) a handhold shall contrast with the seat to which the handhold is attached; | 4.2.2.2.1 para 2 | Handholds or other items that can be used for personal stability shall ...contrast with the seat. | 4.2.2.1.1 para 2 | Handholds or other items that can be used for personal stability shall... contrast with the seat | Refer to TFW schedule of finishes RA/18/001-018. | Compliance Achieved | 4.2.2.1.1 para 2 |
| 11(3)(c) | (c) a handhold shall have a slip-resistant surface; | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 11(3)(d) | (d) There shall be no gap less than 150mm wide measured in any direction in a handhold or between a handhold and the seat to which it is attached. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 11(4) | Paragraph (3) does not apply to a seat the back of which touches a partition, to a seat the back of which touches the back of another seat which faces in the opposite direction and is fitted with a handhold, or to a seat to which a handrail is attached. | 4.2.2.2.1 para 1 | Handholds or vertical handrails or other items that can be used for personal stability, whilst using the aisle, shall be provided on seat backs of all aisle-side seats unless the seat touches the back of another seat facing in the opposite direction which is fitted with a handhold or touches a partition. | 4.2.2.1.1 para 1 | Handholds or vertical handrails or other items that can be used for personal stability, whilst using the aisle, shall be provided on all aisle-side seats unless the seat, when in the upright position, is within 200mm of: - the back of another seat facing in the opposite direction which is fitted with a handhold or a vertical handrail or other items that can be used for personal stability - a handrail or a partition | Refer to drawing no. PB-CO-2121046 | Compliance Achieved | 4.2.2.1.1 para 1 |
| N/A | | 4.2.2.2.1 para 2 | Handholds or other items that can be used for personal stability shall be positioned at a height of between 800 mm and 1200 mm above the floor, shall not protrude into the clearway and shall contrast with the seat. | 4.2.2.1.1 para 2 | Handholds or other items that can be used for personal stability shall be positioned at a height of between 800 mm and 1200 mm above the floor, measured from the centre of the usable part of the handhold, shall not protrude into the clearway and shall contrast with the seat. | Internal hand hold measured at 1150mm. Top of handhold measured at 1220mm. | Dispensation Required | 4.2.2.1.1 para 2 |
| N/A | | 4.2.2.2.1 para 4 | In seating areas with fixed longitudinal seats, handrails shall be used for personal stability. These handrails shall be at a maximum distance of 2000 mm apart, shall be positioned at a height of between 800 mm and 1200 mm above the floor and shall contrast with the vehicle interior surroundings. | 4.2.2.1.1 para 3 | In seating areas with fixed longitudinal seats, handrails shall be used for personal stability. These handrails shall be at a maximum distance of 2000 mm apart, shall be positioned at a height of between 800 mm and 1200 mm above the floor and shall contrast with the vehicle interior surroundings. | | Not applicable | |
| N/A | | 4.2.2.10 Para 5 | Where the clearway of the gangway is less than 1000 mm and longer than 2000 mm there shall be handrails or handholds, provided in, or adjacent to, intervehicle gangways that are provided for passenger use. Where the clearway of the gangway is wider than or equal to 1000 mm handrails or handholds shall be provided in the gangway. | 4.2.2.9 para 6 | Where the clearway of the gangway is narrower than 1 000 mm and longer than 2 000 mm there shall be handrails or handholds provided in, or adjacent to, inter-vehicle gangways that are provided for passenger use. | Refer to drawing PB-CO-2121335 for new handrail | Compliance Achieved | 4.2.2.9 para 6 |
| Door Handles | | | | | | | | |
| 12 | A door handle fitted for the use of passengers shall be operable by the exertion of a force not exceeding 15 newtons. | 4.2.2.4.1 para 1 4.2.2.4.3.1 para 5 | To latch or unlatch a manually operated door, for use by the public, the control device shall be operable by the palm of the hand exerting a force not exceeding 20 Newtons. The force required to open or close a manual door shall not exceed 60 Newtons (applies to interior doors only). | 4.2.2.3.1 para 2 4.2.2.3.3 para 3 | To latch or unlatch a manually operated door, for use by the public, the control device shall be operable by the palm of the hand exerting a force not exceeding 20 Newtons. The force required to open or close a manual door shall not exceed 60 Newtons (applies to interior doors only). | Existing toilet has been replaced by a compliant UAT at the opposite end, therefore no manually operated doors. | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.4.3.1 para 6 | The centre of interior door controls shall be not less than 800mm and not more than 1200mm measured vertically above the vehicle floor level. | 4.2.2.3.3 para 4 | The centre of interior door controls shall be not less than 800mm and not more than 1100mm measured vertically above the vehicle floor level. | No gangway door when coupled in multiple. | Not applicable | |
| Passenger Information | | | | | | | | |
| 13(1) | 13(1) A regulated rail vehicle shall be fitted with public address systems for audible and visual announcements inside the passenger saloon and for visual announcements on the exterior of the vehicle. | 4.2.2.8.3 para 12 | The train shall be fitted with a public address system which shall be used either for routine or emergency announcements by the driver or by another crewmember who has specific responsibility for passengers. | 4.2.2.7.4 para 1 | The train shall be fitted with a public address system which shall be used either for routine or emergency announcements by the driver or by another crewmember who has specific responsibility for passengers. | Fitted with TrainFX PIS | Compliance Achieved | 4.2.2.7.4 para 1 |
| 13(2) | The system for visual announcements on the exterior of the vehicle shall be fitted, if the vehicle is not hauled by a locomotive: | 4.2.2.8.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | 4.2.2.7.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | No bodyside displays fitted across the fleet due to substantial modification costs. | Dispensation Required | 4.2.2.7.3 para 1 |
| 13(2)(a) | a) on the front of a single vehicle; | 4.2.2.8.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | 4.2.2.7.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | No bodyside displays fitted across the fleet due to substantial modification costs. | Dispensation Required | 4.2.2.7.3 para 1 |
| 13(2)(b) | (b) where two or more vehicles are coupled together, on the front of the leading vehicle; or | 4.2.2.8.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | 4.2.2.7.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | No bodyside displays fitted across the fleet due to substantial modification costs. | Dispensation Required | 4.2.2.7.3 para 1 |
| 13(2)(c) | (c) where five or more vehicles are coupled together, on each side of each vehicle, unless such a system is fitted to the front of the leading vehicle. | 4.2.2.8.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | 4.2.2.7.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | No bodyside displays fitted across the fleet due to substantial modification costs. | Dispensation Required | 4.2.2.7.3 para 1 |
| 13(3) | The system for visual announcements on the exterior of a vehicle which is hauled by one or more locomotives shall be fitted to each side of each such vehicle, unless such a system is fitted to the of the leading locomotive and is used to provide the announcements required by paragraph (4) using letters and numbers which comply with paragraph (7). | 4.2.2.8.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | 4.2.2.7.3 para 1 | The final destination or route shall be displayed outside of the train on the platform side adjacent to at least one of the passenger access doors on a minimum of alternate vehicles of the train. | No bodyside displays fitted across the fleet due to substantial modification costs. | Dispensation Required | 4.2.2.7.3 para 1 |

| | | | | | | | | |
|----------|--|--|--|--|--|---|---------------------|--|
| | | 4.2.2.8.3 para 2 | Where trains operate in a system, in which dynamic visual information is given on the station platforms within a distance of 50 metres, and destination or route information is also provided on the front of the train, it is not mandatory to provide information on the sides of each vehicle | 4.2.2.7.3 para 2 | Where trains operate in a system, in which dynamic visual information is given on the station platforms within a distance of 50 metres, and destination or route information is also provided on the front of the train, it is not mandatory to provide information on the sides of each vehicle | | Compliance Achieved | 4.2.2.7.3 para 2 |
| 13(4) | Whilst the vehicle is stationary at a station or a 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 or number of the route, and, in the case of systems inside the passenger saloon only, to announce the next stop. | 4.2.2.8.1 para 7 4.2.2.8.3 paras 3 & 14 | It shall be possible to give information (both audible and visual) in more than one language. (The choice and number of languages shall be the responsibility of the Railway Undertaking having regard to the clientele of an individual train service.) The following information shall be provided: • Information concerning the route of the train The final destination or route of the train shall be displayed inside each vehicle. The system shall be used to announce the destination and next stop of the train, or on departure from, each stop. | 4.2.2.7.1 para 1 4.2.2.7.3 para 3 | The following information shall be provided: - Information concerning the route of the train, including information about delays and unplanned stops. The final destination or route of the train shall be displayed inside each vehicle. | Operational responsibility. | Compliance Achieved | 4.2.2.7.1 para 1 4.2.2.7.3 para 3 |
| 13(5) | Subject to paragraph (6) the systems inside the passenger saloon shall be used: | | | | | | | |
| 13(5)(a) | (a) to announce the next station, or tram stop, at which the vehicle will be stopping, not less than once during the period beginning five minutes before the vehicle is expected by the operator's staff to stop at that station or tram stop; | 4.2.2.8.3 paras 4 & 15 | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle. This information shall be displayed at least two minutes before arrival at the station concerned. If the next station is less than two minutes planned journey time away, the next station shall be displayed immediately following departure from the previous station. The (audible public address) system shall be used to announce the next stop of the train at least two minutes before the arrival of the train at that stop. If the next station is less than two minutes planned journey time away, the next station shall be announced immediately following departure from the previous station. | 4.2.2.7.3 para 4 4.2.2.7.3 para 5 4.2.2.7.4 para 4 | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle including 51% of the priority seats, and from all wheelchair spaces. This information shall be displayed at least two minutes before arrival at the station concerned. If the next station is less than two minutes planned journey time away, the next station shall be displayed immediately following departure from the previous station. The public address system shall be used to announce the next stop of the train at least two minutes before the arrival of the train at that stop. If the next station is less than two minutes planned journey time away, the next station shall be announced immediately following departure from the previous station. | | Compliance Achieved | 4.2.2.7.3 para 4 4.2.2.7.3 para 5 4.2.2.7.4 para 4 |
| 13(5)(b) | (b) to announce any delay exceeding ten minutes to the scheduled timing for that journey; | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 13(5)(c) | (c) to announce any diversions from the route shown in the published timetable for that journey; and | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 13(5)(d) | (d) to make emergency announcements. | 4.2.2.8.1 para 7 | It shall be possible to give information (both audible and visual) in more than one language. (The choice and number of languages shall be the responsibility of the Railway Undertaking having regard to the clientele of an individual train service.) The following information shall be provided: • Safety information and Safety Instructions in accordance with European or National Rules • Audible safety instructions in case of emergency | 4.2.2.7.1 para 1 | The following information shall be provided: - Safety information and safety instructions | | Compliance Achieved | 4.2.2.7.1 para 1 |
| 13(6) | Paragraph (5)(a) does not apply if the timetabled journey time between stations or tram stops is less than two minutes. | 4.2.2.8.3 paras 4 & 15 | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle. This information shall be displayed at least two minutes before arrival at the station concerned. If the next station is less than two minutes planned journey time away, the next station shall be displayed immediately following departure from the previous station. The (audible public address) system shall be used to announce the next stop of the train at least two minutes before the arrival of the train at that stop. If the next station is less than two minutes planned journey time away, the next station shall be announced immediately following departure from the previous station. | 4.2.2.7.3 para 4 4.2.2.7.3 para 5 4.2.2.7.4 para 4 | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle including 51% of the priority seats, and from all wheelchair spaces. This information shall be displayed at least two minutes before arrival at the station concerned. If the next station is less than two minutes planned journey time away, the next station shall be displayed immediately following departure from the previous station. The public address system shall be used to announce the next stop of the train at least two minutes before the arrival of the train at that stop. If the next station is less than two minutes planned journey time away, the next station shall be announced immediately following departure from the previous station. | | Compliance Achieved | 4.2.2.7.3 para 4 4.2.2.7.3 para 5 4.2.2.7.4 para 4 |
| 13(7) | The first letter of, and numbers used in, announcements on visual systems shall be not less than 70mm high on systems on the front of the vehicle and not less than 35mm high on other systems, and all letters and numbers shall contrast with their background. | 4.2.2.8.1 para 4, 4.2.2.8.4 paras 2 - 4 | Visual information shall contrast with its background. Upper Case Letters and numbers used in front external displays shall have a minimum height of 70mm and on side displays 35mm on bodyside and internal indicators. Inside trains the font size shall be not less than 35mm for a reading distance in excess of 5000mm. 35mm display characters shall be considered to be legible up to a maximum viewing distance of 10000 mm. | 4.2.2.7.1 para 2 4.2.2.7.1 para 3 4.2.2.7.1 para 4 | Visual information shall contrast with its background The typeface used for text shall be easily readable Time information presented in digits shall be in the 24hr format | | Compliance Achieved | 4.2.2.7.1 para 2 4.2.2.7.1 para 3 4.2.2.7.1 para 4 |
| 13(8) | A word on a visual system shall not be written in capital letters only. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 13(9) | Visual announcements inside the passenger saloon shall be visible from the majority of passenger seats (including priority seats) in that saloon. | 4.2.2.8.3 para 4, 1st sentence | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle. | 4.2.2.7.3 para 4 | The next stop of the train shall be displayed such that it can be read from a minimum of 51% of passenger seats inside each vehicle including 51% of the priority seats, and from all wheelchair spaces. | | Compliance Achieved | 4.2.2.7.3 para 4 |
| N/A | No equivalent requirement | 4.2.2.8.1 para 1 | All information shall be of a consistent nature and in accordance with European or National Rules. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.1 para 2 | All information shall be coherent with the general routing and information system especially colour and contrast in trains, platforms and entrances. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.1 para 3 | Visual information shall be legible in all lighting conditions when the vehicle or station is operational. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.1 para 5 | Descenders in Roman script shall be clearly recognisable and have a minimum size ratio of 20% to the upper case characters. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.1 para 6 | Compressed descenders and ascenders shall not be used. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.1 para 7 | It shall be possible to give information (both audible and visual) in more than one language. (The choice and number of languages shall be the responsibility of the Railway Undertaking having regard to the clientele of an individual train service.) The following information shall be provided: • Safety information and Safety Instructions in accordance with European or National Rules • Audible safety instructions in case of emergency • Warning, prohibition and mandatory actions signs in accordance with European or National Rules. • Information concerning the route of the train • Information concerning the location of on-board facilities | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.2.1 para 1 | All safety, warning, mandatory action and prohibition signs shall include pictograms and shall be designed according to ISO 3864-1. | 4.2.2.7.2 para 1 | All safety, warning, mandatory action and prohibition signs shall include pictograms and shall be designed according to the specification referenced in Appendix A, index 7. | Refer to drawing PB-CO-2121649. | Compliance Achieved | 4.2.2.7.2 para 1 |
| N/A | No equivalent requirement | 4.2.2.8.2.1 para 2 | There shall be no more than five pictograms, together with a directional arrow, indicating a single direction placed adjacent to each other at a single location. | 4.2.2.7.2 para 2 | There shall be no more than five pictograms, together with a directional arrow, indicating a single direction placed adjacent to each other at a single location. | Refer to drawings PB-CO-2121649 and PB-CO-2121650. | Compliance Achieved | 4.2.2.7.2 para 2 |
| N/A | No equivalent requirement | 4.2.2.8.2.1 para 3 | Tactile information signage shall be fitted in: • Toilets, for functional information and emergency call if appropriate • Trains, for door open/close button and emergency call Advertisements shall not be combined with the routing and information systems. The following specific PRM graphic symbols and pictograms shall be fitted: • Wheelchair symbol in accordance with Annex N Clauses N.3 and N.4 • Directional information for wheelchair accessible amenities • Indication of the wheelchair accessible door location outside the train • Indication of the wheelchair space inside the train • Indication of the universal toilets The symbols in can be combined with other symbols (for example: lift, toilet, etc). | 4.2.2.7.2 para 3 4.2.2.7.2 para 8 | The following specific pictograms shall be fitted with the wheelchair symbol in accordance with appendix N: - Directional information for wheelchair accessible amenities - Indication of the wheelchair accessible door location outside the train - Indication of the wheelchair space inside the train - Indication of the universal toilets These symbols can be combined with other symbols (for example carriage number, toilet etc) Tactile information signage shall be fitted in: - Toilets and wheelchair accessible sleeping accommodation, for functional information and call for aid device if appropriate - Rolling stock, for the open/close of passenger accessible doors and call for aid devices | Refer to drawings PB-CO-2121649 and PB-CO-2121650. | Compliance Achieved | 4.2.2.7.2 para 3 4.2.2.7.2 para 8 |
| N/A | No equivalent requirement | 4.2.2.8.2.2 para 1 | Where inductive loops are fitted these shall be indicated by a sign complying with Annex N Clauses N.3 and N.5. | 4.2.2.7.2 para 4 | Where inductive loops are fitted these shall be indicated by a pictogram complying with appendix N | | Not applicable | 4.2.2.7.2 para 4 |
| N/A | No equivalent requirement | 4.2.2.8.2.2 para 2 | Where the facility is provided, a graphic symbol shall indicate a storage place for heavy luggage and bulky goods. | | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.2.2 para 3 | If there is a call for assistance or call for information facility, this shall be indicated by a sign complying with Annex N Clauses N.3 and N.6. and shall have: • A visual and audible indication that the device has been operated; • Additional operating information if necessary | 4.2.2.2 para 11 4.2.2.2 para 12 4.2.2.2 para 15 | The wheelchair space shall be fitted with a call for aid device that shall, in the event of danger, provide to a wheelchair user the possibility to inform a person who can take appropriate action. The call for aid device shall be placed within the comfortable reach range of the person using the wheelchair as shown in Appendix L, figure L1 A sign conforming to appendix N shall be placed immediately next to, or in the wheelchair space so as to identify the space as the wheelchair space. | This is part of the CFA device itself. Refer to drawing PB-CO-2121650. | Compliance Achieved | 4.2.2.2 para 11 4.2.2.2 para 12 4.2.2.2 para 15 |
| N/A | No equivalent requirement | 4.2.2.8.2.2 para 4 | If there is an Emergency call device it shall comply with Annex N Clauses N.3 and N.7. And shall have: • visual and tactile symbols, • A visual and audible indication that the device has been operated • Additional operating information if necessary. | 4.2.2.2 para 14 4.2.2.2 para 15 | The interface of the call for aid device shall be as defined in point 5.3.2.6 A sign conforming to appendix N shall be placed immediately next to, or in the wheelchair space so as to identify the space as the wheelchair space. | This is part of the CFA device itself. Refer to drawing PB-CO-2121650. | Compliance Achieved | 4.2.2.2 para 14 4.2.2.2 para 15 |

| | | | | | | | | |
|--|---|-----------------------|--|----------------------------------|--|---|---------------------|----------------------------------|
| N/A | No equivalent requirement | 4.2.2.8.3 para 5 | The requirement to make the destination and 'next stop' displays visible to 51% from passenger seats need not be met if the train is partly or wholly divided into compartments of not more than 8 seats, which are serviced by a corridor. However, a display shall be visible to a person standing in a corridor outside a compartment and shall be visible to a passenger occupying a wheelchair space. | 4.2.2.7.3 para 6 | The requirement to make the destination and 'next stop' displays visible from 51% of passenger seats does not apply to compartment carriages where the compartments have a maximum of 8 seats and are served by an adjacent corridor. However, this information shall be visible to a person standing in a corridor outside a compartment and to a passenger occupying a wheelchair space. | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 6 | Details of the Route or Network on which the train operates shall be available (the Railway Undertaking shall decide the manner in which this information is provided). | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 7 | The information about the next stop may be shown on the same display as the final destination. However, it shall revert to show the final destination as soon as the train has stopped. | 4.2.2.7.3 para 7 | The information about the next stop may be displayed on the same support as the final destination. However, it shall revert to show the final destination as soon as the train has stopped. | | Compliance Achieved | 4.2.2.7.3 para 7 |
| N/A | No equivalent requirement | 4.2.2.8.3 para 8 | The (visual passenger information) system shall be capable of giving announcements in more than one language. (The choice and number of languages shall be the responsibility of the Railway Undertaking having regard to the clientele of an individual train service.) | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 9 | If the (visual passenger information) system is automated, it shall be possible to suppress, or correct, incorrect or misleading information. | 4.2.2.7.4 para 2 | The public address system may operate on a manual, an automated or pre-programmed basis. If the public address system is automated, it shall be possible to suppress, or correct, incorrect or misleading information | | Compliance Achieved | 4.2.2.7.4 para 2 |
| N/A | No equivalent requirement | 4.2.2.8.3 para 10 | If the vehicle provides reserved seats then the number or letter of the vehicle (as used in the reservation system) shall be displayed on or adjacent to every door in characters not less than 70mm high. | 4.2.2.7.2 para 6 | If a vehicle provides reserved seats then the number or letter of that vehicle (as used in the reservation system) shall be displayed externally on or adjacent to all its access doors. The number or letter shall be displayed in characters not less than 70 mm high and shall be visible when the door is open and closed. | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 11 | If seats are identified by numbers or letters, the number or letter of the seat shall be displayed on or adjacent to every seat in characters not less than 12 mm high. Such numbers and letters shall contrast with their background. | 4.2.2.7.2 para 7 | If seats are identified by numbers or letters, the number or letter of the seat shall be displayed on or adjacent to every seat in characters not less than 12 mm high. Such numbers and letters shall contrast with their background. | Refer to drawing PB-CO-2121650. | Compliance Achieved | 4.2.2.7.2 para 7 |
| N/A | No equivalent requirement | 4.2.2.8.3 para 13 | The (audible public address) system may operate on a manual, an automated or pre-programmed basis. If the system is automated, it shall be possible to suppress, or correct, incorrect or misleading information. | 4.2.2.7.4 para 2 | The public address system may operate on a manual, an automated or pre-programmed basis. If the public address system is automated, it shall be possible to suppress, or correct, incorrect or misleading information | | Compliance Achieved | 4.2.2.7.4 para 2 |
| N/A | No equivalent requirement | 4.2.2.8.3 para 16 | The spoken information shall have a minimum RASTI level of 0,5, in accordance with IEC 60268-16 part 16, in all areas. The system shall meet the requirement at each seat location and wheelchair space. | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 17 | The (audible public address) system shall be capable of giving announcements in more than one language. (The choice and number of languages shall be the responsibility of the Railway Undertaking having regard to the clientele of an individual train service.) | N/A | No equivalent requirement | | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.8.3 para 18 | If the (audible public address) system is automated, it shall be possible to suppress, or correct, incorrect or misleading information. | 4.2.2.7.4 para 2 | The public address system may operate on a manual, an automated or pre-programmed basis. If the public address system is automated, it shall be possible to suppress, or correct, incorrect or misleading information | | Compliance Achieved | 4.2.2.7.4 para 2 |
| N/A | No equivalent requirement | 4.2.2.8.4 para 1 | Each station name (which may be abbreviated), or words of messages, shall be displayed for a minimum of 2 seconds. If a scrolling display is used (either horizontal or vertical), each complete word shall be displayed for a minimum of 2 seconds and the horizontal scrolling speed shall not exceed 6 characters per second. Sans Serif fonts, in mixed case, shall be used for all written information. (i.e. not in capital letters only). | N/A | No equivalent requirement | | Not applicable | |
| Toilets | | | | | | | | |
| 14 | If a toilet is fitted in a regulated rail vehicle that vehicle shall comply with the following requirements: | | | | | | | |
| 14(a) | (a) the centre of any door control device on the exterior or the interior of the toilet cubicle shall be not less than 800mm and not more than 1,200mm vertically above the floor; | 4.2.2.4.3.1 para 6 | The centre of interior door controls shall be not less than 800mm and not more than 1200mm measured vertically above the vehicle floor level. | 4.2.2.3.3 para 4 | The centre of internal door controls shall be not less than 800mm and not more than 1100mm measured vertically above the vehicle floor level. | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 4.2.2.3.3 para 4 |
| 14(b) | (b) any door control device, or other equipment inside the toilet cubicle shall be operable by the exertion of a force of not more than 15 newtons; | 4.2.2.6.2 para 5 | Any door control device, and other equipment inside the toilet compartment (except for baby change facilities) shall be operable by exerting a force not exceeding 20 Newtons. | 5.3.2.2 para 3 | Any door control device and other equipment in the toilet (except for baby nappy change facilities and call for aid devices) shall be operable by exerting a force not exceeding 20N | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.2 para 3 |
| 14(c) | (c) the seat and any lid on the toilet and any handholds in the toilet cubicle shall be coloured to contrast with the adjacent parts of the toilet cubicle; | 4.2.2.6.2 para 10 | The toilet seat and lid, and any handrails shall be in a contrasting colour and/or tone to the background. | 5.3.2.2 para 6 | The toilet seat and lid, and any handrails shall contrast with the background | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.2 para 6 |
| 14(d) | (d) the immediate surround of a control device in a toilet cubicle shall be coloured to contrast with that control device and with the part of the toilet cubicle on which it is mounted; | 4.2.2.6.2 paras 6 & 7 | Any control device, including flushing system, shall be provided in a contrasting colour and/or tone to the background surface, and shall be identifiable by touch. Clear, precise information for the operation of any control device shall be provided, making use of pictograms and shall be tactile. | 5.3.2.2 para 4 5.3.2.2 para 5 | Any control device, including flushing system, shall contrast with the background surface, and shall be identifiable by touch Clear precise information for the operation of any control device shall be provided, making use of pictograms and shall be tactile. | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.2 para 4 5.3.2.2 para 5 |
| 14(e) | (e) a control device inside a toilet cubicle shall be so constructed as to be identifiable by touch. | 4.2.2.6.2 paras 6 & 7 | Any control device, including flushing system, shall be identifiable by touch. Clear, precise information for the operation of any control device shall be provided, making use of pictograms and shall be tactile. | 5.3.2.2 para 4 5.3.2.2 para 5 | Any control device, including flushing system, shall contrast with the background surface, and shall be identifiable by touch Clear precise information for the operation of any control device shall be provided, making use of pictograms and shall be tactile. | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.2 para 4 5.3.2.2 para 5 |
| N/A | No equivalent requirement | 4.2.2.6.2 para 2 | The minimum door useable width shall be 500mm | 5.3.2.3 para 2 | The minimum door useable width shall be 500mm | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.3 para 2 |
| N/A | No equivalent requirement | 4.2.2.6.2 para 8 | A fixed vertical and/or horizontal handrail shall be provided adjacent to the toilet pan and the wash basin. | 5.3.2.3 para 3 | A fixed vertical and/or horizontal handrail according to point 4.2.2.9 shall be provided adjacent to the toilet seat and the wash basin. | Refer to IC cert 1125/2018/RST/22459/AR there is only the PRM compliant toilet module fitted to this train. | Compliance Achieved | 5.3.2.3 para 3 |
| Wheelchair Spaces | | | | | | | | |
| 15(1) | Subject to paragraphs (2) and (3) below a regulated rail vehicle which does not form part of a train shall contain not less than one wheelchair space. | 4.2.2.3 | According to the length of the train, excluding locomotive or power head, there shall be in that train not less than the number of wheelchair spaces shown in the following table: Unit Length No of wheelchair spaces by unit Less than 30m 1 wheelchair space 30 to 205m 2 wheelchair spaces 205 to 300m 3 wheelchair spaces More than 300m 4 wheelchair spaces | 4.2.2.2 para 1 | According to the length of the unit, excluding the locomotive or power head, there shall be in the unit not less than the number of accessible wheelchair spaces shown in the following table: Unit Length No of wheelchair spaces by unit Less than 30m 1 wheelchair space 30 to 205m 2 wheelchair spaces 205 to 300m 3 wheelchair spaces More than 300m 4 wheelchair spaces | Refer to drawing no. PB-CO-2121045 for general arrangement. There are two wheelchair spaces. | Compliance Achieved | 4.2.2.2 para 1 |
| 15(2) | A tramcar with accommodation for 100 or more persons shall contain not less than two wheelchair spaces. | | | | | | | |
| 15(3) | Subject to paragraph (4) where a train consists of a number of regulated rail vehicles shown in column A, there shall be in that train not less than the number of wheelchair spaces shown in column B opposite that number of vehicle; | 4.2.2.3 | According to the length of the train, excluding locomotive or power head, there shall be in that train not less than the number of wheelchair spaces shown in the following table: Unit Length No of wheelchair spaces by unit Less than 30m 1 wheelchair space 30 to 205m 2 wheelchair spaces 205 to 300m 3 wheelchair spaces More than 300m 4 wheelchair spaces | 4.2.2.2 para 1 | According to the length of the unit, excluding the locomotive or power head, there shall be in the unit not less than the number of accessible wheelchair spaces shown in the following table: Unit Length No of wheelchair spaces by unit Less than 30m 1 wheelchair space 30 to 205m 2 wheelchair spaces 205 to 300m 3 wheelchair spaces More than 300m 4 wheelchair spaces | Refer to drawing no. PB-CO-2121045 for general arrangement. There are two wheelchair spaces. | Compliance Achieved | 4.2.2.2 para 1 |
| 15(4) | Where one or more regulated rail vehicles in a train are provided for a different class of passenger accommodation from another regulated rail vehicle in that train, there shall be not less than one wheelchair space in each class of passenger accommodation in that train. | N/A | No equivalent requirement | N/A | No equivalent requirement | | Not applicable | |
| Wheelchair Space Specifications | | | | | | | | |
| 16(1) | A wheelchair space shall comply with the following specifications: | | | | | | | |

| | | | | | | | | | |
|---------------------------------------|--|-------------------------------|--|------------------------------------|--|---|---------------------|----------------------------------|--|
| | | | To ensure stability, the wheelchair space shall be designed for the wheelchair to be positioned either facing or back to the direction of travel. The minimum distance in the longitudinal plane between the wheelchair space and a front surface 2 shall be in accordance with figure 5. Surface 1 may be a closed tip-up or foldable seat, or a partition. If surface 2 is the front edge of a passenger seat cushion in a facing arrangement and if this seat can be occupied by a passenger, the minimum distance shall be not less than 300mm. If surface 2 is a passenger seat back in a uni-directional arrangement, or a partition or a closed tip-up or foldable seat in front of wheelchair space, the minimum distance shall be not less than 200mm (see Figure 6) | 4.2.2.2 para 2 4.2.2.2 para 4 | To ensure stability, the wheelchair space shall be designed for the wheelchair to be positioned either facing or back to the direction of travel. The minimum distance in the longitudinal plane between the back of the wheelchair space and the next surface shall be in accordance with Appendix I, figures I1 to I3. | Refer to drawing no. PB-CO-2121045 for general arrangement and PB-CO-2121046 for the seating layout. There are two compliant wheelchair spaces. | Compliance Achieved | 4.2.2.2 para 2 4.2.2.2 para 4 | |
| 16(1)(a) | (a) the space shall be not less than 1300mm long measured in the longitudinal plane of the regulated rail vehicle and not less than 750mm wide measured in the transverse plane of that vehicle; | 4.2.2.3 paras 2, 6, 7 & 8 | | | | | | | |
| 16(1)(b) | (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); | 4.2.2.3 para 5 | There shall be no obstruction of the designated space between the floor and the ceiling of the vehicle other than an overhead luggage rack, a horizontal handrail attached to the wall or ceiling of the vehicle or a table in accordance with the requirements of clause 4.2.2.10. | 4.2.2.2 para 5 | There shall be no obstruction of the designated space between the floor and the ceiling of the vehicle other than an overhead luggage rack, a horizontal handrail in accordance with the requirements of point 4.2.2.9 attached to the wall or ceiling of the vehicle, or a table. | | Compliance Achieved | 4.2.2.2 para 5 | |
| 16(1)(c) | (c) at one end of the space there shall be a structure or fitting which shall have a minimum width of 700mm and shall be capable of preventing a reference wheelchair, which has been positioned with its back against the structure or fitting, from moving or tipping towards the structure or fitting, whether or not that movement or tip includes a sideways movement or tip; | 4.2.2.3 para 10 | There shall be a structure or other acceptable fitting 700mm wide (as shown in figure 6) at one end of the wheelchair space. The height of the structure, or fitting, shall be capable of preventing a wheelchair that has been positioned with its back against the structure or fitting, from tipping over backwards. | 4.2.2.2 para 6 | The back of the wheelchair space shall be a structure or other acceptable fitting of at least 700mm wide. The height of the structure, or fitting, shall be capable of preventing a wheelchair that has been positioned with its back against the structure or fitting, from tipping over backwards. | PB-CO-2121326 for the wheelchair stub partition and PB-CO-2121046 for the back of the UAT module | Compliance Achieved | 4.2.2.2 para 6 | |
| 16(1)(d) | (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); | Not applicable | No equivalent requirement | 4.2.2.2 para 8 | It is not allowed to install any permanent equipment such as bike hooks or ski racks into the wheelchair space or directly in front of it. | | Compliance Achieved | 4.2.2.2 para 8 | |
| 16(1)(e) | (e) the space shall be fitted with a device which shall: (i) enable a disabled person in a wheelchair to communicate with a person who is in a position to take appropriate action in an emergency; | 4.2.2.3 para 12, 1st sentence | The wheelchair space shall be fitted with an alarm device that shall, in the event of danger, enable a wheelchair user to inform a person who can take appropriate action. | 4.2.2.2 para 11 | The wheelchair space shall be fitted with a call for aid device that shall, in the event of danger, provide to a wheelchair user the possibility to inform a person who can take appropriate action. | | Compliance Achieved | 4.2.2.2 para 11 | |
| | (ii) be placed within reach of a person in a reference wheelchair; | 4.2.2.3 para 12, 2nd sentence | It shall be placed within reach of a person seated in a reference wheelchair. | 4.2.2.2 para 12 | The call for aid device shall be placed within the comfortable reach range of the person using the wheelchair as shown in Appendix I, figure I1. | | Compliance Achieved | 4.2.2.2 para 12 | |
| | (iii) be operable by the palm of a person's hand; and | 4.2.2.3 para 14 | The alarm device shall not be placed within a narrow recess or any other form of shielding which prevents immediate palm operation. | 4.2.2.2 para 13 | The call for aid device shall not be placed within a narrow recess which prevents immediate intentional palm operation but can be protected from unintentional use. | | Compliance Achieved | 4.2.2.2 para 13 | |
| | (iv) not require a force greater than 30 newtons for operation. | 5.4.2 para 5 | The alarm devices shall be operable by the palm of a person's hand and shall not require a force exceeding 30N to operate. | 5.3.2.6 para 5 | A call for aid device shall be operable by the palm of a person's hand and not require a force exceeding 30N to operate. | | Compliance Achieved | 5.3.2.6 para 5 | |
| N/A | No equivalent requirement | 4.2.2.3 para 13 | When the alarm device has been activated a visual and audible indication that the alarm system is working shall be provided. | 5.3.2.6 para 3 | A call for aid device shall be emit a visual and audible indication to the user that it has been operated. | | Compliance Achieved | 5.3.2.6 para 3 | |
| 16(1)(f) | (f) a sign conforming to diagram C in the Schedule shall be placed immediately next to, or in, the wheelchair space so as to identify the space as a wheelchair space. | 4.2.2.3 para 16 | A sign conforming to Annex N Clauses N.3 and N.4 shall be placed immediately next to, or in, the wheelchair space so as to identify the space as the wheelchair space. | 4.2.2.2 para 15 | A sign conforming to appendix N shall be placed immediately next to, or in the wheelchair space so as to identify the space as the wheelchair space. | Refer to drawing PB-CO-2121650. | Compliance Achieved | 4.2.2.2 para 15 | |
| 16(2)(a) | (a) if a wheelchair space is not needed by a disabled person in a wheelchair folding or tip-up seats may be used in that space. | 4.2.2.3 para 9 | Tip-up or folding seats may be installed in the wheelchair space but, when in the stowed position, shall not encroach on the dimensional requirements of the wheelchair space. | 4.2.2.2 para 7 | Tip-up seats may be installed in the wheelchair space but, when in the stowed position, shall not encroach on the dimensional requirements of the wheelchair space. | | Compliance Achieved | 4.2.2.2 para 7 | |
| 16(2)(b) | (b) When folded or tipped up those seats shall not project into the space. | 4.2.2.3 para 9 | Tip-up or folding seats may be installed in the wheelchair space but, when in the stowed position, shall not encroach on the dimensional requirements of the wheelchair space. | 4.2.2.2 para 7 | Tip-up seats may be installed in the wheelchair space but, when in the stowed position, shall not encroach on the dimensional requirements of the wheelchair space. | | Compliance Achieved | 4.2.2.2 para 7 | |
| N/A | No equivalent requirement | 4.2.2.3 para 11 | At least one seat shall be available either adjacent to or facing to the wheelchair spaces for a companion to travel with the wheelchair user. This seat shall offer the same level of comfort as other seats, and may also be situated on the opposing side of the clearway. | 4.2.2.2 para 9 | At least one seat shall be available either adjacent to or facing to each of the wheelchair spaces for a companion to travel with the wheelchair user. This seat shall offer the same level of comfort as the other passenger seats, and may also be situated on the opposing side of the aisle. | | Compliance Achieved | 4.2.2.2 para 9 | |
| Sleeping Accommodation | | | | | | | | | |
| 17(1) | Subject to paragraph (2) a regulated rail vehicle with sleeping accommodation for passengers shall have not less than one wheelchair-compatible sleeping compartment. | 4.2.2.11 para 1 | When a train is equipped with sleeping accommodation for passengers it shall provide a vehicle containing not less than one wheelchair accessible sleeping accommodation that shall accommodate a wheelchair with the specification as defined in Annex M. | 4.2.2.10 para 1 | When a train is equipped with sleeping accommodation for passengers, it shall provide a vehicle containing at least one wheelchair accessible sleeping accommodation. | | Not applicable | | |
| 17(2) | If there is more than one regulated rail vehicle with sleeping accommodation for passengers in a train, there shall be not less than two wheelchair-compatible sleeping compartments in the train. | 4.2.2.11 para 2 | If there is more than one vehicle with sleeping accommodation for passengers in a train, there shall be not less than two wheelchair accessible sleeping compartments in the train. | 4.2.2.10 para 2 | If there is more than one vehicle with sleeping accommodation for passengers in a train, there shall be not less than two wheelchair accessible sleeping accommodations in the train. | | Not applicable | | |
| 17(3) | The doorway into a wheelchair-compatible sleeping compartment and the space beside the bed in such a compartment shall not be less than 850mm wide. | Not applicable | No equivalent requirement | 4.2.2.10 para 4 | The wheelchair accessible sleeping accommodation internal space shall take in consideration the requirements of point 4.2.2.6 for actions expected from the wheelchair user in the sleeping accommodation. | | Not applicable | | |
| N/A | No equivalent requirement | 4.2.2.11 para 3 | If a rail vehicle provides wheelchair accessible sleeping accommodation the exterior of the relevant vehicle door shall be marked with a sign in accordance with Annex N Clauses N.3 and N.4. | 4.2.2.10 para 3 | If a rail vehicle provides wheelchair accessible sleeping accommodation, the exterior of the relevant vehicle door and the wheelchair accessible sleeping accommodation door shall be marked with a sign in accordance with appendix N. | | Not applicable | | |
| N/A | No equivalent requirement | 4.2.2.11 para 4 | The sleeping accommodation shall be fitted with not less than two alarm devices that shall, in the event of danger enable, a PRM to inform a person who can take appropriate action. One shall be placed not more than 450 millimetres above the floor, measured vertically from the surface of the floor to the top of the control. The other shall be not less than 600 millimetres and not more than 800 millimetres above the floor measured vertically to the top of the control. | 4.2.2.10 para 5 4.2.2.10 para 6 | The sleeping accommodation shall be fitted with not less than two call for aid devices that shall, when operated, send a signal to a person who can take appropriate action; they need not initiate a communication. The interface of the call for aid devices shall be as defined in point 5.3.2.6. | | Not applicable | | |
| N/A | No equivalent requirement | 4.2.2.11 para 5 | The lower alarm device shall be positioned so that the control can be reached comfortably by a person lying on the floor. These two devices shall be located on different vertical surfaces of the sleeping accommodation. The alarm devices shall be distinct from any other control within the sleeping accommodation and be coloured differently from other control devices. | 4.2.2.10 para 7 4.2.2.10 para 8 | One call for aid device shall be placed not more than 450mm above the floor, measured vertically from the surface of the floor to the centre of the control. It shall be positioned so that the control can be reached by a person lying on the floor. The other call for aid device shall be not less than 600mm and not more than 800mm above the floor measured vertically to the centre of the control. | | Not applicable | | |
| N/A | No equivalent requirement | 4.2.2.11 para 6 | A sign conforming to Annex N Clauses N.3 and N.7 shall be placed immediately next to each alarm device. The sign shall describe the function and required actions and shall contrast with its background and have clear visual and tactile information. | | | | Not applicable | | |
| N/A | No equivalent requirement | 4.2.2.11 para 7 | A visual and audible indication that the alarm device has been operated shall be provided within the sleeping accommodation. | 5.3.2.6 para 3 | A call for aid device shall emit a visual and audible indication to the user that it has been operated. | | Not applicable | | |
| Tables | | | | | | | | | |
| 18(1) | If tables or trays (whether fixed or folding) are fitted for the use of passengers at not less than 10% of the seats (excluding priority seats) in a regulated rail vehicle, a similar table or tray shall be available for use in any wheelchair space in that vehicle by a disabled person in a wheelchair. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | |
| 18(2) | The operator of a regulated rail vehicle shall provide assistance to erect a removable or folding table or tray in a wheelchair space at the request of or on behalf of a disabled person in a wheelchair. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | |
| 18(3) | There shall be no obstruction in the space beneath the table-top other than a table-leg positioned so that the unobstructed space beneath the table is not less than 700mm wide when measured at a right angle to the direction in which the wheelchair faces when facing the table. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | |
| 18(4) | The lowest point on the underside of the table-top shall be not less than 720mm vertically above the floor of the regulated rail vehicle. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | | |
| Wheelchair-compatible doorways | | | | | | | | | |
| 19(1) | A regulated rail vehicle in which there is a wheelchair space or wheelchair-compatible sleeping compartment shall be fitted with a wheelchair-compatible doorway on each side of the vehicle in which there is a door for the use of passengers. | 4.2.2.4.2 para 4 | The designated wheelchair exterior accessible doorways shall be the closest doorways to the designated wheelchair spaces. | 4.2.2.3.2 para 4 | The designated wheelchair exterior accessible doorways shall be the closest doorways to the designated wheelchair spaces. | See drawing no. PB-CO-2121344 which shows 800mm between grab poles | Compliance Achieved | 4.2.2.3.2 para 4 | |
| 19(2) | The width of the opening of a wheelchair-compatible doorway shall be not less than 850mm. | 4.2.2.4.2 para 2 | All exterior passenger doorways shall have a minimum clear useable width of 800mm when open. | 4.2.2.3.2 para 1 | All exterior passenger doorways shall have a minimum clear useable width of 800mm when open. | See drawing no. PB-CO-2121344 which shows 800mm between grab poles | Compliance Achieved | 4.2.2.3.2 para 1 | |
| 19(3) | A sign conforming to diagram C in the Schedule shall be marked on the exterior of the regulated rail vehicle on not less than one side of the wheelchair-compatible doorway, or on the door, in such a position that it will be visible both before and after the door has opened. | 4.2.2.4.2 para 5 | The door to be used for wheelchair access shall be clearly labelled with a sign in accordance with Annex N Clauses N.3 and N.4. | 4.2.2.3.2 para 5 | The doors to be used for wheelchair access shall be clearly labelled with a sign in accordance with appendix N. | Refer to drawing CR-CO-2305269. | Compliance Achieved | 4.2.2.3.2 para 5 | |

| | | | | | | | | |
|---|---|---------------------------|---|--|--|--|---------------------|--|
| 19(4) | There shall be no step, or slope with a gradient exceeding 5% measured when the vehicle is on a straight and level track, in or between the wheelchair-compatible doorway and the wheelchair space or wheelchair-compatible sleeping compartment. | 4.2.2.9 paras 2 & 3 | No steps are allowed between the vestibule of a wheelchair accessible exterior door, the wheelchair space, a universal sleeping compartment and the universal toilet except for a door threshold strip that shall not exceed 15mm in height. For ramps in the train the maximum slope shall not exceed the following values: Length of ramp Max gradient (deg) Maximum gradient (%) > 1000 mm 4,47 8 600mm to 1000mm 8,5 15 Less than 600mm 10,2 18 | 4.2.2.8 para 6 | No steps are allowed between the vestibule of a wheelchair accessible exterior door, the wheelchair space, a universal sleeping compartment and the universal toilet except for a door threshold strip that shall not exceed 15mm in height or except in case that a lift is provided to overcome the step. | No steps | Not applicable | |
| 19(5) | The passageway between the wheelchair-compatible doorway and the wheelchair space or wheelchair-compatible sleeping compartment shall not be less than 850mm wide at any point, and shall provide a turning space adjacent to the wheelchair space or sleeping compartment for the disabled person in the reference wheelchair to turn the wheelchair around through one hundred and eighty degrees, which turning space may incorporate the wheelchair space. | 4.2.2.7 para 3 | Access to and from wheelchair spaces, wheelchair accessible areas and wheelchair accessible doors shall have a minimum clearway width of 800mm wide up to a minimum height of 1450mm at any point. The clearway shall be arranged to permit unobstructed movement of the reference wheelchair as detailed in Annex M. | 4.2.2.3.3 para 2 | Interior doors that are made available for wheelchair users shall have a minimum clear useable width of 800mm. | No interior doors | Not applicable | |
| Toilets for disabled persons in wheelchair | | | | | | | | |
| 20(1) | If a regulated rail vehicle or train is equipped with toilets, the nearest toilet cubicle to a wheelchair space or wheelchair-compatible sleeping compartment shall comply with the requirements in Regulation 14 and with the following requirements: | | | | | | | |
| 20(1)(a) | (a) the exterior of the toilet cubicle door shall be marked with a sign conforming to diagram C in the Schedule; | 4.2.2.6.3.1 para 2 | The exterior of the door shall be marked with a sign in accordance with Annex N Clauses N.3 and N.4. | 5.3.2.4 para 4 | The exterior of the door shall be marked with a sign in accordance with appendix N. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 4 |
| | | 4.2.2.6.3.1 para 4 | A visual and tactile (or audible) indication shall be given to indicate when a door has been locked. | 5.3.2.2 para 2 | A visual and tactile (or audible) indication shall be given inside and outside the toilet to indicate when a door has been locked. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.2 para 2 |
| 20(1)(b) | (b) the width of the doorway shall be not less than 850mm; | 4.2.2.6.3.1 para 1 | The toilet access door shall provide a minimum clear useable width of 800mm. | 5.3.2.4 para 3 | The toilet access door shall provide a minimum clear useable width of 800mm. Where the door is automatic or semi-automatic, it shall be possible to open it partially in order to allow a wheelchair user's assistant to leave and re-enter the toilet module. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 3 |
| 20(1)(c) | (c) the surface of the toilet seat when lowered shall be not less than 475mm and not more than 485mm vertically above the floor of the toilet cubicle; | 4.2.2.6.3.1 para 9 | The surface of the toilet seat, when lowered shall be at a height of 450mm to 500mm above the floor level. | 5.3.2.4 para 9 | The surface of the toilet seat, when lowered, shall be at a height of 450mm to 500mm above the floor level. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 9 |
| 20(1)(d) | (d) the toilet shall be equipped with facilities to enable a disabled person in a wheelchair to wash and dry his hands without moving from the seat of the toilet; | 4.2.2.6.3.1 para 10 | All amenities (wash basin, soap dispenser, mirror, water dispenser and hand dryer.) shall be readily accessible to a person in a wheelchair. | 5.3.2.4 para 10 | All amenities shall be readily accessible to a wheelchair user. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 10 |
| 20(1)(e) | (e) there shall be sufficient space inside the toilet cubicle for a reference wheelchair to be positioned in front of the toilet and to be positioned at one side of the toilet so that it is possible for a disabled person to move from a reference wheelchair on to the toilet seat from the front or the side of the toilet; | 4.2.2.6.3.1 paras 6 & 7 | There shall be sufficient space inside the toilet compartment to enable a wheelchair as defined in Annex M to be manoeuvred to a position adjacent to the toilet seat and to the front of the toilet seat, see figure 8a. In front of the toilet seat there shall be a minimum clear space of 700 mm as shown in figure 8b. | 5.3.2.4 para 5 | There shall be sufficient space inside the toilet compartment to enable a wheelchair as defined in appendix M to be manoeuvred to a position allowing both a lateral and a diagonal transfer of the wheelchair user to the toilet seat. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 5 |
| 20(1)(f) | (f) there shall be hinged handrail beside the toilet which shall: (i) be on the same side of the toilet as the space for the reference wheelchair; (ii) comply with the requirements in paragraph (2) (a), (c), (d) and (e) of Regulation 11; and (iii) comply with the specifications in diagrams D1 and D2 in the Schedule. | 4.2.2.6.3.1 para 8 | A horizontal handrail that complies with the dimensional requirements in the clause above shall be provided at each side of the toilet seat. The handrail on the wheelchair accessible side shall be hinged in such a way so as to enable an unobstructed transfer for the wheelchair user to and from the toilet seat, see figures 9 and 10. | 5.3.2.4 para 7 5.3.2.4 para 8 | A horizontal handrail that complies with the requirements of point 4.2.2.9 shall be provided at each side of the toilet seat extending to at least the leading edge of the toilet seat. The handrail on the wheelchair accessible side shall be hinged in such a way so as to enable an unobstructed transfer for the wheelchair user to and from the toilet seat. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 7 5.3.2.4 para 8 |
| 20(1)(g) | (g) beside the toilet and on the opposite side to the space for the reference wheelchair there shall be a horizontal handrail which shall comply with the requirements in paragraph (2) of regulation 11; | 4.2.2.6.3.1 para 8 | A horizontal handrail that complies with the dimensional requirements in the clause above shall be provided at each side of the toilet seat. The handrail on the wheelchair accessible side shall be hinged in such a way so as to enable an unobstructed transfer for the wheelchair user to and from the toilet seat, see figures 9 and 10. | 5.3.2.4 para 7 5.3.2.4 para 8 | A horizontal handrail that complies with the requirements of point 4.2.2.9 shall be provided at each side of the toilet seat extending to at least the leading edge of the toilet seat. The handrail on the wheelchair accessible side shall be hinged in such a way so as to enable an unobstructed transfer for the wheelchair user to and from the toilet seat. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 7 5.3.2.4 para 8 |
| 20(1)(h) | (h) the toilet cubicle shall be fitted with not less than two devices to enable a disabled person to communicate in an emergency with a person who is in a position to take appropriate action, one to be placed not more than 450mm above the floor measured vertically from the surface of the floor to the top of the control device and the other to be not less than 800mm and not more than 1200mm above the floor measured vertically to the top of the control; | 4.2.2.6.3.1 paras 11 - 15 | The toilet cubicle shall be fitted with not less than two alarm devices that shall, in the event of danger enable, a PRM to inform a person who can take appropriate action. One shall be placed not more than 450mm above the floor, measured vertically from the surface of the floor to the top of the control. The other shall be not less than 800mm and not more than 1200mm above the floor measured, vertically to the top of the control. The lower alarm device shall be positioned so that the control can be reached by a person lying on the floor. These two devices shall be located on different vertical surfaces of the cubicle so that they can be reached from a range of positions. The alarm control shall be distinct from any other control within the toilet and be coloured differently from other control devices. A sign in accordance with Annex N Clauses N.3 and N.7 shall be placed immediately next to each alarm device. The sign shall describe the function and required actions and shall contrast with the background and give clear visual and tactile information. A visual and audible indication that the alarm system has been operated shall be provided within the toilet. | 5.3.2.4 para 11 5.3.2.4 para 12 5.3.2.4 para 13 5.3.2.4 para 14 5.3.2.4 para 15 5.3.2.4 para 16 | The toilet cubicle shall be fitted with not less than two call for aid devices that shall, when operated, send a signal to a person who can take appropriate action; they need not initiate a communication. The interface of the call for aid devices shall be as defined in point 5.3.2.6. One call for aid device shall be placed not more than 450mm above the floor; measured vertically from the surface of the floor to the centre of the control. It shall be positioned so that the control can be reached by a person laying on the floor. The other call for aid device shall be not less than 800mm and not more than 1100mm above the floor; measured vertically to the centre of the control. These two call for aid devices shall be located on different vertical surfaces of the cubicle so that they can be reached from a range of positions. The control of the call for aid devices shall be distinct from any other control within the toilet, be coloured differently from other control devices and contrast with their background. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 11 5.3.2.4 para 12 5.3.2.4 para 13 5.3.2.4 para 14 5.3.2.4 para 15 5.3.2.4 para 16 |
| 20(1)(i) | (i) each such control shall be operable by the palm of a person's hand exerting a force not greater than 30 newtons. | 5.4.2 para 5 | The alarm devices shall be operable by the palm of a person's hand and shall not require a force exceeding 30N to operate. | 5.3.2.6 para 5 | A call for aid device shall be operable by the palm of a person's hand and not require a force exceeding 30N to operate. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.6 para 5 |
| 20(2) | The passageway between the wheelchair space or wheelchair-compatible sleeping compartment and that toilet cubicle, shall be not less than 850mm wide at any point and provide a space adjacent to that toilet cubicle for the disabled person in the reference wheelchair to turn the wheelchair around through one hundred and eighty degrees. | 4.2.2.7 para 3 | Access to and from wheelchair spaces, wheelchair accessible areas and wheelchair accessible doors shall have a minimum clearway width of 800mm wide up to a minimum height of 1450mm at any point. The clearway shall be arranged to permit unobstructed movement of the reference wheelchair as detailed in Annex M. | 5.3.2.4 para 3 | The toilet access door shall provide a minimum clear useable width of 800mm. Where the door is automatic or semi-automatic, it shall be possible to open it partially in order to allow a wheelchair user's assistant to leave and re-enter the toilet module. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.4 para 3 |
| N/A | No equivalent requirement | 4.2.2.6.3.2 para 1 | If separate nursery facilities are not provided a facility to enable the changing of babies' nappies shall be incorporated within the universal toilet. In the lowered position, the changing facility shall be between 800mm and 1000mm above floor level. It shall be a minimum of 500mm wide and 700mm long. | 4.2.2.5 para 4 | When toilets are fitted in a train a baby nappy changing facility shall be provided. If separate facilities are not provided or if separate nursery facilities are provided but are not accessible to a wheelchair user, a table shall be incorporated within the universal toilets. It shall be compliant with the requirements of point 5.3.2.5 | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 4.2.2.5 para 5 |
| N/A | No equivalent requirement | 4.2.2.6.3.2 para 2 | It shall be designed to prevent a baby from inadvertently sliding off, shall have no sharp edges and shall be able to take a minimum weight of 80 Kg | 5.3.2.5 para 1 5.3.2.5 para 2 | The usable surface of the baby nappy changing table shall be a minimum of 500mm wide and 700mm long. It shall be designed to prevent a baby from inadvertently sliding off, shall have no sharp edges and shall be able to take a minimum load of 80kg. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.5 para 1 5.3.2.5 para 2 |
| N/A | No equivalent requirement | 4.2.2.6.3.2 para 3 | If the baby-change table protrudes into the accessible toilet space, it shall be possible to put it into the stowed position using a force not exceeding 25 Newtons. | 5.3.2.5 para 3 | It shall be possible to put it into the stowed position with only one hand, using a force not exceeding 25N. | Refer to IC cert 1125/2018/RST/22459/AR. | Compliance Achieved | 5.3.2.5 para 3 |
| Telephones - Reg 21 - Not applicable | | | | | | | | |
| Internal Doorways | | | | | | | | |
| 22(1) | A doorway (other than an external doorway in the side or the end of a regulated rail vehicle) through which a disabled person in wheelchair must pass to reach a wheelchair space, a wheelchair-compatible sleeping compartment, or the nearest toilet or telephone to that space or compartment shall be not less than 850mm wide. | 4.2.2.4.3.1 para 3 | Door openings that are made available for wheelchair users shall have a minimum clear useable width of 800mm. | 4.2.2.3.3 para 2 | Interior doors that are made available for wheelchair users shall have a minimum clear useable width of 800mm. | No interior doors | Not applicable | |
| 22(2) | A doorway in the end of a vehicle through which a disabled person in a wheelchair must pass to reach a wheelchair space, a wheelchair-compatible sleeping compartment, or the nearest toilet or telephone to that compartment or space shall be not less than 750mm wide. | 4.2.2.4.3.1 para 3 | Door openings that are made available for wheelchair users shall have a minimum clear useable width of 800mm. | 4.2.2.3.3 para 2 | Interior doors that are made available for wheelchair users shall have a minimum clear useable width of 800mm. | No interior doors | Not applicable | |
| N/A | No equivalent requirement | 4.2.2.4.3.1 para 7 | Automatic inter-vehicle and consecutive connecting doors shall operate either synchronously as a pair, or the second door shall automatically detect the person moving towards it and open. | 4.2.2.3.3 para 5 | Automatic inter-vehicle connecting doors shall operate either synchronously as a pair, or the second door shall automatically detect the person moving towards it and open. | No interior doors | Not applicable | |
| Boarding Devices | | | | | | | | |

| | | | | | | | | |
|-------------|---|-------------------------|---|-------------------|--|--|-----------------------|-------------------|
| 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 75mm measured horizontally and not more than 50mm measured vertically. | 4.2.2.12.3.2 para 1 | When a wheelchair-compatible doorway in a train is intended to be open, in normal operation, at a platform at a station that has obstacle free access routes in accordance with 4.1.2.3.1, a boarding aid shall be provided to be used between that doorway and the platform to allow a passenger in a wheelchair to board or alight, unless it is demonstrated that the gap between the edge of the door sill of that doorway and the edge of the platform is not more than 75mm measured horizontally and not more than 50mm measured vertically. | Not applicable | No equivalent requirement | | Not applicable | |
| 23(2) | The surface of a boarding device shall be slip-resistant. | 4.2.2.12.3.3 para 4 | The device surface shall be slip resistant and shall have an effective clear width as large as the doorway width. | 4.2.2.11.2 para 1 | all steps for access and egress shall be slip resistant and shall have an effective clear width as large as the doorway width. | | Compliance Achieved | 4.2.2.11.2 para 1 |
| 23(3) | No boarding device other than a lift or a ramp shall be used. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| 23(4) | If a regulated rail vehicle is fitted with a lift it shall comply with the following requirements: | | | | | | | |
| 23(4)(a) | (a) the lift-platform shall be not less than 750mm wide measured parallel to the side of the vehicle and not less than 1200mm long measured at a right angle to the side of the vehicle; | | | | | | | |
| 23(4)(b) | (b) the lift-platform shall be capable of supporting a weight of not less than 300kg (excluding its own weight); | | | | | | | |
| 23(4)(c) | (c) the surface of the lift-platform shall be marked by a strip of colour, which shall abut the edges of that surface, be not less than 50mm wide and contrast with the remainder of the surface, and the platform shall be coloured on each side with that colour; | | | | | | | |
| 23(4)(d) | (d) the lift-platform shall not travel up or down at a speed in excess of 150mm per second; | | | | | | | |
| 23(4)(e) | (e) the lift-platform shall rest on the surface of the platform of the station or tram stop when it has been fully lowered; | | | | | | | |
| 23(4)(f) | (f) unless the lift-platform is in its fully wheelchair shall be prevented from rolling off the platform by a lowered position the device with a height of not less than 100mm above the surface of the lift-platform; | | | | | | | |
| 23(4)(g) | (g) the lift-platform shall be fitted with sensors capable of stopping the movement of the lift-platform if it comes into contact with any thing or person whilst it is in motion; | | | | | | | |
| 23(4)(h) | (h) the lift shall be operable only by persons (other than passengers) who are authorised to operate it by the operator of the vehicle and who shall provide assistance by operating it for disabled persons in wheelchairs. | | | | | | | |
| 23(5) | If the regulated rail vehicle is fitted with a power-operated ramp: | | | | | | | |
| 23(5)(a) | (a) if the ramp is to be operated by a disabled person in a wheelchair the control button for that ramp shall be adjacent to the wheelchair-compatible doorway and within reach of a person in a reference wheelchair; | | | | | | | |
| 23(5)(b) | (b) the ramp shall be fitted with a sensor along the edge furthest from the vehicle capable of stopping the movement of that ramp if it comes into contact with any thing or person whilst the ramp is in movement; | | | | | | | |
| 23(5)(c) | (c) the ramp shall be incapable of movement in any plane if the surface of the ramp is subjected to a load of 15kg or more; | | | | | | | |
| 23(5)(d) | (d) the operator of the vehicle shall provide assistance to the disabled person in a wheelchair using the ramp unless the gradient of the ramp above the horizontal plane is 8% or less; | | | | | | | |
| 23(5)(e) | (e) the ramp shall not be operable by a passenger unless the vehicle has stopped at a station, a stop in a street or another place to which the public have access. | | | | | | | |
| 23(6) | If the regulated rail vehicle is not fitted with a lift or a power-operated ramp, the operator of the vehicle shall provide assistance in deploying and using a separate ramp. | 4.2.2.12.3.6 para 3 | An access ramp shall be either positioned manually by staff whether stored on the station platform or on board, or deployed semi-automatically by mechanical means, operated by staff or by the passenger. | 5.3.2.9 para 3 | An access ramp shall either be positioned manually by staff or deployed semi-automatically by mechanical means, operated by staff or by the passenger. | Portaramp part number RR.1675.768 BR cat number: 015/902532 | Compliance Achieved | 5.3.2.9 para 3 |
| 23(7) | A ramp (whether power-operated or not) shall when in use: | | | | | | | |
| 23(7)(a) | (a) be fixed securely to the regulated rail vehicle; | 4.2.2.12.3.6 para 7 | When in use for boarding or alighting, the ramp shall be secured in use so that it is not subject to displacement when loading or unloading. | 5.3.2.9 para 8 | When in use for boarding or alighting, the ramp shall be secured in use so that it is not subject to displacement when loading or unloading. | Refer to drawing number PB-CO-2121141 for the wheelchair ramp housing | Compliance Achieved | 5.3.2.9 para 8 |
| 23(7)(b) | (b) be not less than 800mm wide and not wider than the opening of the wheelchair-compatible doorway; | 4.2.2.12.3.6 para 4 | The ramp surface shall be slip resistant and shall have an effective clear width of a minimum of 760mm. | 5.3.2.9 para 5 | The ramp surface shall be slip resistant and shall have an effective clear width of a minimum of 760mm. | Portaramp part number RR.1675.768 BR cat number: 015/902532 | Compliance Achieved | 5.3.2.9 para 5 |
| 23(7)(c) | (c) have along each side which is not to be crossed by the wheelchair a protective rim standing at least 50mm higher than the surface of the ramp; | 4.2.2.12.3.6 para 5 | Ramps shall have raised edges on both sides to prevent mobility aid wheels from slipping off. | 5.3.2.9 para 6 | Ramps having a clear width of less than 1000 mm shall have raised edges on both sides to prevent mobility aid wheels from slipping off. | Portaramp part number RR.1675.768 BR cat number: 015/902532 | Compliance Achieved | 5.3.2.9 para 6 |
| 23(7)(d) | (d) be capable of supporting a weight of not less than 300kg (excluding its own weight); | 4.2.2.12.3.3 para 1 & 2 | The device shall be capable of withstanding a concentrated downward vertical load of 2 kN this shall be applied on an surface area of 100 mm * 200 mm at any position on the exposed step surface without causing permanent deformation; The device shall be capable of withstanding on its exposed surface a distributed downward vertical load of 4 kN per metre of step length without causing significant permanent deformation. | 5.3.2.9 para 2 | Ramps shall withstand a weight of at least 300 kg, placed at the centre of the ramp distributed over an area of 660mm by 660mm. | Portaramp part number RR.1675.768 BR cat number: 015/902532 | Compliance Achieved | 5.3.2.9 para 2 |
| 23(7)(e) | (e) rest its outer edge securely on the surface of the platform of the station or tram stop; and | 4.2.2.12.3.6 para 7 | When in use for boarding or alighting, the ramp shall be secured in use so that it is not subject to displacement when loading or unloading. | 5.3.2.9 para 8 | When in use for boarding or alighting, the ramp shall be secured in use so that it is not subject to displacement when loading or unloading. | Refer to drawing number PB-CO-2121141 for the wheelchair ramp housing | Compliance Achieved | 5.3.2.9 para 8 |
| 23(7)(f) | (f) be marked on its upper surface by a strip of colour, which shall abut the edge of that surface shall be not less than 50mm wide and shall contrast with the remainder of that surface, and be coloured on each side with that colour. | 4.2.2.12.3.6 para 6 | The upstands at both ends of the ramp shall be bevelled and shall not be higher than 20mm. They shall have contrasting hazard warning bands. | 5.3.2.9 para 7 | The upstands at both ends of the ramp shall be bevelled and shall not be higher than 20mm. They shall have contrasting hazard warning bands. | Portaramp part number RR.1675.768.01 BR cat number: 015/902532 | Compliance Achieved | 5.3.2.9 para 7 |
| 23(8) | A boarding device which is power-operated shall also be operable manually, and the operator shall provide assistance for such manual operation if the power-operation fails. | 4.2.2.12.3.6 para 2 | If the boarding device is power operated the boarding aid shall incorporate an emergency method of manual operation should power fail. Such a method shall be capable of being operated in a non-hazardous manner for both occupant and the operator. | Not applicable | No equivalent requirement | | Not applicable | |
| 23(9) | A boarding device which is power-operated shall not be capable of being deployed unless the vehicle to which it is fitted is stationary. | 4.2.2.12.3.5 para 3 | In the case of the moving step extending beyond that permitted by the gauging rules, the train shall be immobilised whilst the step is extended. | 4.2.2.12.1 | In the case of the moving step extending beyond that permitted by the gauging rules, the train shall be immobilised whilst the step is extended. | | Not applicable | |
| 23(10) | A boarding device which is carried by a rail vehicle and which is not in use shall be fixed securely to that vehicle so that it does not endanger the safety of persons in that vehicle. | 4.2.2.12.3.6 para 8 | A secure compartment shall be provided to ensure that stowed ramps, including portable ramps, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop. | Not applicable | No equivalent requirement | | Not applicable | |
| Catering | | 4.2.2.12.3.6 para 9 | A ramp slope shall have a maximum value of 10.2° (18%) this maximum value may require assistance to the passenger | 5.3.2.9 para 1 | Ramps shall be designed and assessed for an area of use defined by the maximum vertical gap they can overcome within a maximum slope of 18% | Dependant on the platform height the slope may be slightly above the TSI requirements. | Dispensation Required | 5.3.2.9 para 1 |
| 24 | If catering facilities are provided in a regulated rail vehicle or on a train but there is no passageway for a reference wheelchair from a wheelchair space or wheelchair-compatible sleeping compartment to those facilities the operator of that vehicle or train shall assist a disabled person in a wheelchair by providing a reasonably equivalent catering service to that person in that space or compartment. | Not applicable | No equivalent requirement | Not applicable | No equivalent requirement | | Not applicable | |
| Throughways | | | | | | | | |
| N/A | No equivalent requirement | 4.2.2.7 Para 1 | From the vehicle entrance the minimum clearway width through the vehicle shall be 450mm from floor level to a height of 1000mm and 550mm from a height of 1000mm to 1950mm | | | Refer to drawing number PB-CO-2121046 | Compliance Achieved | 4.2.2.6 para 1 |