Australasian Railway Association

Submission to the Australian Human Rights Commission – Temporary Exemption Applications

15 April 2015

**Introduction**

The Australasian Railway Association (‘ARA’) application (‘the application’) seeks temporary exemptions pursuant to section 55(1) of the *Disability Discrimination Act 1992* (Cth) (‘DDA’), section 33A.1of the *Disability Standards for Accessible Public Transport 2002* (Cth) (‘Transport Standards’) and section 5.1 of the *Disability (Access to Premises-Buildings) Standards 2010* (Cth) (‘Premises Standards’).

The application relates to exemptions from compliance with parts of the Transport Standards, parts of Part H2 of the Access Code and Schedule 1 of the Premises Standards. The compliance requirements, to which the application seeks temporary exemptions, are detailed in section A of each exemption application.

In each instance, where an application is made, exemption for the maximum allowable period of five years is sought.

It should be noted that one of the key recommendations of the draft report of the Commonwealth Government’s 2012 Review of the Transport Standards was the need to modernise the Transport Standards. The ARA intends to pursue amendment of the compliance requirements, to which the application seeks temporary exemptions, as part of this process.

The ARA is making the application on behalf of all members which are listed at Appendix 1. The application applies collectively to members and independently to individual rail operators that were members of the ARA at the time of the application.

In submitting this application, the ARA and its member organisations acknowledge that while the Transport Standards have been effective in addressing accessibility to public transport there are a number of areas where modifications could be made to ensure compliance requirements can be practically implemented. Many of the requirements for which the ARA is seeking exemption fail to take into account the distinct nature and limitations of railway infrastructure and operations.

From the commencement of the Transport Standards in 2002, the rail industry, through the ARA, has raised concerns about the practical implementation of some aspects of the Transport Standards in the rail environment. In addition to seeking temporary exemptions from the AHRC, the ARA and its individual members have made submissions to both the 2007 and 2012 Reviews of the Transport Standards outlining specific elements of the Transport Standards that should be amended to address rail-related issues. The recommendation of the draft 2012 Transport Standards Review report to modernise the Transport Standards is welcomed by the rail the industry. For the first time, the Australian Government has acknowledged that there are difficulties within the current standards.

**Contact**

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**Accessibility Improvements**

ARA members have focused not only on improvements to infrastructure and rolling stock, but also on customer experience innovation for people with disability.

As part of this commitment to continuous improvement, a number of member organisations have created specialist roles within their organisations to advise on access issues. This has intensified the focus on the accessibility of the network and ensured effective implementation and monitoring of Disability Action Plans.

As complete accessibility cannot be provided immediately, ARA members have concentrated their efforts on upgrading facilities where the greatest number of customers benefit from the investment. Prioritisation for access upgrades is based on a number of factors, including station patronage, local demographics, access to educational and health services, parking, bus services, shopping, tourism and how stations form a network or provide interchange opportunities.

The age of rail infrastructure and its configuration means that most operators will continue to rely on ‘direct assistance’ via boarding ramps to move from rail platforms onto the train. Members have committed to the training of all frontline staff, including drivers, conductors, customer service officers and station staff through disability awareness and customer service training. Training better equips staff to recognise opportunities to improve the customer experience and provide appropriate assistance and is continuing to evolve in response to identified customer needs.

Appropriate use of new and existing technologies is positively changing the relationship between rail operators and customers with disability. Examples of services innovations include:

* Progressive installation of equipment to improve announcements and Passenger Information Displays on platforms, stops and conveyances. This includes training in voice announcements where there is continued reliance upon manual announcement systems.
* Development of specialist Smartphone applications to assist customers with disability to navigate public transport services and accessible real time travel information.
* Provision of social networking tools and SMS services providing live service updates on planned and unplanned service disruptions and lift outages.
* Improvements to way-finding systems to help customers with disability navigate through stations and transport interchanges. These systems use words, pictograms and tactile and Braille signage, such as precinct and station maps.
* Publication of brochures and video materials to help customers plan and complete their rail and tram journeys, and customer information help buttons on platforms where additional assistance is required during a trip.
* Supporting activities of organisations that provide on-the-ground support for vulnerable travellers and specialist assistance to customers with disability, including mobility aid hire services in some locations.
* Systems to assist customers who use wheelchairs or mobility aids and customers with vision or hearing impairments to provide notification to staff in relation to the assistance they require at their destination station.
* Improvements to accessible parking provision, access pathways, pedestrian safety and lighting in station precincts.
* Hosting local safety orientation days at stations to provide opportunities for customers with physical or sensory disabilities to familiarise themselves with trains and entry/exit onto platforms in a safe and controlled environment.
* Providing access to call centres and customer feedback phone services through TTY telephone service and National Relay Service.
* First Aid services at stations to respond quickly in the event of a medical emergency.
* Research projects conducted by the CRC for Rail Innovation on platforms and stations access, and carriage access and way-finding. Information about the research projects and research reports are provided in Appendix 3 and Attachment 1, 2 and 3.

Community Consultation

Since the introduction of the Transport Standards in 2002 ARA members have consulted with the disability sector both individually and collectively. Key outcomes and feedback from the consultation process have been carefully considered and included in individual operators’ accessibility plans and investment decisions.

As part of their consultation processes, individual ARA members and the ARA have worked with a wide variety of stakeholders to ensure that all accessibility improvements are developed in collaboration with people with disability and the organisations that represent them. The majority of operators host disability advisory committees to assist them to better meet the needs of customers with disability or mobility constraints. Consultation also includes ongoing discussion and consultation with the Australian Federation of Disability Organisations, state-based Equal Opportunity and Human Rights commissions, state-based Transport Ombudsman agencies, as well as advocacy and community groups.

Furthermore, all operators convene and/or participate in state-based accessibility committees and forums. These committees and forums consider a broad range of issues including major infrastructure projects, customer information, conveyance procurement and customer service issues. Membership of these committees varies from jurisdiction to jurisdiction but normally includes key disability organisations including but not limited to:

* Australian Federation of Disability Organisations
* State-based Equal Opportunity and Human Rights commissions
* State-based Transport Ombudsman agencies
* State-based Multicultural & Ethnic Affairs Commissions
* State-based Local Government Associations
* Council on the Ageing
* Combined Pensioners and Superannuants
* Blind Citizens Australia
* Guide Dogs agencies
* Vision Australia
* Better Hearing Australia
* State based Deaf service organisations
* Council for Intellectual Disability
* Brain Injury Association
* Assistance Animal services
* Paraquad
* State based spinal cord injury and paraplegic associations
* Endeavour Foundation
* Arthritis groups
* MS Society
* Royal Society for the Blind
* Deaf Australia
* Australian Association of the Deaf
* Physical Disability Councils
* Spina Bifida Hydrocephalus Association
* Disability Advocacy & Complaints Inc
* Intellectual Disability Council

These engagements are important and have helped the relevant ARA members in the prioritisation of accessibility improvements across the Australian passenger rail networks.

Direct customer consultation or consultation with specific disability groups has led to effective and tailored solutions to address the needs of specific customer groups. Technologies such as the ‘Stop Here’ Smartphone application in Victoria, improved boarding assistance procedures on trains, appropriate placement of Tactile Ground Surface Indicators (TGSIs), new way-finding systems, new guidelines for announcements on planned and unplanned service disruptions, modern passenger information display screens and new and refurbished rail infrastructure and rolling stock design are good examples of the outcomes of such consultation.

At a national level, the ARA was a longstanding member of the Australian Government’s Accessible Public Transport National Advisory Committee (APTNAC). The membership of APTNAC comprised many different disability groups and the AHRC. Through APTNAC, the ARA has regularly discussed the progress of the review of the Transport Standards and provisions within the Standards where compliance is not achievable. The ARA has also discussed extensively with the Federal Attorney-General’s Department the industry limitations to compliance from 2009 to present.

During the consultation process, individual ARA members and the ARA have worked with a wide variety of stakeholders to ensure that all accessibility improvements are developed through a collaborative approach. The majority of operators host disability advisory committees with representatives from peak disability organisations to assist them to better meet the needs of customers who have a disability. Many of these representatives have a disability and are able to provide personal insights and make recommendations for operators to provide access to services.

Advice and input from representatives address a wide range of matters including:

* Consideration of policy initiatives that comprehensively address the accessibility and mobility needs of people with disabilities
* Policy review or creation
* Input to the development and review of Disability Access and Inclusion Plans
* Strategic planning for transport service and access provisions

Moving forward, the industry is committed to maintaining an open and collaborative approach to removing access barriers and negotiating challenges associated with providing access on our services.

Consultation with and Reporting to the AHRC

Since the release of the Transport Standards in 2002, the rail industry has engaged in a national process to assess and review compliance requirements in relation to rail services. In the absence of significant progress in the implementation of recommendations from the 2007 review of the Transport Standards, the ARA engaged the Australian Federation of Disability Organisations and the AHRC to address the issues.

After discussion with those organisations the Accessible Rail Services Code of Practice was developed under the auspices of the Rail Industry Safety and Standards Board to define a relevant and achievable guide for accessible rail services.

While the Code of Practice was being developed, the AHRC granted the ARA temporary exemptions from some of the standards. Many of the exemptions required ARA members to report back to and consult with the AHRC on progress in meeting compliance milestones or conditions.

The ARA notes that consultation with the AHRC occurred throughout the Code development process and that regular updates were provided to the AHRC at the Code development meetings over a period of 5 years. The ARA further notes that the AHRC has never expressed dissatisfaction with that reporting mechanism.

Table of Contents

[Group 1 Application for temporary exemptions from the Transport Standards 10](#_Toc416458664)

[2.1 Access paths – Unhindered passage 10](#_Toc416458665)

[2.6 Access paths – conveyances 16](#_Toc416458666)

[3.1 Circulation space for wheelchairs to turn in 21](#_Toc416458667)

[4.2 Passing areas - Two-way access paths and aerobridges 22](#_Toc416458668)

[5.1 Resting points - When resting points must be provided 24](#_Toc416458669)

[6.4 Slope of external boarding ramps 26](#_Toc416458670)

[8.7 Boarding - Signals requesting use of boarding device 32](#_Toc416458671)

[11.2 Handrails and grabrails - Handrails to be provided on access paths 33](#_Toc416458672)

[Section C.2 Consultation with the disability sector: 34](#_Toc416458673)

[12.2 Doorways and doors - Compliance with Australian Standard — premises and infrastructure 35](#_Toc416458674)

[12.4 Clear opening of doorways 37](#_Toc416458675)

[14.3 Stairs - Compliance with Australian Standards — conveyances 39](#_Toc416458676)

[15.2 Toilets - Location of accessible toilets 42](#_Toc416458677)

[Section C.2 Report to the AHRC 42](#_Toc416458678)

[15.3 Unisex accessible toilet — ferries and accessible rail cars 44](#_Toc416458679)

[15.4 Toilets - Requirements for accessible toilets — ferries and accessible rail cars 46](#_Toc416458680)

[17.5 Signs - Electronic notices 48](#_Toc416458681)

[18.1 Tactile ground surface indicators - Location 50](#_Toc416458682)

[20.1 Lighting - Illumination levels — premises and infrastructure 53](#_Toc416458683)

[21.1 Controls - Compliance with Australian Standard — premises and infrastructure 58](#_Toc416458684)

[26.2 Hearing augmentation – listening systems - Public address systems — conveyances 60](#_Toc416458685)

[27.3 Information - Size and format of printing 63](#_Toc416458686)

[28.1 Booked services - Notice of requirement for accessible travel 65](#_Toc416458687)

[28.2 Booked services - Period of notice of requirement for accessible travel 65](#_Toc416458688)

[Group 2 Application for temporary exemptions from the Transport Standards in relation to issues that were previously deferred 67](#_Toc416458689)

[11.2 Handrails and grabrails - Handrails to be provided on access paths 67](#_Toc416458690)

[21.2 Passenger operated devices for opening and closing doors 69](#_Toc416458691)

[21.3 Location of passenger operated controls for opening and locking doors 70](#_Toc416458692)

[Group 3 Application for temporary exemptions from the Premises Standards 72](#_Toc416458693)

[H2.2 (1) Access paths – Unhindered passage 72](#_Toc416458694)

[H2.4 (2) Handrails and grabrails - Handrails to be provided on access paths 80](#_Toc416458695)

[H2.5 Doorways and doors - Compliance with Australian Standard — premises and infrastructure 81](#_Toc416458696)

[H2.9 Toilets - Location of accessible toilets 82](#_Toc416458697)

[H2.12 Lighting - Illumination levels — premises and infrastructure 85](#_Toc416458698)

[H2.15 Controls - Compliance with Australian Standard — premises and infrastructure 88](#_Toc416458699)

[Appendix 1 List of ARA Members 89](#_Toc416458700)

[Appendix 2 Relevant Australian Standards 90](#_Toc416458701)

[Appendix 3 CRC Research Projects 129](#_Toc416458702)

[Rail Station Access 129](#_Toc416458703)

[Platform Access 129](#_Toc416458704)

[Carriage Way Access 129](#_Toc416458705)

# Group 1 Application for temporary exemptions from the Transport Standards

## 2.1 Access paths – Unhindered passage

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*2.1 Unhindered passage*

*(1) An access path that allows unhindered passage must be provided along a walkway, ramp or landing.*

*(2) An access path must comply with AS1428.2 (1992) Clause 8.1.*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions

Part 1: Temporary exemption: rail premises and rail infrastructure

* For a period of three years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure. This exemption is subject to the condition that the member of the ARA concerned reports to the Commission every 12 months during the period of this exemption on measures taken to reduce the use of level crossings as part of access paths and on research undertaken into possible technical solutions for bridging flange gaps.

Part 2: Temporary exemption: existing rail premises and existing rail infrastructure

* For a period of three years, an access path is required to provide entrance and exit only at a single boundary point for existing rail stations, subject to the following conditions:
* this exemption does not exclude any requirement for fuller upgrading of access paths or entrances and exits which may arise under legislation giving effect to the Building Code of Australia as in force during the period of this exemption; and
* the member of the ARA concerned reports to the Commission within 12 months of this decision on which rail stations have inaccessible as well as accessible entrances and exits, the impact of inaccessible entrances and exits on passenger amenity, and constraints on upgrading entrances and exits to provide access paths.

**Section B Temporary exemption sought:**

Part 1: Temporary exemption: rail premises and rail infrastructure

* For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure.

Part 2: Temporary exemption: existing rail premises and existing rail infrastructure

* For a period of three years, an access path is required to provide entrance and exit only at a single boundary point for existing rail stations.

### Section C Reasons for seeking temporary exemption:

Part 1: Improvements to pathways and ramps to allow access to rail premises have been undertaken by operators where reasonably practicable. The number of facilities and the legacy design of the facilities and grounds (including accommodating premises with heritage status) require substantial capital investment to correct access deficiencies at all locations. Future improvements to access will continue through upgrades, in consultation with the disability community.

Part 2: On existing stations there may be multiple entry/exit points, which use steps, rail crossings, narrow paths, and/or steep ramps. There is a significant cost to create accessible paths of travel for multiple station entrances/exits across all the stations that require accessibility upgrades. Furthermore, providing continuous accessible paths of travel at multiple station entrances/exits may not be feasible due to land size and topographical limitations such as road widening and other developments which affect the railway corridor.

When undertaking an access upgrade, the scope of work is focused on providing the best possible outcomes for customers, which includes providing a primary path of travel through a station precinct. This path is critical to enabling customers to achieve street to platform access safely and independently, as it provides connectivity between all essential facilities.

**Section C.1 Impact on customer experience:**

* Provision of a single, main point of entry that is well-signposted and offers a seamless journey for customers with disability.
* Customers can obtain journey planning information about accessible pathways through station precincts through brochures, telephone information services and transport information websites.

On existing railway stations a clear and unobstructed path:

* is provided from a nominated boundary point(s), one of which is identified as the primary station entrance/exit;
* connects to each platform and provides cross corridor access where appropriate;
* links accessible platform entries/exits to the assisted boarding point on a platform;
* provides, as far as possible, independent access to rollingstock through partial or full platform raising; and
* leads to and from all accessible facilities such as a unisex accessible toilet or accessible parking.

**Section C.2** **Consultation with the disability sector**

Part 1: Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

Part 2: ARA members have consulted with disability sector organisations and customers with disabilities in relation to station prioritisation. Participants indicated preference for a greater number of upgrades with a more limited scope, as opposed to fewer but more comprehensive upgrades.

The approach of providing a primary path of travel through a station environment at the widest range of stations possible has been supported by findings from a customer survey conducted in 2010 by Queensland Rail.

**2.4 Access paths – Minimum unobstructed width**

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*2.4 Minimum unobstructed width*

*(1) The minimum unobstructed width of an access path must be 1200 mm (AS1428.2 (1992) Clause 6.4, Width of path of travel).*

*(2) However, the minimum unobstructed width of a moving footway may be 850 mm.*

* + - *Premises – except premises to which the Premises Standards apply*
    - *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of three years, for existing rail premises and existing rail infrastructure:

• where the 1200mm minimum unobstructed width for access paths cannot be met due to structural and technical constraints, an access path with a minimum unobstructed width of 1000mm may be provided;

• the 850mm minimum unobstructed width (applicable to doorways and gateways) is also permitted on access paths for the purposes of passing an obstruction limited to less than 800mm in length; and

• platform edge warning TGSIs are permitted to intrude into access paths, subject to the condition that where site constraints permit an access path with a minimum unobstructed width of 1000mm is provided, and where site constraints require further intrusion of TGSIs into the access path such intrusion is the minimum required.

**Section B Temporary exemption sought:**

For a period of five years, for existing rail premises and existing rail infrastructure:

• where the 1200mm minimum unobstructed width for access paths cannot be met due to structural and technical constraints, an access path with a minimum unobstructed width of 1000mm may be provided;

• the 850mm minimum unobstructed width (applicable to doorways and gateways) is also permitted on access paths for the purposes of passing an obstruction limited to less than 800mm in length; and

• platform edge warning TGSIs are permitted to intrude into access paths.

### Section C Reasons for seeking temporary exemption

Platforms on existing stations are often built in cuttings and tend to be low, curved and narrow significantly towards either end. Obstacles along existing platforms are common, along with multiple entry/exit points, use of steps, rail crossings and/or steep ramps. Furthermore, road widening and other development activities have significantly constrained the railway corridor in many locations.

Rail corridor, land constraints and topography limit available space on platforms and on the concourses to house all of the necessary access elements.

Platforms on heritage listed stations pose particular challenges. Raising platform levels to reduce the gap/step between train and platform may result in existing narrow platforms being reduced further due to the requirement to make provision for the train tread plate to be level with, as opposed to overhang, the coping. Some heritage items, such as cast iron decorative columns or seating cannot be altered, resulting in protrusions into the access path width.

Given the constraints listed above it has proven challenging to upgrade stations and meet access requirements for the minimum unobstructed width of accessways, in particular, on existing platforms. Furthermore, no other building or space is required to have 1200 mm as per the Premises Standards.

Another example is tram infrastructure built on existing roadways which can result in space limitations due to several competing priorities including road lanes, car parks, bike lanes and the tram stop. Some pre-existing stops on the tram network were built with old shelter configurations that are no longer used due to their depth, which has resulted in an access path that is less than 1.2m.

**Section C.1 Impact on customer experience:**

Wherever possible, rail operators work in consultation with user groups to minimise the impact of a constricted width. This often leads to an improved customer outcome. Station staff are available to assist customers wherever possible and can guide them to the areas of the station precinct which offer the greatest accessibility for their needs.

As far as possible, when upgrading stations the required minimum unobstructed width on accessways is maintained throughout the upgraded station precinct. Where this is not feasible, precedence is given to achieving required widths on a primary path of travel through a station.

For customers with disabilities this may be a primary path from a street entrance, accessible car park, through a station entrance and onto or between platforms via a lift or ramp, leading to the assisted boarding point. Path widths may be restricted in other areas of the station environment outside of this primary path, such as beside lift shafts or stairs on narrow platforms.

There may be a requirement for customers with mobility devices to take turns using the path or utilise the assisted boarding point rather than traversing the length of a platform. It should be noted that key facilities and services are collocated at the assisted boarding point and/or along this primary path. Customers who are vision impaired may need to work with an orientation and mobility instructor to help them become familiar with the station layout and identify where the path width is reduced and the way-finding cues in place to assist with navigation through the environment. Station staff or operators’ customer service officers are available to assist customers wherever possible.

Stops that are non-compliant are still able to be accessed by customers who use mobility aids, however they sometimes have to travel over the TGSIs due to the restricted space.

For trams, extensive consultation with customers, local councils, and local businesses occurs prior to the construction of a new accessible stop. All newly constructed stops comply with the 1200mm minimum unobstructed width.

**Section C.2 Consultation with the disability sector and progress on alternative solutions**

Consultation:

ARA members consult with their Accessibility Reference Groups on all major station upgrades. Accessibility Reference Groups function as a consultation and advisory mechanism by which operators can engage with various disability groups and organisations, ensuring the needs of people with disabilities requiring rail services are considered across all areas of planning and development. Station upgrades are discussed at the pre-feasibility, concept and design and detailed design stages with regular updates occurring throughout construction phases.

## 2.6 Access paths – conveyances

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*2.6 Access paths — conveyances*

*(1) Subject to subsection (3) and section 2.7, an access path that allows continuous and unhindered passage must be provided with a minimum width of at least 850 mm.*

*(2) Subsection (1) applies to doorways and stairs, and between entrances, exits, allocated spaces and other essential facilities for passengers using wheelchairs and other mobility aids.*

*(3) If the conveyance exists or is ordered before the commencement of this section, the minimum width may be reduced to 800 mm at any doorway restriction.*

*Conveyances*

* *Buses*
* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section B Current temporary exemption and conditions:

Temporary exemption: existing rail conveyances

For a period of three years for existing rail conveyance external doors, and for a period of two years for existing rail conveyance internal doors, the width of the access path may be reduced to a minimum of 760mm, subject to the following conditions:

• direct assistance is available;

• the ARA member concerned ensures that information is available to passengers in advance of travel of instances where the width of the access path has been reduced; and

• the ARA member concerned reports to the Commission within 12 months of this decision on technical options for the widening of access paths on existing rail conveyance external and internal doors and proposals for the implementation of these options.

For a period of three years, access may be provided only by means of stairs to upper and lower decks of double deck existing rail cars, subject to the condition that access to unique facilities is assured.

For a period of three years, an access path is only required at a single door rather than all doors of existing rail conveyances, subject to the following conditions:

• equivalent access is provided at an alternative door of the rail conveyance in the following circumstances:

* if an allocated space is not available;
* to ensure access to unique facilities; or
* to ensure a passenger can both board and alight the rail conveyance; and

• the ARA member concerned reports to the Commission every 12 months during the period of this exemption on measures taken to ensure that staff and passengers are adequately informed of both the access paths available at the doors of existing rail conveyances and the equivalent access measures available.

**Section B Temporary Exemption sought:**

For a period of five years for existing rail conveyance external doors, and for a period of five years for existing rail conveyance internal doors, the width of the access path may be reduced to a minimum of 760mm.

For a period of five years, access may be provided only by means of stairs to upper and lower decks of double deck existing rail cars.

For a period of five years, an access path is only required at a single door rather than all doors of existing rail conveyances.

### Section C Reasons for seeking temporary exemption:

### Many passenger rail operators are currently constrained by the need to use existing rolling stock which may be up to 40 years old. Growth requirements on rail networks have necessitated extended life refits. During these refits every effort is taken to increase door widths to the maximum extent possible. In the majority of cases, technical solutions are not available or if they are, the cost is prohibitive.

***Reduced access path width and doorways (on-board)***

Some ARA members are unable to comply due to narrow gauge railway tracks and narrow carriage width. This means that the carriages are necessarily very narrow in width in order to fit on the infrastructure and also travel through some tunnels. This limitation remains regardless of whether the rollingstock is new or existing.

For example, some trains have a narrow aisle way alongside a unisex accessible toilet wall, which leads to the passenger seating area. Due to the narrow width, a balance between access path width and toilet circulation space is needed. To widen the access path requires a reduction in the circulation room and door width for the adjacent toilet. To change the layout of the toilet and other key internal fixtures may not be feasible due to the need to maintain structural integrity and impact on crash worthiness. While the dimensional restrictions of fleet mean that an 850mm aisle width may not be achieved, practical, functional outcomes may be realised. Determining what constitutes a functional outcome will necessarily involve consultation with people with disabilities through the operator’s Accessibility Reference Group.

***Boarding at nominated doors***

The majority of rail operators world-wide have to deal with grade separations between the platform and the train and have trialled many solutions to overcome the problem. Research[[1]](#footnote-1) indicates that the horizontal gap between the platform and the train seems to be the greater obstacle for the majority of customers compared to the vertical step onto a train.

*The Transport Standards part 8.2 requires:*

*8.2 Boarding – When boarding devices must be provided, requires:*

*A manual or power assisted boarding device must be available at any accessible entrance to a conveyance that has:*

* *a vertical rise of gap no greater than 12mm*
* *a horizontal gap no greater than 40mm*

*Where the train/platform interface is outside of these tolerances, an operator must provide an assisted boarding device for people with a disability.*

Currently, many ARA members cannot meet these tolerances due to engineering constraints. When upgrading a station the gap and step between trains and platforms is reduced to as close to legislated requirements as operationally possible. However, minimum gaps are dependent on:

* + differing types of passenger and freight rollingstock;
  + track curves;
  + track cants;
  + ranges in rollingstock;
  + track infrastructure maintenance tolerance; and
  + a clearance factor for safety.

Consequently, the operators rely on a combination of direct assistance by the guard or customer service officer and the deployment of a manual boarding ramp at nominated carriage doors to offer equivalent access for customers with disabilities. The boarding assistance ramps are deployed by station staff or by train guards at unmanned stations.

It is not possible to deploy the manual boarding ramp at each carriage door given platform obstacles/infrastructure, timetable requirements and guard capabilities. By restricting the number of assisted boarding points a clear line of sight between staff and the customer needing assistance is maintained.  Multiple assisted boarding points will have a negative impact on service reliability by increasing dwell time at stations.  Provision of additional portable access ramp cabinets may impact on access paths along the platform.

Furthermore, as part of many operators’ approaches to station access upgrades, sections of platforms may be raised to allow boarding via railcar ramp deployment.

At newer stations it is possible to raise the entire length of the platform. However, at older stations where platforms are typically located on curves, it is extremely difficult to raise platforms without further impacting on the horizontal gap between the platform and the train. At a number of older stations operated by ARA members the curve of the platform is too great to allow for even partial raising of the platform.

A number of options to raise the height of curved low level platforms have been explored by operators with options being progressed to trial and consultation stages.

### Section C.1 Impact on customer experience:

The major customer impact is the inability to carry larger mobility scooters on some fleet (although we note the guidelines to the Transport Standards set out assumptions about the maximum size and weight of mobility devices that can be carried on public transport conveyances).

Detailed accessibility information is provided for customers in various forms including on the ARA members’ websites, via downloadable fact sheets; in person at Travel Centres; or via a telephone call to the Customer Contact Centre. Information provided covers issues such as direct assistance that can be provided by staff; position and location of on-board allocated spaces; options for travelling with a wheelchair or mobility scooter; booking procedures and safe boarding procedures. Internal car dimensions are available on request and in some circumstances customers can arrange a viewing or on-board trial to confirm requirements before booking.

***Boarding***

In many country services and on light rail services, customers can board or disembark trains using a fold out ramp, which is kept on-board and deployed by staff. The ramp and staff assistance can be provided at any door upon request.

In a busier environment such as an operator’s city network, if a customer requires a ramp to board or disembark services due to the train/platform gap, rail operators provide an assisted boarding point on most rail platforms. This point is indicated by a blue and white symbol for accessibility, and will be in close proximity to the guard’s cabin when the train pulls in. At many stations it will be located on a higher section of the platform to allow for easier access to and from the carriage.

**Section C.2 Consultation with the disability sector and progress on alternative solutions:**

Consultation:

Many ARA members have undertaken extensive consultation in relation to aisle way and door widths on trains with the disability sector and customers with a disability. For example a series of consultations were held as part of the design and construction phases for an operator’s regional trains.

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

Alternative solution:

Primary path of travel – The construction and design of existing carriages limits the ability to reconfigure internal fixtures and fittings, doors, intercar gangways and amenities. Narrow gauge (1067mm) track imposes limitations to train carriage width. Given these limitations consultation and design modifications concentrate on the functional outcomes sought by our customers and focus on a primary path of travel through our trains.

The primary path of travel is critical to ensuring that customers are able to safely and, as far as possible, independently use rail services: it provides connectivity between all essential facilities and information. On existing trains the primary path of travel is focused on the accessible carriages and extends from the external doorway to the allocated space, priority seats and other essential facilities required by customers with disabilities, in particular customers using mobility devices.

## 3.1 Circulation space for wheelchairs to turn in

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*3.1 Circulation space for wheelchairs to turn in*

*A manoeuvring area must comply with AS1428.2 (1992) Clause 6.2, Circulation space for a 180 degree wheelchair turn.*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of three years, a manoeuvring area in existing rail premises and existing rail infrastructure complying only with the lower end of the range of dimensions stated in AS1428.2 (1992) Clause 6.2 is permitted, to the extent that space constraints do not permit a larger manoeuvring area.

**Section B Temporary exemption sought:**

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of five years, a manoeuvring area in existing rail premises and existing rail infrastructure complying only with the lower end of the range of dimensions stated in AS1428.2 (1992) Clause 6.2 is permitted, to the extent that space constraints do not permit a larger manoeuvring area.

### Section C Reasons for seeking temporary exemption

Larger circulation spaces are often not achievable due to the constraints of existing platforms, track alignment, narrow rail corridors and surrounding infrastructure. As far as possible, rail operators’ upgraded stations have appropriate circulation spaces. However, in relation to existing narrow platforms, it is challenging to balance access requirements with the need to provide physical infrastructure such as stairs and lifts in a limited space.

**Section C.1 Impact on customer experience:**

Restricted circulation room may mean that customers using mobility devices need to perform more than one continuous movement to access a particular facility. Customers who use mobility devices are provided with information and safety briefings about safely manoeuvring wheelchairs and mobility scooters on rail premises.

**Section C. 2 Progress on alternative solutions and consultation with the disability sector**

Alternative Solution:

Primary Path of Travel – When upgrading existing narrow platforms within narrow rail corridors necessary infrastructure constrains the required circulation room. Where possible, precedence is given to achieving required circulation space on a primary path of travel.

## 4.2 Passing areas - Two-way access paths and aerobridges

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*4.2 Passing areas - Two-way access paths and aerobridges*

*(1) A passing area must be provided at least every 6 metres along any two-way access path that is less than 1800 mm wide (AS1428.2 (1992) Clause 6.5 (b), Passing space for wheelchairs and Figure 3).*

*(2) A passing area is not required on an aerobridge.*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail platforms

For a period of three years, for existing rail platforms a passing area every 9 metres along any two-way access path that is less than 1800mm wide is permitted. This exemption is subject to the condition that the ARA member concerned reports to the Commission every 12 months during the period of this exemption on instances where this exemption has been relied upon, the impact of this exemption on passenger amenity, and measures taken by the ARA member to minimise these impacts.

**Section B Temporary Exemption Sought:**

Temporary exemption: existing rail platforms

For a period of five years, for existing rail platforms a passing area every 9 metres along any two-way access path that is less than 1800mm wide is permitted.

### Section C Reasons for seeking temporary exemption:

Increasing the distance required between passing areas to 9 metres acknowledges the limitations on existing platforms due to track alignment, narrow rail corridors and surrounding infrastructure.

Significant capital improvement is required to achieve the standard due to limited spaces in and around buildings and on platforms. Many rail structures are over 100 years old. Continuous improvements have been implemented across the passenger rail networks, however balancing capital improvements with ongoing priority for operational maintenance for rail safety has restricted the pace of improvements toward compliance. Existing legacy buildings and surrounding grounds, some of which are heritage listed, increase the challenge and complexity of compliance with 6 metres.

Passing areas every 9 metres are consistent with the requirements in the Access to Premises Standards 2010.

**Section C.1 Impact on customer experience:**

As far as possible, ARA members provide a maximum of 6 metres between passing spaces on an accessway less than 1.8 metres wide at upgraded stations. In situations where there is a distance greater than 6 metres along an access path that is narrower than 1.8 metres, customers with mobility devices may need to take turns to traverse the path. Customers with vision impairment may need to work with an orientation and mobility instructor to assist them to become familiar with the station layout and to identify where the path width is reduced and the way-finding cues in place to assist with navigation.

At some stations, where possible (e.g. stations with larger patronage where crowding may be an issue) direct assistance is provided by railway staff. An assistance button and/or a help phone is also available at the majority of stations.

**Section C. 2 Consultation and progress on alternative solutions and consultation with the disability sector**

Consultation:

Consultations with Accessible Transport Advisory Groups has not provided feedback that the extra 3 metres between passing areas along an access path is of concern to people with disability and mobility constraints.

Alternative Solution:

Primary Path of Travel – When upgrading existing narrow platforms or platforms where necessary infrastructure constrains the accessway width precedence is given to achieving required accessway widths on a primary path of travel. On existing railway stations this is a clear and unobstructed path:

* from a nominated boundary point(s), one of which is identified as the primary station entrance/exit;
* connecting to each platform and providing cross corridor access where appropriate;
* linking accessible platform entries/exits to the assisted boarding point on a platform;
* providing, as far as possible, independent access to rollingstock through partial or full platform raising; and
* leading to and from all accessible facilities such as a unisex accessible toilet or accessible parking boarding points (eg. timetable information or a unisex accessible toilet).

This primary path of travel is based on a ‘whole of journey’ approach and aims to provide a seamless journey from the station precinct boundary, through necessary services and facilities and, ultimately onto the train, as opposed to upgrading isolated pieces of infrastructure to compliance requirements.

## 5.1 Resting points - When resting points must be provided

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*5.1 Resting points - When resting points must be provided*

*(1) There must be resting points for passengers along an access path if the walking distance between facilities or services exceeds 60 metres (AS1428.2 (1992) Note to Clause 7, Continuous accessible path of travel).*

*(2) A resting point must provide seats (AS1428.2 (1992) Clause 27.1(a), Street Furniture).*

* *Premises*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of three years, compliance with clause 5.1 is not required for existing rail premises and existing rail infrastructure to the extent that site constraints prevent compliance (rather than only add expense or difficulty). This exemption is subject to the condition that the ARA member concerned:

• consults with the Australian Federation of Disability Organisations every 12 months on the impact of this exemption on passenger amenity; and

• reports to the Commission every 12 months during the period of this exemption on any equivalent access measures implemented, the impact of this exemption on passenger amenity, and the outcome of the consultation with the Australian Federation of Disability Organisations.

**Section B Temporary exemption sought:**

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of five years, compliance with clause 5.1 is not required for existing rail premises and existing rail infrastructure to the extent that site constraints prevent compliance (rather than only add expense or difficulty).

### Section C Reasons for seeking temporary exemption:

This requirement is impractical particularly in existing station environments. Given the complex nature and expanse of many station precincts it is necessary to examine the layout and use of pathways to determine where resting points will be of most use and benefit to customers.

In many cases where the seating requirement has not been met, the decision not to install seating has been influenced by issues such as security and safety concerns and impacts on customer movements. Installation of seating on access paths in rail carparks raises particular safety concerns. Underground tunnels with high passenger flows are another area where Part 5.1 is not practical to implement.

It should also be noted that there is significant resistance to works undertaken on heritage sites by the heritage sector.

**Section C.1 Impact on customer experience:**

Resting points and in particular seating in a station precinct are primarily situated at key locations where it is anticipated that customers will be waiting or require rest, including:

* Station platforms
* Station entrances
* Waiting areas on platforms or within station buildings
* Bus stops and taxi ranks within a station precinct
* Kiss ‘n’ rides (customer drop off points)

The approach to addition of resting points and seating will differ greatly between locations depending on the layout of the existing assets. ARA members have devised local solutions through consultation with user groups to develop a functional solution. For example, where a seat cannot be provided at 60 metre intervals due to the width of an existing access path, customers will be consulted to determine a suitable location which allows for a clear path and still achieves the intended outcome.

**Section C.2** **Consultation with the disability sector and progress on alternative solutions:**

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

Alternative solution:

Primary Path of Travel – When existing stations undergo an accessibility upgrade emphasis is placed on creating a primary path of travel through the station environment and locating facilities and services at key points along this path where they are most likely to benefit customers. Resting points are priorities for those locations where customers are likely to require this facility such as station platforms, station entrances, bus stops, drop-off points and where station topography may be difficult for customers to traverse. Identification of beneficial locations for resting points along a primary path of travel is based on a ‘whole of journey’ approach and aims to provide a seamless journey from the station precinct boundary, through necessary services and facilities and, ultimately onto the train, as opposed to upgrading isolated pieces of infrastructure to compliance requirements.

## 6.4 Slope of external boarding ramps

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*6.4           Slope of external boarding ramps*

*The slope of an external boarding ramp must not exceed:*

*(a)    1 in 14 for unassisted access ( AS/NZS3856.1 (1998) Clause 2.1.8 (e) (including the notes)); and*

*(b)    1 in 8 for unassisted access where the ramp length is less than 1520 mm (AS1428.2 (1992) Clause 8.4.2 (a) and AS1428.1 (2001) Figure 8; and*

*(c)    1 in 4 for assisted access (AS/NZS3856.1 (1998) Clause 2.1.8 (e)).*

*Conveyances - except dedicated school buses and small aircraft*

### Section A.1 Current temporary exemption and conditions:

*During the exemption period, and in relation to the provisions of the DSAPT appearing above, HREOC hereby grants an exemption such that where the slope of an external board ramp is greater than 1 in 8, ARA Operators are not required to provide staff assistance in ascending or descending the ramp.*

*This exemption is granted on the condition that each ARA Operator concerned report to HREOC within the exemption period on:*

* *the number of locations where boarding ramp slopes of 1 in 8 or better cannot currently be achieved;*
* *measures to be taken to increase the number of locations where external boarding ramp slopes of 1 in 8 or better will be achieved;*
* *any factors affecting the operator's ability to achieve external boarding ramp slopes of 1 in 8 or better in the number of locations indicated by the target proportions and dates specified for accessible boarding in the DSAPT; and*
* *results of examination by the operator of alternative methods for achieving accessible boarding.*

**Section B Temporary exemption sought:**

Where the slope of an external board ramp is greater than 1 in 8, ARA operators are not required to provide staff assistance in ascending or descending the ramp.

### Section C Reasons for seeking temporary exemption:

While operators recognise that disability aids need to suit a person and their specific functional, economic and social requirements, the weight of the mobility device and the person is not easily determined and as such has caused injury to staff that have assisted. Staff may also have an injury or disability that prevents them from assisting.

**Section C.1 Impact on customer experience:**

Operators provide information advising which of their stations are accessible via media channels such as websites, apps and journey planners. If the station of choice has not had either the entire platform or a section of the platform heightened as yet, the customer may need to use another nearby station.

**Section C.2** **Consultation with the disability sector and progress on alternative solutions:**

The treatments described at 8.2 have proven to greatly assist in removing steep boarding ramp gradients across the networks. These treatments were highlighted at a meeting on 9 May 2007 by AFDO as an accepted means of reducing boarding ramp gradients.

Some operators also have Companion Cards (or similar) that provide for a person to travel free and to accompany and assist with boarding.

**8.2 Boarding - When boarding devices must be provided**

### Section A       Section of the Transport Standards from which a temporary exemption is sought:

*8.2 Boarding - When boarding devices must be provided*

1. *A manual or power assisted boarding device must be available at any accessible entrance to a conveyance that has:*
2. *a vertical rise or gap exceeding 12 mm (AS/NZS3856.1 (1998) Clause 2.1.7 (f)); or*
3. *a horizontal gap exceeding 40 mm (AS/NZS3856.1 (1998) Clause 2.1.8 (g)).*

*Conveyances - except dedicated school buses and small aircraft*

**Section A.1 Current temporary exemption and conditions:**

Temporary exemption: rail conveyances

For a period of three years, a manual or power assisted boarding device is only required at a single door rather than all doors of a rail conveyance, subject to the following conditions:

•          Equivalent access is provided at an alternative door of the rail conveyance in the following circumstances:

* if an allocated space is not available; or
* to ensure access to unique facilities; or
* to ensure a passenger can both board and alight the rail conveyance; and

•          the ARA member concerned reports to the Commission every 12 months during the period of this exemption on measures taken to ensure that staff and passengers are adequately informed of both the doors of rail conveyances at which boarding devices are available and the equivalent access measures available.

**Section B   Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years a manual or power assisted boarding device is only required at a nominated single door rather than all doors of a rail conveyance.

**Section C      Reasons for continuing need for temporary exemption:**

***Achieving required Train/platform tolerances***

This requirement is not possible for most of the operators due to engineering and technical limitations. The majority of rail operators world-wide have to deal with grade separations between the platform and the train and have trialled many solutions to overcome the problem. Research[[2]](#footnote-2) indicates that the horizontal gap between the platform and the train seems to be the greater obstacle for the majority of customers compared to the vertical step onto a train.

When upgrading a station the gap and step between trains and platforms is reduced to as close to legislated requirements as operationally possible. However, minimum gaps are dependent on:

* + differing types of passenger and freight rollingstock;
  + track curves;
  + track cants;
  + ranges in rollingstock;
  + track infrastructure maintenance tolerance; and
  + a clearance factor for safety.

Operators have trialled a number of engineering solutions, such as, rubber fillers attached to the rail side of the platform, sacrificial strips attached to the rail car and hydraulic ramps, none of these solutions have proven to be fully reliable in providing access for people with disabilities. Additionally, the solutions trialled have not been effective in achieving the horizontal gap requirements specified in the Transport Standards. .

Furthermore, rail standards which provide a method to control the hazard of a collision between a railcar and a platform require significantly greater tolerances than specified in the Transport Standards. For example, the combined result of the tolerances for lateral translation of vehicle body, body roll, wheel clearance and cant effect is 115mm in addition to the rolling stock static outline. Some rolling stock is smaller than the outline, and in this case the gap increases to 148mm. In curved platforms it is necessary to make additional allowance for the effect of end or centre throw.

Further variations due to historic platforms and movement of ballasted track may also negatively impact the gap at some locations. Vehicle movement is necessary to provide for an acceptable ride quality. Likewise track is constructed to achievable tolerances. To avoid a collision between rolling stock and platforms a gap greater than 115mm mm horizontal must be provided.

At this time the vertical gap is as problematic as the horizontal gap as operators have different models and types of rolling stock with different dimensions, such as floor heights, on the same tracks stopping at the same stations.

***Nominated boarding point***

It is not possible to deploy the manual boarding ramp at each railcar door given platform obstacles/infrastructure, timetable requirements and railway staff capabilities. By restricting the number of assisted boarding points a clear line of sight between staff and the customer needing assistance is maintained. Multiple assisted boarding points will have a negative impact on service reliability by increasing dwell time at stations. Provision of additional portable access ramp cabinets may impact on access paths along the platform. Furthermore, as part of many operators’ approaches to station access upgrades, sections of platforms may be raised to allow boarding via railcar ramp deployment.

At new stations it is possible to raise the entire length of the platform. However, at old stations where platforms are typically located on curves, it is extremely difficult to raise platforms without further impacting on the horizontal gap between the platform and the train. At a number of older stations operated by ARA members the curve of the platform is too great to allow for even partial raising of the platform.

**Section C.1    Impact on customer experience:**

Operators rely on a combination of direct assistance by the railway staff and the deployment of a manual boarding ramp at nominated railcar doors to offer equivalent access for customers with disabilities. The boarding assistance ramps are deployed by railway staff at unmanned stations.

Rail operators inform customers of accessible boarding points. Also, customers are provided with information about boarding procedures on websites and information booklets.The boarding point is marked on the platform by a large (minimum 1 m x 1 m) International Symbol for Access with accompanying signage along the length of the platform to the boarding point.

This strategy has also proven to be beneficial to people with low vision as not only is the painted boarding point large and recognisable, TGSIs are also used at the bottom of the raised section, thus providing easy cues to the conveyance doorway and the priority seating immediately inside that door.

**Section C.2**    **Progress on alternative solutions and consultation with the disability sector**

Consultation:

The majority of rail operators have conducted consultations on the deployment of boarding ramps. Specific issues that have been addressed through consultation include: boarding assistance protocols; performance of different types of boarding ramps; safety of boarding assistance ramps for unassisted use by customers with ambulant impairments; and performance of sacrificial gap fillers.

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

Alternative solution:

An operator who has ‘neighbourhood’ platforms (low platforms that are not stopping points for express services or Key Node Stations, such as Interchanges where transport modes converge), a section of the platform has been raised ensuring required gradients are adhered to and TGSIs are used. This raised area aligns with the front door of the leading railcar and is shown by a large international symbol for access painted on that area. Signage is provided at the station and electronically to inform customers who require the ramp to be deployed to go to that area when the train is due and staff will deploy the ramp. Allocated spaces and priority seating are in close proximity inside the rolling stock. If the spaces are occupied by customers using mobility devices; drivers will obtain permission from Train Control to align the next car with the raised section of the platform.

## 8.7 Boarding - Signals requesting use of boarding device

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*8.7 Boarding - Signals requesting use of boarding device*

*(1) Any signal for requesting the deployment of a boarding device must be located in an allocated space.*

*(2) If possible, a signal is to be placed according to the dimensions given in AS1428.2 (1992) Clause 11.4, Call buttons.*

*Conveyances   
• Buses - except dedicated school buses  
• Coaches  
• Ferries  
• Trains  
• Trams  
• Light rail*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances

For a period of three years, signals for requesting boarding devices may be located in or within reach from, rather than only in, allocated spaces on rail conveyances.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years, signals for requesting boarding devices may be located in or within reach from, rather than only in, allocated spaces on rail conveyances.

### Section C Reasons for seeking temporary exemption:

The clause sets a requirement which does not take into account the limitations of carriage design and available button locations. AS1428.2 details the common reach zone of ambulant and wheelchair users for critical controls as between 700mm and 1200mm above floor level. Design and wall space constraints on trains and platforms mean that a call button for customers with mobility aids may need to be placed lower than the 700mm (minimum 550mm) above floor level, e.g. where flip up seats are installed in the allocated space under windows. This provides greater design flexibility in limited spaces.

**Section C.1 Impact on customer experience:**

Alternative locations for signals outside the allocated space are clearly visible to customers using the allocated space. Typically they are located near the carriage door. The proposed clause could have an adverse impact in a very crowded peak commuter service, however no customer complaints have been received. It should be noted that the majority of customers with disability avoid travel during the AM and PM peak travel periods.

## 11.2 Handrails and grabrails - Handrails to be provided on access paths

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*11.2 Handrails and grabrails - Handrails to be provided on access paths*

*(1) Handrails must be placed along an access path wherever passengers are likely to require additional support or passive guidance.*

*(2) A handrail must not infringe an area on a roadside boarding point that may be needed to deploy a boarding device.*

* *Premises - except premises to which the Premises Standards apply*
* *Infrastructure- except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail platforms

For a period of three years, rail platforms are exempt from clause 11.2.

**Section B Temporary exemption sought:**

Temporary exemption: rail platforms

For a period of five years, rail platforms are exempt from clause 11.2.

### Section C Reasons for seeking temporary exemption:

Railway premises and infrastructure should be excluded from this requirement as it is not possible to anticipate the level of additional support or passive guidance needed by customers along an access path. The clause as it stands may require the provision of handrails along the entire length of the access path from property boundary to boarding point.

The application of continuous handrails along the length of the platform could be dangerous and a barrier to mobility aid access on railway infrastructure by adversely affecting customer flows, reducing the width of access paths and preventing seating from being placed along the building shoreline.  There are also impacts from applying handrails to heritage station buildings.  Handrails cannot be attached without damage to the fabric of the building.

**Section C.1 Impact on customer experience:**

The absence of continuous handrails along the length of the platform has not been demonstrated to have any detrimental impact. Handrails are also provided as way-finding devices. It should be noted that mobility support and way-finding features are already prescribed in other parts of the Standards. For example:

* alternative way-finding and cues are available through TGSIs;
* ramps to 1 in 19 and stairs are currently required to have a handrail;
* seating is provided at rest areas every 60 metres;
* seats are provided on platforms; and
* all pedestrian mazes have fences.

## Section C.2 Consultation with the disability sector:

Operators regularly consult with people with disability and older people regarding their access requirements. Specialist consultations on wayfinding tools to assist people who are blind or vision impaired to navigate through a station environment also have been conducted by a number of ARA members. A requirement for provision of handrails on station platforms has never been identified through these processes.

## 12.2 Doorways and doors - Compliance with Australian Standard — premises and infrastructure

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*12.2 Doorways and doors - Compliance with Australian Standard — premises and infrastructure*

*Doorways and doors must comply with AS1428.2 (1992) Clause 11 (except Clause 11.5.2).*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail platforms

For a period of three years, existing doorways and doors on existing rail platforms are exempt from clause 12.2, subject to the condition that the doorways and doors comply with the Building Code of Australia as in force during the period of this exemption.

**Section B Temporary exemption sought:**

Temporary exemption: existing rail platforms

For a period of five years, existing doorways and doors on existing rail platforms are exempt from clause 12.2.

### Section C Reasons for seeking temporary exemption:

In relation to accessible doors for public unisex toilets, it has proved to be challenging to find suppliers of doors and door hardware that will meet the access requirements prescribed in AS1428.2 and in particular the referenced AS1428.1 clause 13.5.2 in relation to force required to open, swing and hold a door open. Specifically, a force of 6N to swing the door and 7.5N to hold the door open between 60 degrees and 90 degrees has proven difficult if not impossible to achieve.

NOTE: many operators can meet 2009 version of ASA1428.1 but would require further clarifications from the AHRC.

**Section C.1 Impact on customer experience:**

As far as possible, automated doors are installed when stations are upgraded, particularly at high traffic stations. Recent stations in many jurisdictions include design modifications to public unisex toilet doors which offer a balance between access and security requirements. Specifically, the new doors meet the requirements of the latest AS1428.1 2009 in relation to forces required to open, swing and hold the door open (20N in each case). Given that these new doors meet the latest Australian Standard it is anticipated that the doors can be employed by customers with disabilities.

**Section C.2 Progress on alternative solutions and consultation with the disability sector**

Alternative solution:

An operator has worked with suppliers to source a door that meets access requirements and anti-vandalism requirements for public unisex toilet doors. Currently, a new design (with a hollowed-out interior) appears to offer a viable solution and balances access requirements with security needs. Consultation is yet to be conducted but is anticipated to occur as part of a current network extension project.

## 12.4 Clear opening of doorways

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*12.4 Clear opening of doorways*

*Doorways must comply with AS1428.2 (1992) Clause 11.5.1, Clear opening of doorways.*

*Conveyances*

* *Buses - except dedicated school buses*
* *Coaches*
* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances

For a period of three years, where design constraints prevent installation of toilet doors on rail conveyances with an opening width of 850mm, a reduction in toilet door opening width from 850mm to 760mm on rail conveyances is permitted.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years, where design constraints prevent installation of toilet doors on rail conveyances with an opening width of 850mm, a reduction in toilet door opening width from 850mm to 760mm on rail conveyances is permitted.

### Section C Reasons for seeking temporary exemption:

Onboard accessway widths and door opening width requirements create unique difficulties for many rail operators as they are heavily constrained by narrow gauge railway tracks and the consequent narrow car width.

For example if the clear opening door width for the unisex accessible toilet is 780mm on a train, to widen this doorway would necessitate a reduction in the aisle way width adjacent to the toilet or compromise internal circulation room inside the toilet. To change the layout of the toilet and other key internal fixtures would not be feasible due to the need to maintain structural integrity and impact on crash worthiness.

**Section C.1 Impact on customer experience:**

These widths do not always permit use of larger mobility devices and customers may need to transfer into an on-board operator-supplied wheelchair. It should also be noted that the clear door opening widths on many trains can accommodate an 80th percentile occupied wheelchair width (740mm) as per dimensions given in AS1428.1 2009.

Customers are advised as part of the booking process of the above limitations therefore customers are aware of the limitations prior to arrival.

**Section C.2 Progress on alternative solutions and consultation with the disability sector:**

Operators have undertaken extensive consultation in relation to aisle way and door width on trains with the disability sector and customers with a disability. In particular a series of consultations was held as part of the design and construction phases for Queensland Rail’s Travel network trains.

In many cases the construction and design of existing carriages limits the ability to reconfigure internal fixtures and fittings, doors, intercar gangways and amenities. For example, narrow gauge (1067mm) track imposes limitations to train carriage width. Given these limitations consultation and design modifications concentrate on the functional outcomes sought by customers and focus on a primary path of travel through trains. The primary path of travel is critical to ensuring that customers are able to safely and, as far as possible, independently use services: it provides connectivity between all essential facilities and information. On existing trains the primary path of travel is focused on the accessible carriages and extends from the external doorway to the allocated space, priority seats and other essential facilities required by customers with disabilities, in particular customers using mobility devices.

## 14.3 Stairs - Compliance with Australian Standards — conveyances

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*14.3 Stairs - Compliance with Australian Standards — conveyances*

*(1) If stairs are provided on a conveyance mentioned below, they must comply with:*

*(a) AS1428.1 (2001) Clause 9.1 (including the notes), Stair construction; and*

*(b) AS1428.2 (1992) Clause 13.2, Configuration of steps, Clause 13.3, Warning strip at nosing of steps and Figures 8 and 9.*

*(2) However, the minimum access path width on stairs in the conveyance must be 850 mm.*

*Conveyances*

* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances

For a period of three years, stairs on rail conveyances are exempt from clause 14.3, subject to the condition that the ARA member concerned:

* + - provides equivalent access by direct assistance or other means;
    - reports to the Commission every 12 months during the period of this exemption on measures taken to ensure equivalent access including staff training and the provision of passenger information; and
    - ensures that stairs on rail conveyances:
    - do not encroach into circulation spaces;
    - have opaque enclosed risers;
    - have colour contrasted warning nosing strips, of 50mm to 75mm width on top and 25mm to 50mm width on the vertical edge, on the edge of stair treads; and
    - if the stairs are at the entrance to a conveyance, comply with AS 1657 (1992) Figure 4.3 measured at the centre line of the stairs.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years, stairs on rail conveyances are exempt from clause 14.3.

### Section C Reasons for seeking temporary exemption:

Widening narrow stairs and access paths in lower and upper saloons of double deck trains requires significant internal redesign. It is estimated that stair widening would result in a net loss of between 20% and 25% of the seats which will have a detrimental effect on all customers.

Such an upgrade program would require a high number of fleet out of service to deliver the works, having significant network impacts. On some fleet types, changes to the internal stairs are likely to have an adverse impact on the structural integrity of the carriage.

A further example is in relation to carriage doors that are fitted with retractable steps. The step propels forward and upward from its stowed position, when the door is opened. This is to provide an intermediate step between the 1200mm above rail level of the carriage floor down to the typical 870mm above rail level height of low level platforms.

This design meets the requirement of 850mm width specified in the Transport Standards part 14.3 clause (2) and with the referenced Australian Standard AS1428.1-2001 part 9.1 (a) by not encroaching on required circulation spaces, in this case, on the platform itself.

However, this design does not comply with the requirements of AS1428.1-2001 part 9.1 (b) as there is no opaque riser on the rear of the step tread (as having one would not allow the proper mechanical operation of this design), and (c) there is no colour contrasting strip on the step nosing, 50mm to 75mm wide.

It should be noted that rail operators undertook a safety risk assessment in relation to these non-compliances. Given the lack of an enclosed riser and the technical constraints in providing one, it was determined that colour contrasting the whole of the step tread may provide a safer option for all customers. This treatment assists customers to distinguish the location of the step and the width of the step tread through effective colour contrast with surrounding surfaces. Additionally, a boarding ramp and staff assistance can be provided at any door for this particular service.

**Section C.1 Impact on customer experience:**

Priority seating is provided for less mobile customers in the vestibule of double deck trains, reducing the requirements to use the stairs.

Where steps are part of the door entry from the platform to the train, a boarding ramp and staff assistance are available for customers who find it difficult to negotiate the step.

**Section C.2 Progress on alternative solutions and consultation with the disability sector:**

Alternative solution:

A boarding ramp and staff assistance can be provided for services with an external retractable step.

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

## 15.2 Toilets - Location of accessible toilets

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*15.2 Toilets - Location of accessible toilets*

*Accessible toilets must be in the same location as other toilets.*

*Premises Infrastructure except airports that do not accept regular public transport services*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure - except airports that do not accept regular public transport services*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of three years, for existing rail premises and existing rail infrastructure accessible toilets are not required to be in the same location as other toilets, subject to the condition that the ARA member concerned reports to the Commission every 12 months during the period of this exemption on:

* + - rail premises and rail infrastructure where co-location has not been possible;
    - the impact of this exemption on passenger amenity; and
    - measures taken to ensure equivalent access, including passenger information and signage.

### Section B Temporary exemption sought:

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of five years, for existing rail premises and existing rail infrastructure accessible toilets are not required to be in the same location as other toilets.

### Section C Reasons for seeking temporary exemption:

The location of accessible toilets will be dictated by space limitations at existing stations. The layout and construction of older stations (including those with heritage status) place limitations on the position of accessible toilets, as relocation can impact on other aspects of amenity and access.

**Section C.1 Impact on customer experience:**

Clear signage and information on the operators’ websites and at stations are available to point customers to the nearest accessible toilets. As far as possible, accessible toilets are located in a convenient and central location.

## Section C.2 Report to the AHRC

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

## 15.3 Unisex accessible toilet — ferries and accessible rail cars

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*15.3 Toilets - Unisex accessible toilet — ferries and accessible rail cars*

*If toilets are provided, there must be at least one unisex accessible toilet without airlock available to passengers using wheelchairs or mobility aids.*

*Conveyances*

* *Ferries*
* *Accessible railcars*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: accessible rail cars

For a period of three years, if toilets are provided, one unisex accessible toilet without airlock is not required to be provided in each accessible rail car, subject to the following conditions:

• one unisex accessible toilet without airlock is provided on an access path from each allocated space; and

• the first toilet provided on an access path from each allocated space is a unisex accessible toilet without airlock.

**Section B Temporary exemption sought:**

Temporary exemption: accessible rail cars

For a period of five years, if toilets are provided, one unisex accessible toilet without airlock is not required to be provided in each accessible rail car.

### Section C Reasons for seeking temporary exemption:

In many networks, the constraints of narrow gauge which necessitate narrow carriage widths limit the facilities and amenities that can be accommodated in each carriage. For example, dining cars/galleys have limited space due to service provision requirements. The relevant operators have consulted extensively in relation to carriage design.

**Section C.1 Impact on customer experience:**

Customers with disabilities, in particular people with mobility devices may need to board services at nominated doors on accessible carriages. Access is provided from the door to allocated spaces/priority seating and to accessible facilities. For example, in some services, allocated spaces are the carriage closest to the unisex accessible toilet.

**Section C.2 Progress on alternative solutions**

Alternative Solution:

Primary Path of Travel – When upgrading or retrofitting existing trains which are constrained by narrow gauge and, in some cases, existing design limitations and ability to provide direct assistance, precedence is given to achieving a primary path of travel in one or more accessible carriages. This includes:

* boarding at nominated doors on accessible carriages
* appropriate accessways from the door to the allocated spaces and/or priority seating
* Circulation space and passing areas, particularly in the vestibule area
* Access to accessible facilities such as the unisex accessible toilet, where applicable
* Signage, hearing loops, auditory information, lighting and where possible visual information

This primary path of travel does not extend throughout an accessible carriage or between carriages. This approach is based on a ‘whole of journey’ approach and aims to provide a seamless journey from the nominated doors through aisle ways to seating or allocated spaces and including necessary services and facilities.

Operator consultation for new rolling stock is broadly supportive of this approach given the limitations inherent in particular rail environments.

## 15.4 Toilets - Requirements for accessible toilets — ferries and accessible rail cars

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*15.4 Toilets - Requirements for accessible toilets — ferries and accessible rail cars*

*(1) An accessible toilet must:*

*(a) comply with the requirements set out in this section; and*

*(b) allow passengers in wheelchairs or mobility aids to enter, position their aids and exit.*

*(2) The minimum dimension from the centre line of the pan to the near-side wall must be 450 mm (AS1428.1 (2001) Figure 22).*

*(3) The minimum dimension from the centre line of the pan to the far-side wall must be 1150 mm (AS1428.1 (2001) Figure 22).*

*(4) The minimum dimension from the back wall to the front edge of the pan must be 800 mm (AS1428.1 (2001) Figure 22).*

*(5) The toilet seat must be between 460 mm and 480 mm above the floor (AS1428.1 (2001) Figure 18).*

*(6) Hand washing facilities must be provided either inside or outside the toilet (AS1428.1 (2001) Clause 10.2.1 (b), Water closets).*

*Conveyances*

* *Ferries*
* *Accessible rail cars*

### Section B Current temporary exemption and conditions:

Temporary exemption: Narrow gauge and standard gauge accessible rail cars

For a period of three years, compliance with clause 15.4 is not required for narrow gauge and standard gauge accessible rail cars, subject to the following conditions:

• accessible toilets are configured and maintained such that passengers using mobility aids (that conform to the assumptions in Part 40 of the Disability Standards for Accessible Public Transport Guidelines 2004 (No 3)) may enter, position their aids, use the accessible toilets and exit;

• the ARA member concerned consults with the Australian Federation of Disability Organisations every 12 months on the impact of this exemption on passenger amenity; and

• the ARA member concerned reports to the Commission every 12 months during the period of this exemption on the design and configuration of any accessible toilets that have been implemented, the impact of this exemption on passenger amenity, and the outcome of the consultation with the Australian Federation of Disability Organisations.

### Section C Reasons for seeking temporary exemption:

Available circulation space and location of toilet fixtures and fittings is constrained by carriage width due to narrow gauge track. The dimensional restrictions of the fleet mean that an 850mm access path cannot be achieved. This limitation remains regardless of whether the rollingstock is new or existing.

For example, some ARA member services have an aisle way alongside the unisex accessible toilet wall to the customer seating area with a width of 760mm. To widen this aisle way would necessitate a reduction in the circulation room and door width for the adjacent toilet. Such changes to the layout of the toilet and other key internal fixtures may adversely affect the structural integrity of the carriage and impact on crash worthiness.

**Section C.1 Impact on customer experience:**

Due to the narrow width, operators are required to balance the need for an adequate access path width and the need for toilet circulation space within the toilet cubicle. Determining what constitutes a functional outcome involves consultation with people with disabilities through accessibility reference groups. There is travel information readily available on operators’ websites therefore customers can familiarise themselves with the layout of trains. Other sources of information are also available such as contact with travel centres and customer contact centres. Information provided includes position and location of onboard allocated spaces; options for travelling with a wheelchair or mobility scooter; booking procedures; and safe boarding procedures.

Internal car dimensions are also available on request and in some circumstances customers can arrange a viewing or on-board trial to confirm requirements before booking.

It should also be noted that the carriage aisle widths and clear door opening widths on many of the ARA members’ trains can accommodate an 80th percentile occupied wheelchair width (740mm) as per dimensions given in AS1428.1 2009.

**Section C.2 Consultation with the disability sector:**

Operators have undertaken extensive consultation in relation to internal layout, fixtures and fittings for rollingstock with the disability sector and customers with a disability. For example, consultations were held as part of the design and construction phases for Queensland Rail’s Spirit of Queensland trains, New Generation Trains (NGR) and NSW Oscar trains. Consultation is planned on the design of NSW Trains’ proposed inter-city fleet.

## 17.5 Signs - Electronic notices

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*17.5 Signs - Electronic notices*

*(1) Presentations of words or numbers on electronic notices must be visible for at least 10 seconds, unless the electronic notice is for the purpose of ticket validation.*

*(2) If the electronic notice is for this purpose, the words or numbers on the notice must cease to be visible before the end of 10 seconds if the ticket validation device is used by another person within that time.*

* *Premises*
* *Infrastructure*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail premises and rail infrastructure

For a period of three years, electronic notices may be displayed at rail premises and rail infrastructure for less than 10 seconds where more frequent updating is necessary because of the frequency of services or the volume of information to be displayed. This exemption is subject to the condition that the ARA member concerned:

• consults with the Australian Federation of Disability Organisations every 12 months on the impact of this exemption on passenger amenity; and

• reports to the Commission every 12 months during the period of this exemption on the impact of this exemption on passenger amenity and the outcome of the consultation with the Australian Federation of Disability Organisations.

**Section B Temporary exemption sought:**

Temporary exemption: rail premises and rail infrastructure

For a period of five years, electronic notices may be displayed at rail premises and rail infrastructure for less than 10 seconds where more frequent updating is necessary because of the frequency of services or the volume of information to be displayed.

### Section C Reasons for seeking temporary exemption:

Rail operators are rolling out modern Passenger Information Display (PID) screens across their networks. However, at a number of existing stations older PIDs used to indicate train departures on some older passenger information screens at stations are unable to comply with clause 17.5 of the Transport Standards. Compliance would result in scrolling messages taking too long to display the full message or cause difficulties for customers to make quick decisions about which train to board. Service disruptions and changes to stopping patterns also may necessitate quick changes of information to provide real-time accuracy. This issue applies equally to new PIDs at stations operating services with complex stopping patterns. For example one Sydney train line service has 16 different stopping patterns. The relevant operator has two screens currently in use.

1. The 2x24 indicator (which is the horizontal style screen with 2 small screens) has a 10 second scroll time (ie each station is visible for 10 seconds); and
2. The portrait style (in use at the underground stations and some others) has a 7 second scroll time.

Trams with passenger information systems display electronic messages for 10 seconds where possible. However, the short distance between some stops prevent this from always occurring.

**Section C.1 Impact on customer experience:**

Customers receive information about their journeys with sufficient time for decision thereby alleviating anxiety about boarding the right train. A number of operators are rolling out new PIDs across their networks, which will provide both audio and visual information to customers.

In addition to PIDs, many rail operators now offer alternative sources of information for customers. This includes the Smartphone applications which provide timetable and disruption information for customers who are travelling and does not include any scrolling or moving text.

**Section C.2 Consultation with the disability sector:**

Consultation for the Queensland Rail’s older suburban trains – passenger information displays, was conducted in 2010. Consultation focused on a project to upgrade older fleet with passenger information displays (PIDS) and improved audible announcements. As the PIDS are installed, written information will appear in conjunction with messages over the public address system.  Transport for NSW has also conducted customer consultation on the development of new Passenger Information Screens in respect of their readability and scrolling time.

Report to the AHRC:

As previously advised in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

## 18.1 Tactile ground surface indicators - Location

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*18.1 Tactile ground surface indicators - Location*

*Tactile ground surface indicators must be installed on an access path to indicate stairways, ramps, changes of direction, overhead obstructions below a height of 2000 mm, and hazards within a circulation space or adjacent to a path of travel (AS1428.2 (1992) Clause 18.1, Tactile ground surface indicators).*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail premises and rail infrastructure

For a period of three years, compliance with clause 18.1 is not required on rail premises and rail infrastructure, subject to the condition that the ARA member concerned:

• adopts architectural solutions or alternative way finding aids consistent with AS1428.4: 2002 Appendix B;

• consults with the Australian Federation of Disability Organisations every 12 months on the impact of this exemption on passenger amenity, in particular for people with vision impairments and people with physical disabilities; and

• reports to the Commission every 12 months during the period of this exemption on their implementation of architectural solutions or alternative way finding aids, the impact of this exemption on passenger amenity, and the outcome of the consultation with the Australian Federation of Disability Organisations.

**Section B Temporary exemption sought:**

Temporary exemption: rail premises and rail infrastructure

For a period of five years, for existing rail premises and rail infrastructure compliance with clause 18.1 of the Transport Standards and Part H2.11 of the Premises Standards is not required.

### Section C Reasons for seeking temporary exemption:

Tactile ground surface indicators (TGSI’s) are widely accepted as a veryuseful way of enabling people who have a vision impairment to quickly move through busy, congested spaces and environments that lack sufficient architectural cues. However, as identified in AS/NZS1428.4.1:2009 (Appendix A) *‘..the design industry should not over-use or over-prescribe the installation of TGSI’s, but rather should make full use of the range of environmental guidance features available so as to minimize inconvenience to other members of the community.’*

A continuation of the existing temporary exemption is needed as further research and consultation is required to determine the optimal use and location of TGSI’s in a rail environment. Railway stations are complex environments with a range of entry/exits points, structures, and path features that can include fences, kiss and ride zones, car parks, pedestrian entrances from the street, subways, overbridges, stairs, ramps, walkways, lifts, shelters, station buildings and an array of columns and poles. Careful planning and understanding of way-finding is necessary to determine how and where to use appropriate cues (ie. TGSI’s, signage and architectural features), across all of these elements.

Industry operators’ use of TGSIs is carefully considered and determined by each station environment in conjunction with other way-finding cues including: signage, architectural elements audible cues, colour/luminance contrast, landscaping, handrails, tapping rails and tactile contrasts.

Furthermore, there are limitations to the use of TGSI for example the use of both gravel and simple sealed surfaces on many regional platforms require extensive capital upgrades prior to the application to TGSIs. Additionally, once installed TGSIs are difficult to remove and make the area good, if building work and changes to accessways are undertaken. Especially, costly and difficult to remove are cement TGSIs, which have been recessed into cement or bitumen.

**Section C.1 Impact on customer experience:**

The built environment offers many other way-finding cues that can be utilised. The layout of TGSIs is designed to reduce the impact upon people who use mobility devices such as wheelchairs and people who have ambulant disabilities or difficulties in traversing uneven surfaces.

A number of operators use Hazard TGSIs:

* Along the length of a platform adjacent to the cope (hazard TGSIs may be used to represent the yellow line).
* To indicate stairs or ramps.
* To indicate obstructions below 2m, hazards within a circulation space or adjacent to a path of travel (where possible removing the hazard or obstacle is preferred).
* In conjunction with directional TGSIs to indicate a change in direction or the need to stop and investigate further.

A number of operators use Directional TGSIs:

* Lead people from the edge of a platform to the disability assistance and emergency help phone.
* Lead people from the edge of a platform to a platform entry or exit. If there are multiple entry/exit points than a nominated entry/exit which minimises impact on people with mobility devices is selected.

The use of TGSI varies dependent on the location. Guidance and navigation assistance for people with disabilities and the general public are available in high traffic area. This assistance is targeted at different types of disability, for example, mobility or visual impairment.

**Section C.2 Consultation with the disability sector:**

ARA members have consulted extensively with the vision-impaired and blindness sectors on the application of TGSIs in station environments. Consultations typically have occurred on site-specific issues, particularly on the appropriate layout of TGSIs at new and upgraded stations. Other issues that have been discussed with affected customers include:

* The colour contrast of TGSIs with surrounding surfaces.
* Comparison of the functionality of TGSI product types
* Development of tactile maps and way-finding cues

Report to the AHRC:

As previously advised in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

## 20.1 Lighting - Illumination levels — premises and infrastructure

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*20.1 Lighting - Illumination levels — premises and infrastructure*

*Any lighting provided must comply with minimum levels of maintenance illumination for various situations shown in the notes to AS1428.2 (1992) Clause 19.1, Illumination levels*

* *Premises – except premises to which the Premises Standards apply*
* *Infrastructure*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail premises and rail infrastructure

For a period of three years, compliance with clause 20.1 is not required on rail premises and rail infrastructure, subject to the condition that the ARA member concerned complies in full with the lighting levels set out in ARA’s revised application dated 24 February 2006 (as detailed in the table below) by 31 December 2007.

TABLE 1 – RECOMMENDED LIGHTING LEVELS FOR RAILWAY STATIONS (summary of the Webb report)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CODE REQUIREMENTS | | | | | COMMENT | RECOMMENDED ILLUMINANCE | | | RECOMMENDED UNIFORMITY | |
|  | CODE |  | Eav | E min | EV min |  | Eav | E min | EV min | U1 | U2 |
| ENCLOSED STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| ENTRANCE, PASSAGEWAYS, WALKWAYS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| STAIRS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| RAMPS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| GENERAL PLATFORM | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 150 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| OPEN STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 30 |  |  |  |
| GENERAL PLATFORM | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| COVERED AREAS | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| CORE AREAS (AWNING) | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| RAMPS AND STEPS (OPEN) | AS1158.3.1 | P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| OPEN FOOTBRIDGE | AS1158.3.1 | CAT P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| PRIMARY ACCESS PATHS | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| ENCLOSED FOOTBRIDGE | AS 1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| SUBWAYS | AS1158.3.1 | CAT P10 | 35 | 17.5 | 17.5 |  | 35 | 17.5 | 17.5 |  | 7 |

### Section B Temporary exemption sought:

Temporary exemption: rail premises and rail infrastructure

For a period of five years, compliance with clause 20.1 is not required on rail premises and rail infrastructure, subject to the condition that the ARA member concerned complies in full with the lighting levels set out in ARA’s revised application dated 24 February 2006 (as detailed in the table below).

TABLE 1 – RECOMMENDED LIGHTING LEVELS FOR RAILWAY STATIONS (summary of the Webb report)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CODE REQUIREMENTS | | | | | COMMENT | RECOMMENDED ILLUMINANCE | | | RECOMMENDED UNIFORMITY | |
|  | CODE |  | Eav | E min | EV min |  | Eav | E min | EV min | U1 | U2 |
| ENCLOSED STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| ENTRANCE, PASSAGEWAYS, WALKWAYS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| STAIRS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| RAMPS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| GENERAL PLATFORM | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 150 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| OPEN STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 30 |  |  |  |
| GENERAL PLATFORM | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| COVERED AREAS | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| CORE AREAS (AWNING) | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| RAMPS AND STEPS (OPEN) | AS1158.3.1 | P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| OPEN FOOTBRIDGE | AS1158.3.1 | CAT P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| PRIMARY ACCESS PATHS | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| ENCLOSED FOOTBRIDGE | AS 1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| SUBWAYS | AS1158.3.1 | CAT P10 | 35 | 17.5 | 17.5 |  | 35 | 17.5 | 17.5 |  | 7 |

### Section C Reasons for seeking temporary exemption:

Applying the internal standard to outdoor situations or open platform lighting in metropolitan built up areas can reduce visibility for people with visual impairments due to contrast between the surrounding area where lighting is lower and lack of perspective.

The interpretation from using these Australian Standards is that the “core zone” of the open station where tickets are sold, information is provided, vending machines, telephones and out of weather seating is placed will have 150 lux minimum maintenance illumination. Within this area spot vertical lighting of between 200-300 lux will be provided above ticket counters, timetables, information posters, vending machines and telephones As open platforms are in metropolitan areas with homes in close proximity, even with the exemption down to 42 lux and the use of light shields, it is sometimes difficult to ensure light spill does not impact the community.

Other issues are the impact on driver and pedestrian safety as drivers will have difficulty adjusting their eyesight at night approaching platforms.

The proposed Standard sets a significantly higher lux (measure of intensity) in an aerial footbridge than in subways. The definition of ‘enclosed’ aerial footbridge should specifically exclude footbridges that have open mesh walls or glass walls. Many operators have had to respond to community concerns about lights from aerial footbridges illuminating their properties.

Rail operators are reliant on this exemption in order to supply rail services.

The AHRC should also note the Webb Lighting Report attached.

**Section C.1 Impact on customer experience:**

Lighting level is still suitable for customers.

Previously, high pressure sodium (HPS) yellow light was used (including when the Webb report was published), but recently CMH (ceramic metal halide) and LED (light emitting diode) white light is being used giving a much ‘clearer’ light source. This clear light (at 42 lux on open platforms), along with the Crime Prevention through Environmental Design (CEPTD) principles and surveillance cameras has greatly enhanced safety for customers and provided greatly enhanced colour rendering making it easy to identify offenders from surveillance footage.

**Section C.2 Progress on alternative solutions and consultation with the disability sector**

The Webb Lighting Report has been developed to guide the design requirements for lighting within station precincts. This report is focused on identifying lux levels appropriate to each part of the station environment. Safety of customers and staff was a key consideration in the drafting of the report.

The new CMH lighting, at the current exemption levels and using the CEPTD principles has also enhanced the experience and accessibility for people with disabilities, such as those who have a vision impairment who have reported it is easier to see, along with providing a safer experience for everyone.

## 21.1 Controls - Compliance with Australian Standard — premises and infrastructure

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*21.1 Controls - Compliance with Australian Standard — premises and infrastructure*

*Controls must comply with AS1428.1 (2001) Clause 11.*

* *Premises - except airports that do not accept regular public transport services*
* *Infrastructure*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail premises and rail infrastructure

For a period of three years, controls in rail premises and rail infrastructure are not required to comply with clause 21.1, subject to the condition that the controls concerned meet the requirement of a maximum 20N force for operation.

**Section B Temporary exemption sought:**

Temporary exemption: rail premises and rail infrastructure

For a period of five years, controls in rail premises and rail infrastructure are not required to comply with clause 21.1, subject to the condition that the controls concerned meet the requirement of a maximum 20N force for operation.

### Section C Reasons for seeking temporary exemption:

In relation to accessible doors for public unisex toilets, it has proved to be challenging to find suppliers of doors and door hardware that will meet the access requirements prescribed in AS1428.2 and in particular the referenced AS1428.1 clause 13.5.2 in relation to force required to open, swing and hold a door open. Specifically, a force of 6N to swing the door and 7.5N to hold the door open between 60 degrees and 90 degrees has proven difficult if not impossible to achieve.

NOTE: many operators can meet 2009 version of AS1428.1 but would require further clarifications from AHRC on whether this is an appropriate solution.

**Section C.1 Impact on customer experience:**

The industry is looking to implement automated doors when doing upgrades particularly at high traffic stations. Recent station upgrades in many jurisdictions include design modifications to public unisex toilet doors which offer a balance between access and security requirements. Specifically, the new doors meet the requirements of the latest AS1428.1 2009 in relation to forces required to open, swing and hold the door open (20N’s in each case). Given that these new doors meet the latest Australian Standard it is anticipated that the doors can be employed by customers with disabilities.

**Section C.2 Progress on alternative solutions:**

An operator has worked with supplies to source a door that meets access requires and anti-vandalism requirements for public unisex toilet doors, in particular. Currently, a new design (with a hollowed out interior) appears to offer a viable solution and balances access requirements with security needs. Consultation is yet to be conducted but is anticipated to occur as part of a current network extension project.

## 26.2 Hearing augmentation – listening systems - Public address systems — conveyances

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*26.2 Hearing augmentation – listening systems - Public address systems — conveyances*

*If a public address system is installed:*

*(a) people who are deaf or have a hearing impairment must be able to receive a message equivalent to the message received by people without a hearing impairment; and*

*(b) it must comply with AS1428.2 (1992) Clause 21.1, Hearing augmentation.*

*Conveyances*

* *Buses*
* *Coaches*
* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances

For a period of three years, public address systems in rail conveyances are not required to comply with clause 26.2(b). This exemption is subject to the condition that the ARA member concerned:

• ensures equivalent access for people who are deaf or have a hearing impairment to information provided via the public address system;

• consults with the Australian Federation of Disability Organisations every 12 months on the impact of this exemption on passenger amenity; and

• reports to the Commission every 12 months during the period of the exemption on measures taken to ensure equivalent access, the impact of this exemption on passenger amenity, and on the outcome of the consultation with the Australian Federation of Disability Organisations.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years, public address systems in rail conveyances are not required to comply with clause 26.2(b).

### Section C Reasons for seeking temporary exemption:

Electrical interference from on-board equipment on existing fleet can adversely affect the performance of hearing augmentation loops. Passenger information displays (PIDs) are provided throughout the vehicle to offer customers equivalent information about planned and unplanned service disruptions. Direct assistance is offered by operators during emergencies.

The listening devices prescribed in Australian Standard 1428.2 are not suitable for use on board trams. An ARA’s tram operator has installed internal PIDs on its E & D class trams and has plans to add the feature to other classes of trams. These displays show the route destination as well as next stop information via text and audio, however they do not have the capability of displaying disruption messages. Customers with a hearing impairment are able to receive these messages via the free tramTRACKER app which provides real-time information including disruptions.

At stops fitted with the PA system, passenger information displays are available and have the ability to show any service disruption messages.

**Section C.1 Impact on customer experience:**

Using available modern technologies, the rail industry provides essential travel and customer information is provided in a variety of formats so that customers may access relevant information format. Communication methods used include:

* Smartphone applications which provide real time journey information in an accessible format;
* Websites with dedicated information on accessibility for each network;
* Phone, National Relay Service for contact with travel contact centres, customer feedback teams, call centres etc;
* SMS/texting service for customers (of particular use for customers who are deaf or have a hearing impairment);
* Visual information at stations and on trains (PIDs);
* Audible information at stations and on trains via public announcement systems (with hearing loops available on the majority of trains and at a significant number of stations);
* On demand information at stations;
* Emergency and disability assistance consoles on board train services; and
* Direct assistance from station staff, or on-board staff.

**Section C.2 Progress on alternative solutions and consultation with the disability sector:**

Alternative solutions:

ARA members are progressively upgrading older fleet with passenger information displays and improved audible announcements. PIDs are regarded as a viable, and ultimately more reliable, alternative to hearing augmentation loops.

Specialist Smartphone applications are also increasingly being developed to help overcome some of the difficulties people with hearing impairment face on the public transport. For example, Transport for NSW is currently working with third-party app developers and the deaf community to develop an app which will convert audio announcements to text. Initially this app will operate on the train. On platform use is technically more difficult to achieve and will be the next phase of development.

Consultation relating to Hearing Augmentation:

As the listening devices described in AS1428.2 are not suitable for use on board trams, the operators have been investigating alternative options for customers with a hearing impairment. A consultation session was held in October 2014 for Passenger Information Displays for B and C Class trams. Customers were invited to the consultation session where they were shown several different layouts and gave feedback on their preferred option. The consultation session included customers with varying needs including tall and short customers, younger and older customers, regular commuters and those unfamiliar with the route and customers with special needs including some with a visual impairment and some with a hearing impairment. Since the trial was conducted funding has been approved to fit B Class trams with the passenger information display in 2015/2016.

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

## 27.3 Information - Size and format of printing

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*27.3 Information - Size and format of printing*

*(1) Large print format type size must be at least 18 point sans serif characters.*

*(2) Copy must be black on a light background.*

* *Conveyances*
* *Premises*
* *Infrastructure*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances, rail premises and rail infrastructure

For a period of three years, compliance with clause 27.3(2) is not required for rail conveyances, rail premises and rail infrastructure if alternative colours adopted provide strong contrast, including for people with impaired colour vision. This exemption is subject to the condition that the ARA member concerned:

• consults with the Australian Federation of Disability Organisations every 12 months on the alternative colours adopted and on the impact of this exemption on passenger amenity; and

• reports to the Commission every 12 months during the period of this exemption on alternative colours adopted, the impact of this exemption on passenger amenity, and on the outcome of the consultation with the Australian Federation of Disability Organisations.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances, rail premises and rail infrastructure

For a period of five years, compliance with clause 27.3(2) is not required for rail conveyances, rail premises and rail infrastructure if alternative colours adopted provide strong contrast, including for people with impaired colour vision.

### Section C Reasons for seeking temporary exemption:

The exemption allows various formats to be used to convey information on a modern day, mass transit system.

In practice, an 18 point font size cannot be used in all printing. This size is only suitable for signage and posters, not brochures and timetables.

Furthermore, Part 2 of this provision reduces the discretion of the operators to appropriately brand the products. In cases where there are two operators running trains on the same network e.g. the operators have different branding schemes so the services can be distinguished by customers. Part 2 of this clause reduces the operators’ ability to brand the products accordingly.

**Section C.1 Impact on customer experience:**

Vision Australia’s website suggests that luminance contrast has a greater impact on readability than colour contrast alone. ARA members provides all essential travel and customer information in a variety of formats so that customers may access relevant information in their preferred format. Communication methods used include:

* Printed, hard copy information (e.g. timetables or station access guides) with appropriate luminance contrast between the background and the print;
* Websites with dedicated information on accessibility for each network;
* Phone, TTY, National Relay Service for contact with travel contact centres, customer feedback teams, call centres etc;
* SMS/texting service for customers (of particular use for customers who are deaf or have a hearing impairment);
* Visual information at stations and on trains (PIDs);
* Audible information at stations and on trains via public announcement systems (with hearing loops available on the majority of trains and at a significant number of stations);
* On demand information at stations;
* Emergency and disability assistance consoles on board train services; and
* Direct assistance from station staff, or on-board staff.

**Section C.2 Progress on alternative solutions and consultation with the disability sector**

Operators recognise the significance of accessible, correct and timely information to the success of a journey. A variety of formats are utilised to convey information and cover a wide range of preferred communication methods. To ensure information is accessible and appropriate, operators have consulted with their Accessibility Reference Groups and disability organisations in relation to:

* A current website re-design that is still in the design stage. The re-design will aim to achieve a AA rating in relation to the Web Content Accessibility Guidelines (WCAG) 2.0
* Specific information that is targeted at customers with disabilities such as Station Access Guides.

## 28.1 Booked services - Notice of requirement for accessible travel

## 28.2 Booked services - Period of notice of requirement for accessible travel

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*28.2 Booked services - Period of notice of requirement for accessible travel*

*Any advance notice required of a requirement for accessible travel must not exceed the period of notice specified for other passengers.*

*Conveyances*

* *Coaches*
* *Ferries*
* *Dial-a-ride services*
* *Trains*

### Section A.1 Current temporary exemption and conditions:

Temporary exemption: rail conveyances

For a period of three years, ARA members operating rail conveyances may require reasonable notice of a requirement for accessible travel, even if this notice period exceeds the period of notice specified for other passengers.

**Section B Temporary exemption sought:**

Temporary exemption: rail conveyances

For a period of five years, ARA members operating rail conveyances may require reasonable notice of a requirement for accessible travel, even if this notice period exceeds the period of notice specified for other passengers.

### Section C Reasons for seeking temporary exemption:

Providing reasonable notice for accessible travel or assistance allows customers with disability to discuss their travel requirements at the time of booking, rail operators’ policies and the conditions of travel can be clearly explained and direct assistance can be arranged and confirmed before travel.

Where rail coaches replace trains, only two allocated spaces are provided in some services. Pre-booking of services provides assurance to the customer that they can be accommodated. Furthermore, if the spaces allocated for customers in wheelchairs or priority seating are not required, they can be sold to other customers rather than running empty.

This notice allows assistance to be provided to customers where there is an unavoidable constraint on creating unassisted access.

**Section C.1 Impact on customer experience:**

Customers receive greater assurance that their needs will be met. Customer Service Assistants are able to provide agreed assistance which may include:

* Provision of ramps to cross platform-train gaps; and
* Helping passengers to embark and disembark from the train.

# Group 2 Application for temporary exemptions from the Transport Standards in relation to issues that were previously deferred

## 11.2 Handrails and grabrails - Handrails to be provided on access paths

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*11.2 Handrails and grabrails - Handrails to be provided on access paths*

*(1) Handrails must be placed along an access path wherever passengers are likely to require additional support or passive guidance.*

*(2) A handrail must not infringe an area on a roadside boarding point that may be needed to deploy a boarding device.*

* *Premises - except premises to which the Premises Standards apply*
* *Infrastructure- except airports that do not accept regular public transport services*

### Section A.1 Reasons for original decision to defer consideration of the application in 2007:

11.2 Handrails and grabrails - Handrails to be provided on access paths

The Commission defers its decision on ARA’s application for a temporary exemption from the requirement to comply with clause 11.2 of the DSAPT in areas other than rail platforms, on rail premises and rail infrastructure. The Commission has formed the view that further consultation between the ARA and interested parties, including the Commission, is required to determine:

• with more precision the circumstances in which the exemption would apply; and

• the impact of the ARA’s proposal on people with disabilities.

### Section B Temporary exemption sought

Temporary exemption: rail platforms

For a period of five years, rail platforms are exempt from clause 11.2.

### Section C Reasons for seeking temporary exemption:

It is not possible for a rail operator to anticipate the level of additional support for every single customer that uses the facility or may use it sometime in the future. The clause as it stands may require the operator to provide handrails along the entire length of the access path from property boundary to boarding point. This could possibly be dangerous and a barrier to mobility aid access on railway infrastructure.

ARA members utilise handrails and grabrails to provide additional support and passive guidance where appropriate. Given that the Premises Standards have been enacted and the corresponding changes in the BCA have been made this change creates greater consistency between access requirements for the rail environment and other buildings.

NOTE: 11.2 in Group 1 and Group 3 are linked.

**Section C.1 Impact on customer experience:**

Current handrails are sufficient. Handrails are also provided as way-finding devices and it is noted that mobility support and way-finding features are already prescribed in other parts of these Standards. For example:

* Alternative way finding and cues are available through TGSIs.
* Ramps to 1 in 19 and stairs are currently required to have handrail.
* Seating provided at rest areas every 60m.
* Seats are provided on platforms
* All pedestrian mazes have fences

## 21.2 Passenger operated devices for opening and closing doors

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*21.2 Passenger operated devices for opening and closing doors*

*Passenger operated devices for opening and closing manual and power assisted doors on conveyances must comply with AS1428.2 (1992) Clause 23.2, Operation, and Clause 23.3, Door handles and hardware.*

*Conveyances*

* *Buses*
* *Coaches*
* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section A.1 Reasons for original decision to defer consideration of the application in 2007:

21.2 Controls - Passenger-operated devices for opening and closing doors

The Commission defers its decision on ARA’s application for a temporary exemption from clause 21.2 of the DSAPT. The Commission has formed the view that further consultation is required between the ARA and interested parties, including the Commission, to determine whether there are safety issues involved in relying on operator assistance for the operation of emergency exits.

**Section B Temporary exemption sought**

For a period of five years, Passenger operated devices for opening and closing manual and power assisted doors on conveyances are exempt from complying with clause 21.2.

### Section C Reasons for seeking temporary exemption:

The emergency door controls are designed to be of higher force to avoid inadvertent use and vandalism. If emergency doors are too easy to operate they can be opened inadvertently. The likelihood and consequence of inadvertent use is higher than inaccessible access.

**Section C.1 Impact on customer experience:**

Most evacuations are orderly and carried out at the direction of guards.

## 21.3 Location of passenger operated controls for opening and locking doors

### Section A Section of the Transport Standards from which a temporary exemption is sought:

*21.3 Location of passenger operated controls for opening and locking doors*

*Passenger operated opening and locking controls for doors on conveyances must be located according to AS1428.1 (2001) Clause 11.1.2, Location.*

*Conveyances*

* *Buses*
* *Coaches*
* *Ferries*
* *Trains*
* *Trams*
* *Light rail*

### Section A.1 Reasons for AHRC original decision to defer consideration of the application in 2007:

21.3 Controls - Location of passenger-operated controls for opening and locking doors

The Commission defers its decision on ARA’s application for a temporary exemption from clause 21.3 of the DSAPT. The Commission has formed the view that further consultation is required between the ARA and interested parties, including the Commission, to determine whether the ARA proposal results in access remaining possible for people needing to approach the door controls side on.

### Section B Temporary exemption sought:

ARA proposed exemption:

The location of passenger operated devices for opening and locking doors on rollingstock are not required to be located according to AS1428.1 (2001) clause 11.1.2 when:

* Varying train/platform heights prevent external door controls being positioned with the ranges specified.
* Whether shields and existing door design limit the available locations to position internal door controls. In these circumstances, controls may be located within 500mm of an internal corner. Operators must ensure appropriate signage directs customers to the door controls.

### Section C Reasons for seeking temporary exemption:

Measurement of external door control to floor height varies with different platform heights.

The existing clause in the standards tends to limit door controls to being fitted on the doors only, when weather shields are fitted internally adjacent to the doors. Weather shields provide protection from rain and other weather conditions.

Some types of trains have the door opening buttons located within 500mm of an internal corner. This restriction is due largely to the placement of windshields (glass partitions) to screen people seating in the adjacent seating from the vestibule area and the impact of weather conditions when the carriages external doors are open. There is a need to balance door button locations, customer comfort and seating capacity.

**Section C.1 Impact on customer experience:**

Customers with mobility devices may need to position themselves in a comfortable location to reach and press the button.

**Section C.2 Consultation with the disability sector**

ARA members have undertaken consultation in relation to the location of fixtures and fittings on trains (including the location of door buttons) with the disability sector and customers with a disability. For example a series of consultations were held as part of the design and construction phases for new suburban trains. Representatives from the disability sector preferred door buttons to be located on door leaves (as per design for new trains) if this is not possible then locating buttons as close to the door as possible, with accessible signage was an acceptable alternative to participants. Representatives for people with vision impairment highlighted the need for external buttons to be situated away from door leaves if there is the possibility of a customer’s hand becoming trapped.

# Group 3 Application for temporary exemptions from the Premises Standards

## H2.2 (1) Access paths – Unhindered passage

**Section A Section of the Premises Standards from which a temporary exemption is sought:**

*H2.2 Accessways*

*(1) An accessway must comply with AS 1428.2.*

**Section B Temporary exemption sought:**

Part 1: Temporary exemption: rail premises and rail infrastructure

* For a period of five years, flange gaps of up to 75mm are permitted where a level crossing forms part of an access path on rail premises or rail infrastructure.

Part 2: Temporary exemption: existing rail premises and existing rail infrastructure

* For a period of five years, an access path is required to provide entrance and exit only at a single boundary point for existing rail stations.

**Section C Reasons for seeking temporary exemption:**

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 2.1 of the Transport Standards, Access Paths – Unhindered passage (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

Part 1: Improvements to pathways and ramps for compliance with access to railway stations have been undertaken by railway operators where reasonably practicable. The number of facilities and the legacy design of the facilities and grounds require substantial capital investment to correct access deficiencies at all locations. Due to Government funding limitations and the quantum of work required across large networks, correction of all access points at all locations has not been reasonably practicable. Meeting different stakeholders’ requirements including those of track owners and dealing with heritage status of stations can become impediments to improvements of pathways and ramps.

Improvements to access of railway networks and facilities across the country will continue through upgrades to facilities wherever practicable, in consultation and with regard to priority set by affected stakeholders. The industry believes that money is better spent by upgrading multiple stations rather than focussing just one area of a station.

This exemption allows rail operator to identify the safest and most practicable access path at stations. This will enable the operator to find a solution on existing infrastructure, having regards to:

* External geography
* Track configuration

Part 2: On existing stations there may be multiple entry/exit points, which use steps, rail crossings, narrow paths, and/or steep ramps. There is a significant cost to create accessible paths of travel for multiple station entrances/exits across multiple stations that require accessibility upgrades. Furthermore, providing continuous accessible paths of travel at multiple station entrances/exits may not be feasible due to land constraints and topography limitations such as, road widening and other development activities which have significantly constrained the railway corridor in many locations.

When undertaking an access upgrade, the scope of work is focused on the functional outcomes sought by customers and provides a primary path of travel through a station precinct. This accessible path is critical to ensuring that customers are able to safely and independently use rail services, as it provides connectivity between all essential facilities and information. NOTE: The ARA will pursue amendment of this provision in the modernisation of the Transport Standards.

**Section C.1 Impact on customer experience:**

There will only be one main point of entry and this is a primary point of entry for customers therefore will provide a seamless journey for customers with disability.

Passengers are advised via brochures, telephone information services and transport information website about the accessibility on stations. In many states, this includes information that stations have only limited access (eg. via stairs) or assisted access (e.g. via a steep ramp or level crossing. People with mobility aids or difficulties with walking may want to be accompanied by a travelling companion for assistance).On existing railway stations a clear and unobstructed path:

* is provided from a nominated boundary point/s, one of which is identified as the primary station entrance/exit;
* connects to each platform and providing cross corridor access where appropriate;
* links accessible platform entries/exits to the assisted boarding point on a platform;
* provides, as far as possible, independent access to rollingstock through partial or full platform raising; and,
* leads to and from all accessible facilities such as, a unisex accessible toilet or accessible parking.

**Section C.2 Consultation with the disability sector**

ARA members have consulted with disability sector organisations and customers with disabilities in relation to station prioritisation. Participants indicated a significant preference for a greater number of upgrades with a more limited scope, as opposed to fewer but more comprehensive upgrades. Customer feedback on ARA member’s customer survey, conducted in 2010 also supported this approach. Feedback aligns with an approach to provide a primary path of travel through a station environment at the widest range of stations possible.

**H2.2 (3) Access ways**

**Section A Section of the Premises Standards from which a temporary exemption is sought:**

*H2.2 Accessways*

*(3) The minimum unobstructed width of an accessway must be 1.2 m, except that:*

1. *the minimum unobstructed width of a moving walkway forming part of an accessway may be not less than 850 mm; and*
2. *the minimum unobstructed width of a doorway in an accessway may be not less than 850 mm.*
3. Premises Infrastructure except airports that do not accept regular public transport services

**Section B Temporary exemption sought:**

For a period of five years, for existing rail premises and existing rail infrastructure:

• where the 1200mm minimum unobstructed width for access paths cannot be met due to structural and technical constraints, an access path with a minimum unobstructed width of 1000mm may be provided;

• the 850mm minimum unobstructed width (applicable to doorways and gateways) is also permitted on access paths for the purposes of passing an obstruction limited to less than 800mm in length; and

• platform edge warning TGSIs are permitted to intrude into access paths.

**Section C Reasons for seeking temporary exemption:**

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 2.4 of the Transport Standards, Access Paths – Minimum unobstructed width (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

Platforms on existing stations are often built in cuttings and tend to be low, curved and narrow significantly towards either end. Obstacles along existing platforms are common, along with multiple entry/exit points, use of steps, rail crossings and/or steep ramps. Furthermore, road widening and other development activities have significantly constrained the railway corridor in many locations.

Rail corridor, land constraints and topography limit available space on platforms and on the concourses to house all of the necessary access elements.

Given the constraints listed above it has proven challenging to upgrade stations and meet access requirements for the minimum unobstructed width of accessways, in particular, on existing platforms.

For tram, tram infrastructure is built on existing roadways which can result in space limitations due to several competing priorities including road lanes, car parks, bike lanes and the tram stop. Some pre-existing stops on the tram network were built with old shelter configurations that are no longer used due to their depth, which has resulted in an access path that is less than 1.2m.

**Section C.1 Impact on customer experience:**

Wherever possible, rail operators work in consultation with user groups to minimise the impact of a constricted width. This often leads to an improved customer outcome. Station staff are available to assist customers wherever possible and can guide them to the areas of the station precinct which offer the greatest accessibility for their needs.

If possible, operators ensured that upgraded stations have the required minimum unobstructed width on accessways, throughout the upgraded station precinct. Where this is not feasible, precedence is given to achieving required widths on a primary path of travel through a station.

For customers with disabilities this may be a primary path from a street entrance, accessible car park, through a station entrance and onto or between platforms via a lift or ramp, leading to the assisted boarding point. Path widths may be restricted in other areas of the station environment outside of this primary path, such as, beside lift shafts or stairs on narrow platforms.

There may be a requirement for customers with mobility devices to take turns using the path or utilise the assisted boarding point rather than traversing the length of a platform. It should be noted that key facilities and services are collocated at the assisted boarding point and/or along this primary path. Customers who are visually impaired may need to work with an orientation and mobility instructor to ensure that they are familiar with the station layout and can identify where the path width is reduced and what wayfinding cues are in place to assist with navigating through the environment. Station staff or operators’ customer service officers are available to assist customers wherever possible.

Stops that are non-compliant are still able to be accessed by customers who use mobility aids, however they sometimes have to travel over the tactiles due to the restricted space.

Extensive consultation with customers, local councils, local businesses and VicRoads occurs prior to the construction of a new accessible tram stop. All newly constructed stops comply with the 1.2m minimum unobstructed width.

Yarra Trams has not conducted any consultation specifically relating to access paths.

**Section C.2 Consultation with the disability sector and progress on alternative solutions**

Consultation:

ARA members consult with their Accessibility Reference Groups on all major station upgrades. Accessibility Reference Groups function as a consultation and advisory mechanism by which operators can engage with various disability groups and organisations, ensuring the needs of people with disabilities requiring rail services are considered across all areas of planning and development. Station upgrades are discussed at the pre-feasibility concept and design and detailed design stages with regular updates occurring throughout construction phases.

Alternative Solution:

Primary Path of Travel – When upgrading existing narrow platforms or platforms where necessary infrastructure constrains the accessway width precedence is given to achieving required accessway widths from the accessible platform entry/exit to the nominated boarding point. Where possible all necessary facilities/services are also located along this accessway or at the assisted boarding points (eg. timetable information or the unisex accessible toilet). Other sections of the platform or station environment may have paths with reduced widths but it is anticipated that the impact on customers with disabilities is minimised through this solution. This primary path of travel is based on a ‘whole of journey’ approach and aims to ensure a seamless journey from the station precinct boundary, through necessary services and facilities and, ultimately onto the train, as opposed to, upgrading isolated pieces of infrastructure to compliance requirements.

### H2.2 (6) Accessways

### Section A Section of the Premises Standards from which a temporary exemption is sought:

*H2.2 Accessways*

*(6) Manoeuvring areas that allow a 180 degree wheelchair turn must comply with clause 6.2 of AS 1428.2.*

**Section B Temporary exemption sought**

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of five years, a manoeuvring area in existing rail premises and existing rail infrastructure complying only with the lower end of the range of dimensions stated in AS1428.2 (1992) Clause 6.2 is permitted, to the extent that space constraints do not permit a larger manoeuvring area.

### Section C Reasons for seeking temporary exemption

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 3.1 of the Transport Standards, Circulation space for wheelchairs to turn in (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

Larger circulation spaces are often not permitted due the constraints of existing platforms, track alignment, narrow rail corridors and surrounding infrastructure. Where possible, rail operators ensure that upgraded stations have appropriate circulation spaces. However, in relation to existing narrow platforms, it is challenging to try and balance access requirements with the need to provide physical infrastructure such as, stairs and lifts, in a limited space.

**Section C.1 Impact on customer experience:**

Restricted circulation room may mean that customers using mobility devices need to perform more than one continuous movement to access a particular facility.

**Section C. 2 Progress on alternative solutions and consultation with the disability sector**

Alternative Solution:

Primary Path of Travel – When upgrading existing narrow platforms within narrow rail corridors necessary infrastructure constrains the required circulation room. Where possible, precedence is given to achieving required circulation space on a primary path of travel.

### H2.2 (7) Accessways

### Section A Section of the Premises Standards from which a temporary exemption is sought:

### *H2.2 Accessways*

### *(7) A passing area must be provided at least every 6 metres along any two‑way accessway that is less than 1 800 mm wide.*

**Section B Temporary Exemption Sought**

Temporary exemption: existing rail platforms

For a period of five years, for existing rail platforms a passing area every 9 metres along any two-way access path that is less than 1800mm wide is permitted.

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 4.2 of the Transport Standards, Passing areas – Two-way access paths and aerobridges(Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

Increasing the distance required between passing areas to 9 meters acknowledges the limitations on existing platforms due to track alignment, narrow rail corridors and surrounding infrastructure.

Significant capital improvement is not achievable due to limited spaces in and around buildings and on platforms. Many rail structures are over 100 years old. Continuous improvements have been implemented across the passenger rail networks, however balancing capital improvements with ongoing priority for operational maintenance for rail safety has restricted the pace of improvements toward compliance. Existing legacy buildings and surrounding grounds, some of which are heritage listed, increase the challenge and complexity of compliance to 6 metres.

Given that the Premises Standards have been enacted and the corresponding changes in the BCA have been made this change creates greater consistency between access requirements for the rail environment and other buildings.

**Section C.1 Impact on customer experience:**

Where possible, ARA members ensure that upgraded stations have a maximum of 6 metres between passing spaces on an accessway less than 1.8 metres wide. If there is a path less than 1.8 metres wide with greater than 6 metres between passing spaces than two or more customers with mobility devices may need to take turns using the path. Customers with vision impairment may need to work with an orientation and mobility instructor to ensure that they are familiar with the station layout and can identify where the path width is reduced and what way-finding cues are in place to assist with navigation.

At some stations, where possible (e.g. stations with larger patronage where crowding may be an issue) direct assistance is provided by railway staff. CCTV is also installed in a large number of stations to monitor and provide assistance to customers with disability when needed. An assistance button and/or a help phone is also available at the majority of stations.

**Section C. 2 Consultation with the disability sector and alternative solution**

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

Alternative Solution:

Primary Path of Travel – When upgrading existing narrow platforms or platforms where necessary infrastructure constrains the accessway width precedence is given to achieving required accessway widths on a primary path of travel. On existing railway stations this is a clear and unobstructed path:

* from a nominated boundary point/s, one of which is identified as the primary station entrance/exit;
* connecting to each platform and providing cross corridor access where appropriate;
* linking accessible platform entries/exits to the assisted boarding point on a platform
* providing, as far as possible, independent access to rollingstock through partial or full platform raising; and
* leading to and from all accessible facilities such as, a unisex accessible toilet or accessible parking boarding points (eg. Timetable information or the unisex accessible toilet).

This primary path of travel is based on a ‘whole of journey’ approach and aims to ensure a seamless journey from the station precinct boundary, through necessary services and facilities and, ultimately onto the train, as opposed to, upgrading isolated pieces of infrastructure to compliance requirements.

This approach is consistent with customer feedback through Queensland Rail’s Accessibility Surveys and Workshops conducted in 2010/2011.

## H2.4 (2) Handrails and grabrails - Handrails to be provided on access paths

### Section A Section of the Premises Standards from which a temporary exemption is sought:

*H2.4 Handrails and grabrails*

*(2) Handrails must be placed along an accessway wherever passengers are likely to require additional support or passive guidance.*

**Section B Temporary exemption sought:**

Temporary exemption: rail platforms

For a period of five years, rail platforms are exempt from clause 11.2.

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 11.2 of the Transport Standards, Handrails and grabrails – Handrails to be provided on access paths (Group 1 & 3). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

Railway premises and infrastructure should be excluded from this requirement as it is not possible to anticipate the level of additional support or passive guidance needed by customers along an access path. The clause as it stands may require the provision of handrails along the entire length of the access path from property boundary to boarding point.

The application of continuous handrails along the length of the platform could be dangerous and a barrier to mobility aid access on railway infrastructure by adversely affecting passenger flows, reducing the width of access paths and preventing seating from being placed along the building shoreline.  There are also impacts from applying handrails to heritage station buildings.  Handrails cannot be attached without damage to the fabric of the building.

**Section C.1 Impact on customer experience:**

The absence of handrails along platform has not been demonstrated to have any detrimental impact. Handrails are also provided as way-finding devices. It should be noted that mobility support and way-finding features are already prescribed in other parts of these Standards. For example:

* alternative way-finding and cues are available through TGSIs;
* ramps to 1 in 19 and stairs are currently required to have a handrail;
* seating provided at rest areas every 60 metres;
* seats are provided on platforms; and
* all pedestrian mazes have fences.

## H2.5 Doorways and doors - Compliance with Australian Standard — premises and infrastructure

### Section A Section of the Premises Standards from which a temporary exemption is sought:

*H2.5 Doorways and doors*

*Doorways and doors must comply with clause 11 (except clause 11.5.2) of AS 1428.2*

**Section B Temporary exemption sought**

Temporary exemption: existing rail platforms

For a period of five years, existing doorways and doors on existing rail platforms are exempt from clause H2.5

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 12.2 of the Transport Standards, Doorways and doors – Compliance with Australian Standard – premises and infrastructure (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

In relation to accessible doors for public unisex toilets, it has proved to be challenging to find suppliers of doors and door hardware that will meet the access requirements prescribed in AS1428.2 and in particular the referenced AS1428.1 clause 13.5.2 in relation to force required to open, swing and hold a door open. Specifically, a force of 6N to swing the door and 7.5N to hold the door open between 60 degrees and 90 degrees has proven difficult if not impossible to achieve.

NOTE: many operators can meet 2009 version of AS1428.1but would require further clarifications from AHRC.

**Section C.1 Impact on customer experience:**

The industry is looking to implement automated doors when doing upgrades particularly at high traffic stations. Recent station upgrades in many jurisdictions include design modifications to public unisex toilet doors which offer a balance between access and security requirements. Specifically, the new doors meet the requirements of the latest AS1428.1 2009 in relation to forces required to open, swing and hold the door open (20N’s in each case). Given that these new doors meet the latest Australian Standard it is anticipated that the doors can be employed by customers with disabilities.

**Section C.2 Progress on alternative solutions and consultation with the disability sector**

Alternative Solution:

An operator has worked with supplies to source a door that meets access requires and anti-vandalism requirements for public unisex toilet doors, in particular. Currently, a new design (with a hollowed out interior) appears to offer a viable solution and balances access requirements with security needs. Consultation is yet to be conducted but is anticipated to occur as part of a current network extension project.

## H2.9 Toilets - Location of accessible toilets

### Section A Section of the Premises Standards from which a temporary exemption is sought:

*H2.9 Location of accessible toilets*

*Accessible toilets must be in the same location as other toilets.*

### Section B Temporary exemption sought

Temporary exemption: existing rail premises and existing rail infrastructure

For a period of five years, for existing rail premises and existing rail infrastructure accessible toilets are not required to be in the same location as other toilets.

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 15.2 of the Transport Standards, Toilets – Location of accessible toilets (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

The location of accessible toilets will be dictated by space limitations at existing stations. The layout and construction of older stations (including those with heritage status) place limitations on the position of accessible toilets, as relocation can impact on other aspects of amenity and access.

**Section C.1 Impact on customer experience:**

Clear signage and information on the operators’ website and at stations are available to point customers to nearest accessible toilets.

**Section C.2 Reporting to the AHRC**

Report to the AHRC:

As previously noted in this application, the AHRC and ARA members agreed that the reporting to and consultation with the AHRC were to be carried out through the RISSB Code development process as the AHRC is a permanent observer of that process. Based on this understanding, the industry continued to provide updates to AHRC staff present at the Code development meetings over a period of 5 years. The ARA understands that the AHRC is satisfied with this arrangement as the AHRC has never directed the ARA or its members to consult with or report to the AHRC via different mechanisms.

**H2.11 Tactile ground surface indicators - Location**

### Section A Section of the Premises Standards from which a temporary exemption is sought:

*H2.11 Tactile Ground Surface Indicators*

### *Tactile ground surface indicators must be installed in accordance with AS 1428.4 on an accessway and must indicate changes of direction in accordance with clause 18.1 of AS 1428.2.*

**Section B Temporary exemption sought:**

Temporary exemption: rail premises and rail infrastructure

For a period of five years, compliance with clause H2.11 is not required on rail premises and rail infrastructure.

### Section C Reasons for seeking temporary exemption

Tactile ground surface indicators (TGSIs) are widely accepted as a veryuseful way of enabling people who have a vision impairment to quickly move through busy, congested spaces and environments that lack sufficient architectural cues. However, as identified in AS/NZS1428.4.1:2009 (Appendix A) *‘..the design industry should not over-use or over-prescribe the installation of TGSIs, but rather should make full use of the range of environmental guidance features available so as to minimize inconvenience to other members of the community.’*

A continuation of the existing temporary exemption is required as further research and consultation is required to determine the optimal use and location of TGSIs in a rail environment. Railway stations are complex environments with a range of entry/exits points, structures, and path features that can include fences, kiss and ride zones, car parks, pedestrian entrances from the street, subways, overbridges, stairs, ramps, walkways, lifts, shelters, station buildings and an array of columns and poles. Careful planning and understanding of way-finding is necessary to determine how and where to use appropriate cues (ie. TGSIs, signage and architectural features), across all of these elements.

Industry operators’ use of TGSIs is carefully considered and determined by each individual station environment in conjunction with other way-finding cues including: signage, architectural elements audible cues, colour/luminance contrast, landscaping and tactile contrasts. TGSI is only installed where operators and key stakeholders including people with disabilities determine to be the best path ie on busy concourse or from staircase to platform.

There are limitations to the use of TGSI for example the use of both gravel and simple sealed surfaces on many regional platforms require extensive capital upgrades prior to the application of TGSIs. Applying TGSIs to all stations has not been possible in many instances and the required capital upgrades across all assets have not been reasonably practicable to date to accommodate TGSIs.in many jurisdictions TGSI is used in a high pedestrian traffic area.

**Section C.1 Impact on customer experience:**

The use of directional TGSIs is minimised as far as possible as the built environment offers many other way-finding cues that can be utilised. The layout of directional TGSIs is designed to reduce the impact upon people who use mobility devices such as wheelchairs and people who have ambulant disabilities or difficulties in traversing uneven surfaces. However, in large open spaces where it is necessary for people to go between certain points than directional TGSIs are used when a station is upgraded.

On stations which have undergone an accessibility upgrade:

Hazard TGSIs are used:

* Along the length of a platform adjacent to the cope (hazard TGSIs may be used to represent the yellow line).
* Indicate stairs or ramps.
* Indicate obstructions below 2m, hazards within a circulation space or adjacent to a path of travel (where possible removing the hazard or obstacle is preferred).
* In conjunction with directional TGSIs to indicate a change in direction or the need to stop and investigate further.

Directional TGSIs are used to:

* Lead people from the edge of a platform to the disability assistance and emergency help phone.
* Lead people from the edge of a platform to a platform entry or exit. If there are multiple entry/exit points than a nominated entry/exit which minimises impact on people with mobility devices is selected.

The use of TGSI is varied from location to location. Guidance and navigation assistance for people with disabilities and the general public are available in high traffic area. This assistance is targeted at different types of disability e.g. mobility or visual impairment.

**Section C.2 Consultation with the disability sector**

ARA members have consulted extensively with the vision-impaired and blindness sectors on the application of TGSIs in station environments. Consultations typically have occurred on site-specific issues, particularly on the appropriate layout of TGSIs at new and upgraded stations. Other issues that have been discussed with affected customers include:

* The colour contrast of TGSIs with surrounding surfaces.
* Comparison of the functionality of TGSI product types.

## H2.12 Lighting - Illumination levels — premises and infrastructure

### Section A Section of the Premises Standards from which a temporary exemption is sought:

***H2.12 Lighting***

### *Any lighting provided must comply with minimum levels of maintenance illumination for various situations shown in the notes to clause 19.1 of AS 1428.2.*

### Section B Temporary exemption sought:

Temporary exemption: rail premises and rail infrastructure

For a period of five years, compliance with clause H2.12 is not required on rail premises and rail infrastructure, subject to the condition that the ARA member concerned complies in full with the lighting levels set out in the table below.

TABLE 1 – RECOMMENDED LIGHTING LEVELS FOR RAILWAY STATIONS (summary of the Webb report)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CODE REQUIREMENTS | | | | | COMMENT | RECOMMENDED ILLUMINANCE | | | RECOMMENDED UNIFORMITY | |
|  | CODE |  | Eav | E min | EV min |  | Eav | E min | EV min | U1 | U2 |
| ENCLOSED STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| ENTRANCE, PASSAGEWAYS, WALKWAYS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| STAIRS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| RAMPS | AS1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| GENERAL PLATFORM | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 150 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| OPEN STATIONS |  |  |  |  |  |  |  |  |  |  |  |
| TOILETS AND LOCKER ROOMS | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | 0.5 |  |
| COUNTER TOPS | AS1428.2 | SECTION 19 | 250 |  |  |  | 250 |  |  | 0.5 |  |
| DISPLAYS (TIMETABLES) | AS1428.2 | SECTION 19 | 200-300 |  |  |  | 200 |  |  | 0.5 |  |
| TELEPHONES (TICKET MACHINES) | AS1428.2 | SECTION 19 | 200 |  |  |  | 200 |  |  | N/A |  |
| YELLOW LINE (PLATFORM EDGE) |  |  |  |  |  | NOTE 1 |  | 30 |  |  |  |
| GENERAL PLATFORM | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| COVERED AREAS | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| CORE AREAS (AWNING) | AS1680.2.1 | TABLE E1, 1.2 | 160 |  |  |  | 160 |  |  | 0.5 |  |
| RAMPS AND STEPS (OPEN) | AS1158.3.1 | P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| OPEN FOOTBRIDGE | AS1158.3.1 | CAT P8 | 7 | 2 | 2 | NOTES 4 & 5 | 42 | 21 | 14 |  | 7 |
| PRIMARY ACCESS PATHS | AS1158.3.1 | CAT P6 | 21 | 7 | 7 | NOTE 2 | 42 | 21 | 14 |  | 7 |
| ENCLOSED FOOTBRIDGE | AS 1428.2 | SECTION 19 | 150 |  |  |  | 150 |  |  | 0.5 |  |
| SUBWAYS | AS1158.3.1 | CAT P10 | 35 | 17.5 | 17.5 |  | 35 | 17.5 | 17.5 |  | 7 |

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 20.1 of the Transport Standards, Lighting – Illumination levels – premises and infrastructure (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

It is problematic to illuminate open full length platforms due to the impact on driver safety (drivers will have difficulty approaching platforms at night) and consideration of surrounding residents. Most of the operators have been using the exemption in order to supply rail services.

The propose Standards sets a significantly higher lux (measure of intensity) in an aerial footbridge than in subways. The definition of ‘enclosed’ aerial footbridge should specifically exclude footbridges that have open mesh walls or glass walls. Many operators have had to respond to community concerns about lights from aerial footbridges illuminating their properties.

The AHRC should also note the Webb Lighting Report attached. (Attachment 4)

**Section C.1 Impact on customer experience:**

Lighting level is still suitable for customers. When operators consider lighting change, safety impact for customers and train crews are key factors.

**Section C.2 Progress on alternative solutions and consultation with the disability sector**

The Webb Lighting Report has been developed to guide the design requirements for lighting within station precincts. The report is focused on identifying lux levels appropriate to each part of the station environment. Safety of customers and staff was a key consideration in the drafting of the report.

## H2.15 Controls - Compliance with Australian Standard — premises and infrastructure

### Section A Section of the Premises Standards from which a temporary exemption is sought:

### *H2.15 Controls*

### *Controls must comply with clause 11 of AS 1428.1.*

**Section B Temporary exemption sought:**

Temporary exemption: rail premises and rail infrastructure

For a period of five years, controls in rail premises and rail infrastructure are not required to comply with clause H2.15, subject to the condition that the controls concerned meet the requirement of a maximum 20N force for operation.

### Section C Reasons for seeking temporary exemption:

NOTE: section C, C.1 and C.2 correspond with sections C, C.1 and C.2 of the application for temporary exemption from part 21.1 of the Transport Standards, Controls – Compliance with Australian Standard – premises and infrastructure (Group 1). This is due to the relevant requirements being mirrored in both the Transport and Premises Standards.

In relation to accessible doors for public unisex toilets, it has proved to be challenging to find suppliers of doors and door hardware that will meet the access requirements prescribed in AS1428.2 and in particular the referenced AS1428.1 clause 13.5.2 in relation to force required to open, swing and hold a door open. Specifically, a force of 6N to swing the door and 7.5N to hold the door open between 60 degrees and 90 degrees has proven difficult if not impossible to achieve.

NOTE: many operators can meet 2009 version of the AS1428.1 but would require further clarifications from AHRC.

**Section C.1 Impact on customer experience:**

The industry is looking to implement automated doors when doing upgrades particularly at high traffic stations. Recent station upgrades in many jurisdictions include design modifications to public unisex toilet doors which offer a balance between access and security requirements. Specifically, the new doors meet the requirements of the latest AS1428.1 2009 in relation to forces required to open, swing and hold the door open (20N’s in each case). Given that these new doors meet the latest Australian Standard it is anticipated that the doors can be employed by customers with disabilities.

**Section C.2 Progress on alternative solutions:**

An operator has worked with supplies to source a door that meets access requires and anti-vandalism requirements for public unisex toilet doors, in particular. Currently, a new design (with a hollowed out interior) appears to offer a viable solution and balances access requirements with security needs. Consultation is yet to be conducted but is anticipated to occur as part of a current network extension project.

# Appendix 1 List of ARA Members

The following members contributed directly to the Application:

* Capital Metro
* Department of Planning Transport and Infrastructure (South Australia)
* Gold Coast Light Rail
* Great Southern Rail
* Metro Trains Melbourne
* Public Transport Authority Western Australia
* Queensland Rail
* Transport for New South Wales (including Sydney Trains and NSW Trains)
* Yarra Trams
* V/Line

A list of ARA’s entire membership is available at <http://www.raildirectory.com.au/search-via-ara-membership>.

# Appendix 2 Relevant Australian Standards\*

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**Key:**

Highlights in Yellow: references within extract to other Standards (provided in “Further References” [right most column])

Highlights in Green: references within “Further References” that may be extracted below in the same cell.

Note: Figures have not been extracted. Where possible, a brief description of the Figure has been given.

|  |  |  |  |
| --- | --- | --- | --- |
| **DSAPT 2002 Reference** | **Australian Standard Ref** | **Extract** | **Further References** |
| 2.1 | AS1428.2 (1992) Cl 8.1 | **General** Walkways, ramps and landings shall comply with AS 1428.1, with the following exceptions and additional requirements:  (a) *Width* Walkways, ramps and landings shall have an unobstructed width of not less than 1200 mm.  (b) *Provision of landings at ramps* Ramps shall be provided with landings at the top and bottom of the ramp and at intervals not exceeding —  (i) for ramp gradients of 1 in 14: 6 m;  (ii) for ramp gradients of 1 in 19: 14 m; and  (iii) for ramp gradients between 1 in 19 and 1 in 14, at intervals which shall be obtained by linear  interpolation.  (c) *Doorways at landings* The dimensions of the landings shall be in accordance with Clause 11.5.4.  NOTE: A table for calculating the length of a ramp for various rises and gradients is provided in Appendix C. | **11.5.4** *Landings at doorways* The dimensions of a landing at a doorway shall comply with Clause 11.5.2 (see also Note  to Clause 11.2).  **11.5.2** *Circulation spaces at doorways* The circulation spaces at doorways shall comply with AS 1428.1 except that 100 mm shall be added to all length (L) values and 50 mm shall be added to all width (W) values.  Note to Clause 11.2  NOTE: It is in the interests of people with disabilities for thresholds at doorways to be eliminated. Proprietary draught and water seals are available  for use on the bottom of doors as an alternative to thresholds. Water can be controlled by the use of grates (see Clause 9(c)). Canopies for weather  protection at entry doors may also enable thresholds to be eliminated. This is not always possible and, where thresholds do occur, a kerb ramp  should be used to overcome the change of level.  AS 1428.1 not extracted. |
| 2.2 | AS1428.2 (1992) Cl 7 | **7 CONTINUOUS ACCESSIBLEPATH OF TRAVEL** Continuous accessible paths of travel shall be provided as follows:  (a) Accessible paths of travel within the boundary of the site shall be provided from transportation stops, accessible parking and accessible passenger loading zones, and public streets or walkways to the accessible building entrance they serve.  (b) Accessible paths of travel shall connect accessible buildings, facilities, and spaces that are on the same site.  (c) Accessible paths of travel shall connect accessible building entrances with all accessible spaces and facilities within a building.  (d) Accessible paths of travel shall connect accessible entrances of each accessible building with those exterior and interior spaces and facilities that serve it.  (e) The accessible elements of buildings and facilities shall be arranged so as to minimize distances to be travelled between them.  NOTE:  .....  In areas of high use by people with ambulatory disabilities, such as areas frequented by elderly people, seats should be provided no more  than 60 m apart alongside paths of travel .... |  |
| 3.1 | AS1428.2 (1992) Cl 6.2 | **6.2 Circulation space for 180****wheelchair turn**  The space required for a wheelchair to make a 180turn shall be not less than 2070 mm in the direction of travel and not less than 1540 mm wide.  NOTE: A space of 2270 mm in the direction of travel and 1740 mm wide is preferred. |  |
| 5.1 (2) | AS1428.2 (1992) Cl 27.1(a) | **27.1 General** Street furniture, which includes objects such as seats, tables, drinking fountains, planter boxes, rubbish bins and the like, shall comply with the following:  (a) Objects shall not protrude into an accessible path of travel. Seats shall be a minimum of 500 mm away from the path of travel. |  |
| 6.1 | AS1428.2 (1992) Cl 8 | **8.1 General** Walkways, ramps and landings shall comply with AS 1428.1, with the following exceptions and additional requirements:  (a) *Width* Walkways, ramps and landings shall have an unobstructed width of not less than 1200 mm.  (b) *Provision of landings at ramps* Ramps shall be provided with landings at the top and bottom of the ramp and at intervals not exceeding —  (i) for ramp gradients of 1 in 14: 6 m;  (ii) for ramp gradients of 1 in 19: 14 m; and  (iii) for ramp gradients between 1 in 19 and 1 in 14, at intervals which shall be obtained by linear interpolation.  (c) *Doorways at landings* The dimensions of the landings shall be in accordance with Clause 11.5.4.  NOTE: A table for calculating the length of a ramp for various rises and gradients is provided in Appendix C.  **8.2 Outdoor conditions** In outdoor conditions, walkways, ramps and landings shall be designed so that water does not accumulate on surfaces. (For requirements for ground surfaces, see Clause 9.)  **8.3 Ramp handrails** Ramp handrails shall comply with Clause 10.  **8.4 Kerb ramps and step ramps**  **8.4.1** *General* The design, construction and location of kerb ramps and step ramps shall comply with AS 1428.1.  **8.4.2** *Provision of ramps at kerbs* Wherever a path of travel crosses a kerb, one of the following shall be provided —  (a) a kerb ramp in accordance with AS 1428.1 (for preferred gradient, see Notes to Figure 8 of AS 1428.1);  (b) ramps and landings in accordance with this Clause (8); or  (c) the surfaces shall be graded to meet each other, provided that any gradient and abutment of surfaces complies with AS 1428.1 and that tactile directional indicators are provided as appropriate (see Preface).  NOTE: Drainage may be achieved by placing gratings at the base of ramps (see Clause 9(c)).  **8.4.3** *Location at marked crossings* Kerb ramps (the entry to ramps) at marked crossings shall be wholly contained within the markings, excluding any flared sides (see Figure 4).  **8.4.4** *Islands* Raised islands in crossings shall be cut through level with the street or have kerb ramps at both sides and a level area at least 1220 mm long in the part of the island intersected by the crossings (see Figure 4).  NOTES:  1 Traffic signal control buttons should be positioned within the zone of common reach (see Clause 22.4).  2 Where traffic signals are installed, auditory signals and tactile directional indicator buttons should be provided.  **8.4.5** *Surface* The ramp and sloping sides shall be slip-resistant and of a colour that contrasts with the adjoining surface.  **8.4.6** *Tactile warnings* Warning strips shall be provided at the top of the ramp, in accordance with Clause 18.1. | AS1428.1 not extracted  **11.5.4** *Landings at doorways* The dimensions of a landing at a doorway shall comply with Clause 11.5.2 (see also Note  to Clause 11.2).  **11.5.2** *Circulation spaces at doorways* The circulation spaces at doorways shall comply with AS 1428.1 except that 100 mm shall be added to all length (L) values and 50 mm shall be added to all width (W) values.  Note to Clause 11.2  NOTE: It is in the interests of people with disabilities for thresholds at doorways to be eliminated. Proprietary draught and water seals are available  for use on the bottom of doors as an alternative to thresholds. Water can be controlled by the use of grates (see Clause 9(c)). Canopies for weather  protection at entry doors may also enable thresholds to be eliminated. This is not always possible and, where thresholds do occur, a kerb ramp  should be used to overcome the change of level.  **Clause 9 GROUND AND FLOOR SURFACES** Ground and floor surfaces shall comply with the requirements for floor surfaces in AS 1428.1, and with the following:  (a) *Abutment of surfaces* Paving bricks with bevelled edges or chamfered arises and heavily textured and figured  surfaces such as raked joint pavers shall not be used.  (b) *Carpet* Where carpet is used on a ground or floor surface, the following requirements apply:  (i) The carpet shall be securely attached.  (ii) Any pad, backing or cushioning shall provide a firm surface.  (iii) The carpet shall have a level loop, a textured loop, a level cut pile or a level cut or uncut pile texture.  (iv) The pile height shall be not more than 6 mm.  (v) Exposed edges of carpet shall be fastened to the floor surface and shall have a trim along the entire  length of any exposed edge.  (vi) Carpet edge trim shall create no ridge on the floor surface higher than 3 mm.  (c) *Gratings* If gratings are located in a walking surface, they shall have spaces not more than 13 mm wide and  not more than 150 mm long. If gratings have elongated openings, they shall be placed so that the long  dimension is transverse to the dominant direction of travel.  **Clause 10 HANDRAILS AND GRABRAILS**  **10.1 Handrails**  **10.1.1** *General* The following general requirements apply for handrails:  (a) The design and construction of handrails shall comply with AS 1428.1.  (b) The end of the handrail shall be extended parallel to the surface below for a minimum of 300 mm (450 mm is preferred). The end shall be a continuous rail, turned down 100 mm or be returned fully to the end post or wall face.  (c) Where a handrail is not continued, a tactile indicator in the form of a domed button shall be provided in accordance with Figure 5.  (d) Gripping surfaces of handrails shall be continuous.  (e) Handrails shall not rotate within their fittings.  NOTE: Where a high proportion of users are short (i .e. not necessarily children) a second handrail should be provided in accordance with Figure 5. When tested in accordance with the test for head and neck entrapment in AS 1924.2, the space between the handrail s should allow Probe B to be fully inserted without becoming entrapped in any way.  **10.1.2** *Stairway handrails* The installation of stairway handrails shall be in accordance with AS 1428.1 and with the following:  (a) Wherever practicable the outside handrail shall be continuous throughout the stair flights and around landings  (see Clause 10.1.1(c)).  (b) The inside handrail shall always be continuous, and at landings shall maintain a height which is parallel to the finished floor (see Figure 6).  (c) Where there is a background wall, handrails shall have a luminance contrast factor with the wall of not less than 0.3 (30 percent).  **10.2 Grabrails** The design and construction of grabrails shall comply with AS 1428.1, and with the following:  (a) The clearance between the grabrail and the adjacent wall surface shall be as specified in the appropriate Clauses of this Standard.  (b) Grabrails shall not rotate within their fittings.  NOTE: Grabrails installed in wet areas or outdoors should be slip-resistant when wet.  Notes to Figure 8 of AS 1428.1 not extracted.  **Clause 18.1**  **Tactile ground surface indicators** Tactile ground surface indicators (see Preface) shall be provided at the following locations:  (a) Stairways, escalators and ramps.  (b) Kerb ramps and step ramps.  (c) Pedestrian crossings at roadways.  (d) Pedestrian crossings in high-use vehicular areas, e.g. car parks.  (e) Vehicle pick-up and drop-off areas.  (f) Railway platforms.  (g) Passenger wharves.  (h) Where there is a hazard within a circulation space or adjacent to a path of travel.  NOTES:  1 As tactile ground surface indicators would normally indicate a hazard at ground level, hazards within circulation spaces should be protected  by a suitable barrier.  2 Clause 6.7(a) requires a minimum clearance of 2 m above accessible paths of travel.  (i) Where indication of a change of direction is required.  NOTE: For warning strip on nosing of steps, see Clause 13.3. |
| 6.2 | AS/NZS3856.1 (1998) Cl 2.1.8 (b), (c), (f) and (g) | **2.1.8 Ramps** Ramps shall comply with the following:  (b) When two or more ramps are deployed, they shall be attached securely to one another.  (c) The surface of the ramp shall have a slip-resistant finish. The surface shall be an acceptable surface when tested in accordance with AS 3696.13.  NOTE: Cleats may be provided to assist an attendant using the ramp.  (f) A ramp shall have no protrusions extending for more than 6 mm above the surface except when cleats are chosen as an option.  (g) When the ramp is deployed, there shall be no opening or gap in the ramp more than 40 mm. | AS3696.13 not extracted |
| 6.4 (a) | AS/NZS3856.1 (1998) Cl 2.1.8 (e) | **2.1.8 Ramps**  Ramps shall comply with the following:  (e) When deployed, the gradient of a ramp shall be no steeper than 1 in 4.  NOTES:  1 While a gradient of 1 in 4 may be essential under some circumstances of assisted access, this gradient should be avoided. A 1 in 6 gradient is the preferred maximum gradient for assisted access.  2 The gradients for access in AS 1428.1 are recommended. For ramps of up to 1520 mm  in length 1 in 8 maximum and for longer ramps 1 in 14. If assistance is provided, the gradient could be slightly steeper, e.g. airports use 1 in 12 on aerobridges, but provide assistance. |  |
| 6.4 (b) | AS1428.2 (1992) Cl 8.4.2 (a) and AS 1428.1 (2001) Fig 8) | AS1428.2 (1992) Cl **8.4.2** *Provision of ramps at kerbs* Wherever a path of travel crosses a kerb, one of the following shall be provided —   1. a kerb ramp in accordance with AS 1428.1 (for preferred gradient, see Notes to Figure 8 of AS 1428.1); | AS1428.1 not extracted. |
| 6.4 (c) | AS/NZS3856.1 (1998) Cl 2.1.8 (e) | **See above at DSAPT 2002 s 6.4 (a)** |  |
| 8.2(1)(a) | AS/NZS3856.1 (1998) Cl 2.1.7 (f) | **2.1.7 Platforms**  Platforms shall comply with the following:  (f) Entryways shall not have a vertical rise of more than 12 mm (see requirements for  interface of a platform with the vehicle in AS/NZS 3856.2). | AS/NZS 3856.2 not extracted. |
| 8.2(1)(b) | AS/NZS3856.1 (1998) Cl 2.1.8 (g) | **Ramps** Ramps shall comply with the following:  (g) When the ramp is deployed, there shall be no opening or gap in the ramp more than  40 mm. |  |
| 8.7 (2) | AS1428.2 (1992) Cl 11.4 | **11.4 Call buttons** Call buttons at entrances shall be located not less than 900 mm and not more than 1100 mm above the plane of the finished floor and not less than 500 mm from an internal corner.  NOTE: Call buttons should have an integral, continuously operating light. |  |
| 8.8 (2) | AS1428.2 (1992) Cl 11.4 | **See above at DSAPT 2002 s 8.7 (2)** |  |
| 9.10 | AS1428.1 (2001) Cl 14.2 (c) | (c) The colour of the figure shall be white on a blue background, in accordance with Figure 33. The blue shall be B21, Ultramarine of AS 2700, or similar. |  |
| 10.1 | AS1428.2 (1992) Cl 9 | **9 GROUND AND FLOOR SURFACES** Ground and floor surfaces shall comply with the requirements for floor surfaces in AS 1428.1, and with the following:  (a) *Abutment of surfaces* Paving bricks with bevelled edges or chamfered arises and heavily textured and figured surfaces such as raked joint pavers shall not be used.  (b) *Carpet* Where carpet is used on a ground or floor surface, the following requirements apply:  (i) The carpet shall be securely attached.  (ii) Any pad, backing or cushioning shall provide a firm surface.  (iii) The carpet shall have a level loop, a textured loop, a level cut pile or a level cut or uncut pile texture.  (iv) The pile height shall be not more than 6 mm.  (v) Exposed edges of carpet shall be fastened to the floor surface and shall have a trim along the entire length of any exposed edge.  (vi) Carpet edge trim shall create no ridge on the floor surface higher than 3 mm.  (c) *Gratings* If gratings are located in a walking surface, they shall have spaces not more than 13 mm wide and not more than 150 mm long. If gratings have elongated openings, they shall be placed so that the long dimension is transverse to the dominant direction of travel. | AS 1428.1 not extracted. |
| 10.1 (2) | AS1428.1 Supplement 1 (1993) Clause C12 | **C12 FLOOR SURFACES**  The practical testing and specifying of a floor surface to ensure slip resistance is complicated. Test results vary because of the significance of the condition of the floor surface and the condition and characteristics of contact materials used on soles and heels of footwear, and on contact surfaces of mobility aids. Some synthetic sole materials, for example, provide a good grip on wet stone paving slabs, while some other synthetic soles and some rubber soles provide virtually no slip resistance on the same material, and under the same conditions.  One of the better surfaces for general use that is generally slip-resistant, as far as persons  with disabilities are concerned, is bituminous concrete made with small size aggregate at the  surface and unpolished by heavy traffic use. In good condition, this material at its contact  surface provides a large number of small projections that break water films and provide good resistance to slipping when both wet and dry.  Large aggregate in bituminous concrete, after some wear, forms a series of relatively large,  flat, polished stone surfaces that can be very slippery against hard leather soles, and  particularly so against metal plates often used to resist wear on the heels of footwear. This  type of surface can be slippery when wet or dry.  Surfaces that are especially designed to be slip-resistant, when pressure is applied to the  surface, are generally unsuitable for people with disabilities. Most slipping by ambulant  people occurs as the shoe first contacts the floor surface and before any significant pressure is applied. Thus, to be effective, the surface must be slip-resistant under very low contact pressure.  Problems of slipping have been experienced with freshly broomed concrete surfaces that are  generally considered to be slip-resistant surfaces. In their new condition, these surfaces have small raised ridges which, during early use, tend to break away and act as small rollers  against hard contact surfaces such as new or polished leather soles. After some use, and  hosing down to remove surface debris, the broomed concrete surface is generally reasonably slip-resistant both when dry and when wet.  In selecting a slip-resistant surface, the following features are considered desirable:  (a) The surface should consist of a large number of small projections. (See Note 3 to  Clause 12 for materials which are not suitable.)  (b) The projections should be hard enough not to wear down to a smooth surface after  moderate use.  (c) The base material should be hard enough and strong enough to keep the projections in  position.  (d) The surface should, as far as possible, be self-cleaning when in exposed positions, i.e.  of a type such that normal wind and rain will clear away dust and debris that might otherwise build up between projections, and create a smooth, even surface.  (e) The surface should be easily identifiable both by colour and by texture.  (f) The surface should be non-reflecting and glare free.  (g) When used for walkways and ramps, the surface should be of a colour that contrasts with the colour of surrounding surfaces.  (h) The static coefficient of friction, when wet or dry, should be at least 0.40.  NOTES:  1 The recommendation in Item (h) is achieved by most unpolished floor surfaces when dry but  is achieved by only a few under wet conditions.  2 In selecting surfaces, note should be taken of the requirements of Clause 5.1. | Note 3 to Clause 12 not found. |
| 11.1 | AS1428.2 (1992) Cl 10.1 | **10.1 Handrails**  **10.1.1** *General* The following general requirements apply for handrails:  (a) The design and construction of handrails shall comply with AS 1428.1.  (b) The end of the handrail shall be extended parallel to the surface below for a minimum of 300 mm (450 mm is preferred). The end shall be a continuous rail, turned down 100 mm or be returned fully to the end post or wall face.  (c) Where a handrail is not continued, a tactile indicator in the form of a domed button shall be provided in accordance with Figure 5.  (d) Gripping surfaces of handrails shall be continuous.  (e) Handrails shall not rotate within their fittings.  NOTE: Where a high proportion of users are short (i .e. not necessarily children) a second handrail should be provided in accordance with Figure 5. When tested in accordance with the test for head and neck entrapment in AS 1924.2, the space between the handrail s should allow Probe B to be fully inserted without becoming entrapped in any way.  **10.1.2** *Stairway handrails* The installation of stairway handrails shall be in accordance with AS 1428.1 and with the following:  (a) Wherever practicable the outside handrail shall be continuous throughout the stair flights and around landings (see Clause 10.1.1(c)).  (b) The inside handrail shall always be continuous, and at landings shall maintain a height which is parallel to the finished floor (see Figure 6).  (c) Where there is a background wall, handrails shall have a luminance contrast factor with the wall of not less than 0.3 (30 percent). | AS 1428.1 not extracted.  Figure 5 not extracted. |
| 11.4 | AS1428.1 (2001) Cl 6.1 (c) and Figure 9 | **6.1 Handrails**  The requirements for the design and construction of handrails are as follows (see Figure 9):  (a) The cross-section of handrails shall be circular, not less than 30 mm nor more than 50 mm diameter for not less than 270° around the uppermost surface.  NOTE: The cross-section of the lowest 90° is optional; however, fully circular cross-sectioned handrails are preferred.  (b) Exposed edges and corners of handrails shall have a radius of not less than 5 mm.  (c) The top of handrails shall be not less than 865 mm nor more than 1000 mm above the nosing of the tread or the plane of the finished floor of the walkway or ramp.  (d) The height of the top of the handrail, measured in accordance with Item (c), shall be consistent through the ramp (or stairs) and any landings.  (e) Where a balustrade is required at a height greater than the handrail, a handrail shall be provided.  (f) Handrails and balustrades shall not encroach into required circulation spaces.  NOTE: In certain instances a minimum clearance of more than 1000 mm may be required by the BCA.  (g) Handrails shall be securely fixed and rigid, and their ends shall be returned away to a side wall, or turned downwards through an angle of 180° (see Figures 1 and 17).  (h) The clearance between a handrail and an adjacent wall surface or other obstruction shall be not less than 50 mm. This clearance shall extend above the top of the handrail by not less than 600 mm.  (i) Handrails shall be constructed and fixed so that there is no obstruction to the passage of a hand along the rail.  (j) The fastenings and the materials and construction of handrails shall be able to withstand forces, in accordance with AS 1170.1.  Figure 9 not extracted. | AS1170.1 not extracted |
| 11.5 | AS1428.2 (1992) Cl 10.2 | **10.2 Grabrails** The design and construction of grabrails shall comply with AS 1428.1, and with the following:  (a) The clearance between the grabrail and the adjacent wall surface shall be as specified in the appropriate Clauses of this Standard.  (b) Grabrails shall not rotate within their fittings.  NOTE: Grabrails installed in wet areas or outdoors should be slip-resistant when wet. | AS1428.1 not extracted |
| 11.7 | AS1428.2 (1992) Cl 10.2 | **See above DSAPT 2002 s 11.5** |  |
| 12.2 | AS1428.2 (1992) Cl 11 | **11 DOORWAYS AND DOORS**  **11.1 Provision of entrances** The provision of entrances shall comply with AS 1428.1.  NOTE: If an entrance is located in an external wall, consideration should be given to protecting it from wind forces e.g. by a lobby, screen wall or sliding doors.  **11.2 Thresholds** If a threshold is required, it shall be in accordance with AS 1428.1.  NOTE: It is in the interests of people with disabilities for thresholds at doorways to be eliminated. Proprietary draught and water seals are available for use on the bottom of doors as an alternative to thresholds. Water can be controlled by the use of grates (see Clause 9(c)). Canopies for weather protection at entry doors may also enable thresholds to be eliminated. This is not always possible and, where thresholds do occur, a kerb ramp should be used to overcome the change of level.  **11.3 Lighting** Illumination of entrance areas shall comply with Clause 19.  **11.4 Call buttons** Call buttons at entrances shall be located not less than 900 mm and not more than 1100 mm above the plane of the finished floor and not less than 500 mm from an internal corner.  NOTE: Call buttons should have an integral, continuously operating light.  **11.5 Doorways**  **11.5.1** *Clear opening of doorways* The minimum clear opening of a doorway shall be 850 mm (see Figure 7).  NOTE: Doors should be clearly defined by a contrasting frame or trim.  **11.5.2** *Circulation spaces at doorways* The circulation spaces at doorways shall comply with AS 1428.1 except that 100 mm shall be added to all length (L) values and 50 mm shall be added to all width (W) values. [Cl 11.5.2 is excepted by the DSAPT 2002]  **11.5.3** *Double-leaf doorways* If doorways have two independently operated door leaves, then at least one leaf shall meet the requirements of this Standard. That leaf shall be an active leaf.  **11.5.4** *Landings at doorways* The dimensions of a landing at a doorway shall comply with Clause 11.5.2 (see also Note to Clause 11.2).  **11.6 Doors**  **11.6.1.** *Door glazing* Door glazing shall comply with AS 1428.1.  **11.6.2** *Glazing in joinery doors or flush doors* Glazing in joinery doors or flush doors shall be as follows:  (a) The lower edge of the glazing shall be not less than 300 mm and not more than 1000 mm above the bottom edge of the door.  (b) The upper edge of the glazing shall be not less than 1600 mm above the bottom edge of the door.  (c) In width, the glazing shall extend not more than 200 mm from the latch edge of the door and shall be not less than 150 mm wide.  NOTE: Glazing in doors is useful to people with disabilities as it provides a view of a user approaching the door from the other side. The lower perimeters of glazing are set to avoid the footrest of a wheelchair contacting the glass.  **11.6.3** *Door controls* Door controls shall comply with Clause 23. | AS1428.1 not extracted  Clause 19:  **19.1 Illumination levels** Illumination levels shall be uniform and comply with the requirements for maintenance  illumination set out in AS 1680.2. [not extracted here]  **19.2 Light switches** Switches shall be in accordance with Clause 22.4[see below]. In bedrooms, at least one room light of not less than 150 lx shall have a bedside switch.  NOTES:  1 Overhead lighting is preferred.  2 The provision of night lights in circulation areas and bathrooms is beneficial.  3 The provision of two-way switches is desirable.  **22.4 Zone of common reach** The zone for reach to objects which will be suitable for both ambulant people with disabilities and wheelchair users is shown in Figure 23.  **23 CONTROLS**  **23.1 General** Controls, including door handles and hardware, switches and general purpose outlets, shall comply with AS 1428.1 and with the additional requirements of this Clause (23).  **23.2 Operation** Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.  **23.3 Door handles and hardware** The design and performance of door handles and hardware shall comply with AS 1428.1 and with the following:  (a) The shape of the door handle shall be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch. D-shaped handles will meet this requirement. Knobs on bolts and snibs shall be designed so that they provide an easy grip.  (b) Handles shall be clearly identified by colour with luminance contrast to their background of not less than 0.3 (30 percent).  (c) Where an outward opening door is not self-closing, a horizontal handrail or pull bar shall be fixed on the closing face of a side-hung door, as shown in Figure 24.  **23.4 Window handles** Shape and identification of window handles which are intended to be operated by occupants in trafficable areas shall comply with the requirements for door handles in Clause 23.3.  **23.5 Water taps** Water taps shall comply with AS 1428.1.  NOTE: Although sensor taps can cost significantly more than other types of tap, their use is recommended where possible. |
| 12.4 | AS1428.2 (1992) Cl 11.5.1 | **11.5.1** *Clear opening of doorways* The minimum clear opening of a doorway shall be 850 mm (see Figure 7).  NOTE: Doors should be clearly defined by a contrasting frame or trim. | Figure 7 not extracted. |
| 13.1 | AS1735.12 (1999) | Not specific reference provided |  |
| 14.2 (a) | AS1428.1 (2001) Cl 9.1 | **9.1 Stair construction**  Where required, the following requirements apply to stair construction:  (a) The top or bottom tread of a flight of stairs shall not encroach into required circulation spaces.  (b) Stairs shall have opaque risers.  NOTE: Spiral stairways are hazardous and should be avoided.  (c) A strip, not less than 50 mm and not greater than 75 mm, shall be provided on the tread at the nosing with a minimum luminance contrast of 30% to the background.  NOTE: See Appendix D for information on luminance contrast. |  |
| 14.2 (b) | AS1428.1 (2001) Cl 9.2 | **9.2 Stairway handrails**  Handrails, as specified in Clause 6.1, shall be provided on both sides of a stairway. The following requirements apply to handrails:  (a) The installation of the handrails shall be as shown in Figure 17.  (b) Handrails shall have no vertical sections and, wherever practicable, shall be continuous throughout the stair flights and around landings. If the handrail cannot be continuous and there are no TGSIs, a raised tactile warning in the form of a domed  button with a height of between 4–5 mm and a diameter of between 10–12 mm shall be provided on the top of the handrail 150 10 mm from the end of the handrail.  NOTE: Additional information is provided in AS 1428.2.  (c) Where a handrail terminates at the bottom of a flight of stairs, the handrail shall extend at least one tread width plus 300 mm from the last riser (see Figure 17). | Figure 17 not extracted. |
| 14.2 (c) | AS1428.2 (1992) Cl 13.2, 13.3, Figures 8 and 9 | **13.2 Configuration of steps** The configuration of steps shall be as shown in Figure 8.  NOTE: The preferred configuration for users with walking frames and severe ambulant disabilities is shown in Figure 9. However, this  configuration may not comply with the normal requirements of the regulatory authorities.  **13.3 Warning strip at nosing of steps** Steps shall have a warning strip at the nosing as shown in Figures 8 and 9.  Figure 8 and 9 not extracted | Figure 8 and 9 not extracted. |
| 14.3(1) (a) | AS1428.1 (2001) Cl 9.1 | **See above DSAPT 2002 s 14.2 (a)** |  |
| 14.3(1) (b) | AS1428.2 (1992) CL 13.2, 13.3, Figures 8 and 9 | **See above DSAPT 2002 s 14.2 (c)** |  |
| 14.4 | Australian Design Rule 58 | Rule Can be found here: http://www.comlaw.gov.au/Details/F2014C00402 |  |
| 15.1 | AS1428.1 (2001) Cl 10 | **10 SANITARY FACILITIES**  **10.1 General information**  The facilities described in this Clause 10 may be used as individual modules, in mirror image configurations or in a combined form (see Clause 10.6).  Where the floor of a sanitary facility other than a shower recess has a floor waste, the floor shall be self draining and have a grade between 1 in 70 and 1 in 80.  NOTES:  1 It should be noted that the layout and dimensions in a sanitary facility for persons with disabilities may differ from conventional situations and that special care should be taken with documentation and setting out, particularly with concrete slab construction, to ensure that the  requirements of this Standard can be complied with.  2 Dimensional drawings refer to finished surfaces, e.g. wall tiles.  3 This Standard specifies sanitary facilities of two different types as follows:  (a) An accessible sanitary facility whether unisex or gender specific for wheelchair users.  (b) A sanitary facility appointed for people with ambulant disabilities.  4 For guidance on waterproofing of wet areas, see AS 3740.  **10.2 Accessible unisex sanitary facilities**  **10.2.1** *General*  The general requirements for accessible unisex sanitary facilities are as follows:  (a) An accessible unisex sanitary facility is one that is available for use by both sexes and located so that access does not necessitate traversing an area reserved for one sex only. It shall be designed for general use and include adequate circulation space for wheelchair users.  (b) Hand-washing facility may be provided inside or outside the toilet cubicle. They shall form part of the accessible unisex facility.  (c) If two or more accessible unisex facilities are provided, at least one shall be of the opposite hand.  NOTE: A clothes-hanging device should be provided in accordance with Clause 10.4.4.  **10.2.2** *WC pan*  WC pans shall be in accordance with AS 1172.1, and shall be selected to allow the approach of a wheelchair with minimum obstruction at front and side.  **10.2.3** *WC pan clearances*  WC pan clearances and set-out, seat height and seat width shall be as shown in Figure 18.  **10.2.4** *Cistern*  The cistern may be either recessed or surface mounted. Surface-mounted cisterns shall comply with Clause 10.2.9.  **10.2.5** *Seat*  The toilet seat shall be of the full-round type, i.e. not open fronted. It shall be securely hinged to the pan of the WC. Seat fixings shall provide lateral stability for the seat.  NOTE: If a lid is fitted, it should be fitted and be designed so that it remains in the raised position when so placed.  **10.2.6** *Flushing control*  The flushing control shall be hand operated and shall be located within the zone shown in Figure 19, or centred on the centre-line of the toilet, wholly within the vertical limits of that zone. The position of the flushing control within this zone shall not be within the area required for any grabrails.  **10.2.7** *Toilet paper dispenser*  The outlet for the toilet paper dispenser shall be located within the zone shown in Figure 20.  **10.2.8** *Grabrails*  Where a concealed or high-level cistern is used, a continuous grabrail, as specified in Clause 6.2, shall be provided across the rear wall and side wall nearest the WC pan (see Figure 21). If a low-level cistern is used, the grabrail shall be terminated at each side of the cistern as shown in Figure 21.  NOTE: As the grabrail provides both support and assistance, it is recommended that a system be  selected whereby a continuous grabrail can be utilized.  **10.2.9** *Circulation space in WCs*  For each WC, the unobstructed circulation space from the finished floor to a height of not less than 900 mm shall be as shown in Figure 22. The toilet paper dispenser (see Clause 10.2.7), grabrails (see Clause 10.2.8) and the WC pan are the only fixtures permitted in this space. A surface-mounted cistern may be located in this space, provided the  installation is within the dimensional requirements of Figures 18 and 22.  **10.2.10** *WC doors*  The requirements for WC doors of sanitary facilities are as follows:  (a) Doors shall be either hinged or sliding.  (b) Outward-opening doors shall have a hinge mechanism that holds the door in a closed  position without the use of a latch.  (c) Inward opening or sliding doors shall be capable of either being opened outwards or removed from the outside.  (d) Doors shall be provided with an in-use indicator and a bolt or catch, and shall be openable from the outside in an emergency.  (e) The force required to operate the door shall be in accordance with Clause 11.1.1(c).  (f) Door handles and hardware shall be in accordance with Clause 11.1.  (g) Each doorway shall have unobstructed circulation space, in accordance with  Clauses 7.3 and 7.4, for access and egress.  **10.3 Washbasins**  The requirements for the installation of washbasins are as follows:  (a) The projection of the washbasin from the wall and the position of taps, bowl and drain outlet shall be determined in accordance with the requirements shown in Figure 23.  (b) Water supply pipes and waste outlet pipes shall not encroach on the required clear space under the washbasin (see Figure 23).  (c) Water taps shall comply with Clause 11.3.  (d) Exposed hot water supply pipes shall be insulated or located so as not to present a hazard.  NOTE: Plugs (stoppers) should be connected by chain or otherwise attached to the washbasin.  (e) For each washbasin fixture, the unobstructed circulation space shall be as shown in Figure 24. The washbasin fixture and its fittings are the only fixtures permitted in this space.  NOTE: The dimensions also apply in mirror image configurations.  **10.4 Sanitary facility fixtures and fittings**  **10.4.1** *Mirrors*  Where provided, a mirror shall be not less then 350 mm wide, and shall extend from a height of not more than 900 mm to a height of not less than 1850 mm above the plane of the finished floor. A second mirror, where provided, shall extend from a height of not more than 780 mm to a height of not less than 1850 mm above the plane of the finished floor.  **10.4.2** *Shelves*  Where provided, a shelf shall be securely fixed, with the height not less than 900 mm and not more than 1100 mm above the plane of the finished floor.  **10.4.3** *Soap dispensers, towel dispensers and the like* Where provided, soap dispensers, towel dispensers, hand dryers and similar fittings shall be  installed with the height of their operative component or outlet not less than 900 mm and not more than 1100 mm above the plane of the finished floor.  NOTE: These devices should be located so that their operative component or outlet is within reach of the user at the washbasin.  **10.4.4** *Clothes-hanging devices*  A clothes-hanging device shall be installed 1200 mm to 1350 mm above the plane of the finished floor. Such devices shall not be less than 500 mm out from any internal corner except where associated with shower recesses configured as shown in Figure 26 when they shall be placed on the return wall within reach of a person seated on the folding seat.  **10.4.5** *Shredder disposal units and sanitary incinerators*  Where provided, shredder disposal units and sanitary incinerators shall be installed with their operative component or outlet not less than 900 mm and not more than 1100 mm above the plane from the finished floor and within reach from the WC pan.  NOTE: The preferred location for the unit is within an accessible WC.  **10.4.6** *Switches and general purpose outlets*  Where provided near the washbasin, switches and general purpose outlets shall be located in accordance with Clause 11.2 and as close to the shelf or worktop as practicable.  **10.5 Showers**  **10.5.1** *General*  The general requirements for showers are as follows:  (a) Shower recesses and the circulation space for each shower recess from the finished floor to a height of not less than 900 mm shall be as shown in Figures 25 and 26. Grabrails and the folding seat are the only fixtures permitted in these spaces.  (b) Shower recess fittings shall be provided as shown in Figures 25, 26 and 27.  (c) Where two or more shower recesses are provided, at least one shall be of the opposite hand.  (d) Not less than two clothes-hanging devices, as specified in Clause 10.4.4, shall be fitted outside the shower recess. One such device should be located within 600 mm of the folding seat.  **10.5.2** *Floor and waste outlet*  The requirements for the floor and waste outlet are as follows:  (a) The floor of the shower recess and associated circulation space shall be self-draining and without a step down, raised step kerb or hob at the entry to the recess.  (b) The waste outlet for the shower shall be in the centre of the floor of the recess.  (c) The slope of the floor of the shower recess shall have a grade between 1 in 50 and 1in 60.  (d) The slope of floor of the remainder of the sanitary facility shall have a grade between 1 in 70 and 1 in 80.  **10.5.3** *Opening shower screens*  The requirements for opening shower screens are as follows:  (a) Where provided, the means of screening a shower recess shall be a curtain, a sliding door or an outward-opening hinged door. Where a door is provided, it shall be operable or removable from the outside in an emergency.  NOTE: It is recommended that where a shower curtain is used, the curtain should be weighted in the bottom hem to prevent it from moving.  (b) Any opening screens forming part of the recess or circulation space shall, when open, provide the clear opening shown in Figures 25 and 26.  (c) Where provided, floor tracks for sliding screens shall be flush across the shower recess opening and the sliding doors shall not intrude across the end of the seat when in the open position.  (d) Where a swinging door is provided, it shall be hinged from the side opposite the seat, and the circulation space outside the shower recess shall be in accordance with the requirements for 1000 mm doorways, in accordance with Figure C1 of Appendix C.  **10.5.4** *Grabrails*  Grabrails as specified in Clause 6.2 shall be fixed on the walls in the positions shown in Figures 25, 26 and 27. Taps, soap holder and shower head support grabrail as shown in Figure 27 may encroach into the 600 mm clearance above the grabrail required in  Clause 6.2.  **10.5.5** *Shower head support grabrail*  A shower head support grabrail, in accordance with Clause 6.2, shall be fixed on the wall in the position shown in Figure 27.  **10.5.6** *Shower head*  A portable shower head shall be installed on the shower head support grabrail, as shown in Figure 27, to enable the user to shower while sitting or standing. A fitting shall be provided to allow the shower head to be positioned at various angles and at heights between 1000 mm and 1900 mm above the plane of the finished floor. The attachment of the  portable shower head to any bar or track shall be such that the shower head is accessible to a seated person.  **10.5.7** *Soap holder*  The soap holder shall be located within the zone shown in Figure 27.  **10.5.8** *Taps*  Taps, as specified in Clause 11.3, shall be located within the zone shown in Figure 27.  **10.5.9** *Folding seat*  A foldable self-draining, slip-resistant seat with rounded edges shall be provided inside the shower recess (see Figures 25 and 26). The fastenings, materials and construction of the seat shall be able to withstand a force of 1100 N applied at any position and in any direction without failing or showing any visible signs of deformation or loosening of fastenings.  When the seat is in the folded position —  (a) the seat shall not present a hazard;  (b) the grabrail shall be accessible; and  (c) there shall be a minimum clear space of 1000 mm from the seat to the wall opposite or any other fixture or obstruction.  **10.6 Combined sanitary facilities**  Combined sanitary facilities shall contain circulation spaces in accordance with Clause 7.3 and Figures 22, 24, 25 and 26.  Circulation spaces, including door circulation spaces, may be overlapped.  With the following exceptions, fixtures shall not encroach into circulation spaces:  (a) The washbasin may encroach into the WC or shower circulation space to a maximum of 100 mm, provided a minimum clearance of 1100 mm is maintained between the washbasin fixture and any other fixed item such as the WC pan (see Figure 28),  shower screen and the like.  (b) Where the washbasin is located opposite a doorway with a swinging door, the washbasin fixture may encroach into the circulation space of the door, provided a minimum clearance of 300 mm is maintained between the arc of the door leaf and  either the washbasin fixture or its circulation space (see Figure 29).  (c) Where the washbasin is located opposite a doorway with a sliding door, the washbasin fixture may encroach into the circulation space of the door to a maximum of 100 mm, provided a minimum clearance of 1100 mm is maintained between the  doorway wall and the washbasin fixture (see Figure 30).  Clearances beneath the washbasin shall be maintained in accordance with Clause 10.3(b) and door circulation spaces shall be maintained in accordance with Clause 7.3 modified in  accordance with Item (b) (ii) or (iii) of this Clause (10.6), as appropriate.  NOTES:  1 The exceptions in Item (b) are designed to utilize space beneath the washbasin in order to provide a facility that requires minimum space at floor level. Access will then, however, require looping movements of the wheelchair.  2 The use of unisex facilities can significantly reduce the amount of space needed.  3 As a design aid for combining sanitary facilities, transparent overlays of modules of each sanitary facility with its minimum circulation space, which are based on Figures 22 and 24, are included with this Standard. (Available with hardcopy purchases only)  The transparencies are as follows:  Transparency No. 1 WC and circulation space Based on Figure 22 Transparency No. 2 Washbasin and circulation space Based on Figure 24 4 Overlays for spatial requirements at doorways are not included and these should be drawn up by the designer from the data given in Figures 12 and 13, as appropriate.  5 Worked example of shower recess and circulation spaces for three-sided shower enclosures is given in Appendix E.  **10.7 Sanitary facilities for children and adolescents**  Where toilet facilities are to be provided specifically for children and adolescents, accessible facilities shall be in accordance with AS 1428.3.  **10.8 Sanitary facilities for people with ambulant disabilities**  Sanitary facilities for people with ambulant disabilities shall be as shown in Figures 38 and  39 and in accordance with Clause 10.2.10, Items (a) to (f).  The seat height shall be between 460 mm and 480 mm, and door openings a minimum clear width of 700 mm.  Lever handles shall be fitted to any latchset or lockset on the doors. ‘D’ pullhandles may be  used elsewhere.  Grabrails shall not rotate within their fittings.  **10.9 Identification of sanitary facilities**  The requirements for the identification of sanitary facilities are as follows:  (a) Unisex accessible sanitary facilities shall be identified with—  (i) the international symbol of access; and  (ii) symbols indicating use by both males and females, in accordance with Clause 14.  (b) Showers and combined facilities shall be identified with the international symbol of access in accordance with Clause 14.  (c) Sanitary facilities suitable for people with ambulant disabilities shall not be identified  with the international symbol for access.  (d) All symbols and lettering shall be raised tactile.  NOTE: A sign for people with ambulant disabilities is currently being developed. | AS 1172.1 not extracted.  Figures not extracted.  Clause 6.2:  **6.2 Grabrails**  The requirements for the design and construction of grab rails are as follows:  (a) Grabrails shall be not less than 30 mm and not more than 40 mm outside diameter, or they shall have sectional shape within the limits of 30 mm to 40 mm diameter.  (b) Exposed edges and corners of grabrails shall have a radius of not less than 5 mm.  (c) The fastenings and the materials and construction of grabrails shall be able to withstand a force of 1100 N applied at any position and in any direction, without showing any visible signs of deformation or loosening of the fastenings.  (d) Unless otherwise specified, the clearance between a grabrail and the adjacent wall surface or other obstruction shall be not less than 50 mm and not more than 60 mm. This clearance shall extend above the top of the grabrail by not less than 600 mm.  (e) Grabrails shall be fixed so that there is no obstruction to the passage of the hand along the top 270° of the rail.  (f) Grabrails shall not rotate in their fittings.  Clause 7.3:  **7.3 Circulation spaces at doorways on a continuous accessible path of travel**  **7.3.1** *Swinging doors*  The clear circulation space at doorways with swinging doors is based on the clear opening width of the doorway (D). The clear circulation space shall be not less than the dimensions specified in the tables in Figure 12 for the appropriate clear opening width.  Figure 12 provides dimensions for the minimum clear doorway opening (800 mm) and for the next incremental clear doorway opening (850 mm). Dimensions for other sizes are provided in Appendix C.  NOTES:  1 Intermediate sizes should be interpolated.  2 Users are alerted to the fact that doors that open towards a user require a significantly greater  circulation space than those that open away from a user.  **7.3.2** *Sliding doors*  **7.3.2.1** *Doors within a wall cavity*  Where a sliding door is within the wall cavity, the circulation space at the doorway shall be not less than that given in the tables in Figure 13, and in Figures C1 and C2 of Appendix C for the appropriate clear opening width (*D*).  **7.3.2.2** *Surface-mounted doors*  Where a sliding door is surface-mounted, the following requirements apply to circulation space at the doorway:  (a) The circulation space at the door face shall be not less than that given in the tables in Figure 13, and the tables in Figures C1 and C2 of Appendix C.  (b) The circulation space opposite the door face shall be increased from that given in the tables in Figure 13, the tables in Figures C1 and C2 of Appendix C, and according to  the table in Figure 14.  **7.3.3** *Automatic doors*  To permit a wheelchair to turn through a door from a side-on approach, dimension *W* is  required on the side of approach only.  For positioning of manual controls for automatic doors, see Clause 11.1.2(d).  Figures 12, 13 and 14 not extracted.  AS 1428.3 not extracted.  Clause 10.2.10, Items (a) to (f). – see left  Clause 11.1.1(c):  **11.1.1** *Design and performance*  The requirements for the design and performance of door handles, and related hardware and accessories are as follows:  (c) For doors other than fire doors and smoke doors where a door closer is fitted, the force required to operate the door shall not exceed the following:  (i) To initially open the door .........................................................19.5 N.  (ii) To swing the door ....................................................................... 6 N.  (iii) To hold the door open between 60° and 90° ............................7.5 N.  NOTE: Where door closers are required, devices such as adjustable delayed action multisized door closers, rising-butt hinges, and the like, are recommended.  Entirety of Clause 11.1 not extracted.  Clause 11.2:  **11.2 Switches and general purpose outlets (power points)**  All switches, other than general purpose outlets, shall be horizontally aligned with door handles and other controls not less than 900 mm, not more than 1100 mm above the plane of the finished floor, and not less than 500 mm from internal corners (see Figure 31).  NOTES:  1 The preferred height of all switches and GPOs is 1000 mm.  2 Rocker action, toggle or push pad switches with a recommended width of 35 mm are  preferred. For people with severe finger or hand disabilities, these allow convenient operation  by arm or elbow.  Clause 14 not extracted. |
| 16.1 | AS1428.1 (2001) Cl 14.2 and 14.3 and AS1428.2 (1992) Table 1 | **14.2 International symbol**  The requirements for the international symbol of access are as follows:  (a) The symbol of access shall consist of two elements, a stylized figure in a wheelchair and a plain square background.  (b) The proportional layout of the symbol of access shall be in accordance with Figure 32.  (c) The colour of the figure shall be white on a blue background, in accordance with Figure 33. The blue shall be B21, Ultramarine of AS 2700, or similar.  (d) For signs identifying a facility, the figure shall face to the right.  (e) For signs indicating the direction to a facility, the figure shall face the direction of the facility.  NOTE: The sign may be used either with or without the directional arrow shown in Figure 35.  **14.3 International symbol for deafness**  The requirements for the international symbol for deafness are as follows:  (a) The symbol for deafness shall consist of two elements, a stylized ear and diagonal slash on a plain square background.  (b) The proportional layout of the symbol for deafness shall be in accordance with Figure 34.  (c) The colour of the symbol shall be white on a blue background. The blue shall be B21, Ultramarine of AS 2700, or similar.  16.2.JPG | Figures 32, 33, 34 and 35 not extracted. |
| 16.2 | AS2899.1 (1986) | Not extracted. |  |
| 17.1 | AS1428.2 (1992) Cl 17.1, 17,2 and 17.3 and Figure 30 | **17 SIGNS**  **17.1 General** Signs shall be easily comprehended and shall comply with the requirements in AS 1428.1, and with this Clause (17).  **17.2 Height of letters in signs** The height of letters in signs shall be not less than that given in Table 2.  **17.3 Illumination of signs** Illumination of signs shall be provided in accordance with Clause 19 for general displays. Lighting shall be placed so that unwanted reflections shall not occur on the sign.  The luminance factor of the surface of numbers, letters or symbols shall be not less than 0.3 (30 percent) different from their background. | AS 1428.1 not extracted.  Table 2 extracted below:  17.1.JPG  Clause 19:  **19.1 Illumination levels** Illumination levels shall be uniform and comply with the requirements for maintenance  illumination set out in AS 1680.2. (not extracted here)    **19.2 Light switches** Switches shall be in accordance with Clause 22.4 [see below]. In bedrooms, at least one room light of not less  than 150 lx shall have a bedside switch.  NOTES:  1 Overhead lighting is preferred.  2 The provision of night lights in circulation areas and bathrooms is beneficial.  3 The provision of two-way switches is desirable.  **22.4 Zone of common reach** The zone for reach to objects which will be suitable for both ambulant people with disabilities and wheelchair users is shown in Figure 23.  Figure 23 not extracted. The figure indicates that the zone is 700mm away from the ground, a further 500 mm high and 300 to 400 mm wide. |
| 17.2 | AS1428.2 (1992) Cl 17.4 | **17.4 Location of signs**  Signs including symbols, numbering and lettering shall be located as follows:  (a) Where they are clearly visible to people in both a seated and standing position (see Clause 25).  NOTES:  1 Signs should be placed within a zone at a height not less than 1400 mm and not more than 1600 mm above the plane of the finished floor.  Where space in this zone is used up, the zone for placement of signs may be extended downward to not less than 1000 mm from the plane of the finished floor. This height assists people to read from either a seated or a standing position, and also assists people with low vision to read the information on the sign. Letters and symbols in relief assist people with severe visual disabilities.  2 Where a sign can be temporarily obscured, e.g. in a crowd, the sign should be placed at a height of not less than 2000 mm above the plane of the finished floor.  (b) At changes of direction.  (c) At sites where directional decisions are made, to enable the appropriate decisions to be made before a change of direction occurs.  (d) Where the surface of the wall surrounding the sign provides sufficient contrast to the sign. If this surface provides insufficient contrast (e.g. patterned wallpapers), the background to the sign shall be increased in size.  NOTES:  1 The message that the sign carries should be unambiguous.  2 Tactile floor plans or maps and prerecorded auditory instructions at the main entrance and at other useful locations can be of assistance to people with visual impairment. | Clause 25:  **VIEWING RANGES** The ultimate height zone for comfortable common viewing is shown in Figure 30.  Figure 30 is not extracted. It indicates that the ultimate height zone for comfortable common viewing is between 1227 mm and 1709 mm from the ground. |
| 17.3 | AS1428.2 (1992) Cl 17.4 and Figure 30 | **See references for DSAPT 2002 s 17.2** |  |
| 18.1 | AS1428.2 (1992) Cl 18.1 | **18.1 Tactile ground surface indicators** Tactile ground surface indicators (see Preface) shall be provided at the following locations:  (a) Stairways, escalators and ramps.  (b) Kerb ramps and step ramps.  (c) Pedestrian crossings at roadways.  (d) Pedestrian crossings in high-use vehicular areas, e.g. car parks.  (e) Vehicle pick-up and drop-off areas.  (f) Railway platforms.  (g) Passenger wharves.  (h) Where there is a hazard within a circulation space or adjacent to a path of travel.  NOTES:  1 As tactile ground surface indicators would normally indicate a hazard at ground level, hazards within circulation spaces should be protected  by a suitable barrier.  2 Clause 6.7(a) requires a minimum clearance of 2 m above accessible paths of travel.  (i) Where indication of a change of direction is required.  NOTE: For warning strip on nosing of steps, see Clause 13.3. |  |
| 18.2 | AS1428.4 (1992) | No specific reference provided. |  |
| 18.4 | AS1428.4 (1992) Cl 6.7 | **6.7 Tactile indicators at railway platforms** The edges of railway platforms shall have Type A or Type B indicators  with a minimum width of 600 mm commencing 600 mm to 900 mm from the edge of the platform as shown in  Figure 9. | Figure 9 not extracted. |
| 18.5 | AS1428.4 (1992) Cl 6.8 | **6.8 Tactile indicators at passenger wharves** The edges of passenger wharves shall have Type A or Type B indicators with a minimum width of 600 mm commencing 600 mm to 900 mm from the edge of the wharf.  NOTE: The set-back from the edge of the wharf is normally specified by the transit authority. |  |
| 19.1 | AS1428.2 (1992) Cl 18.2.1, 18.2.2 and 18.2.3 | **18.2.1** *General* Emergency warning systems shall include both audible alarms complying with Clause 18.2.2 and visual alarms complying with Clause 18.2.3.  NOTE: This applies to emergency evacuation signals, traffic signals and audible alarms for safety.  **18.2.2** *Audible alarms* Audible emergency alarms shall produce audible signals in accordance with the requirements for output of loudspeakers in AS 2200.2, except that levels shall exceed by 15 dB(A) the noisiest background sound pressure level averaged over a period of 60 s, and the level shall not be less than 75 dB(A).  NOTE: It is essential that audible emergency signals have an intensity and frequency that can attract the attention of individuals who have partial hearing loss. People over 60 years of age generally have difficulty in perceiving frequencies higher than 6000 Hz.  **18.2.3** *Visual alarms* Visual alarms in accordance with AS 2220.1 shall be arranged to flash in conjunction with the audible emergency alarms. The flashing frequency of visual alarms shall be approximately 1 Hz.  NOTES:  1 Specialized systems using advanced technology may be substituted if equivalent protection is provided.  2 The specifications in this Section do not preclude the use of zoned or coded alarm systems. | AS 2200.2 not found.  AS 2200.1 not found. |
| 20.1 | AS1428.2 (1992) Cl 19.1 | **19.1 Illumination levels** Illumination levels shall be uniform and comply with the requirements for maintenance illumination set out in AS 1680.2.  NOTES:  1 The following minimum levels of maintenance illumination are recommended:  Entrances  Passageways and walkway s150 lx  Stairs 150 lx  Ramps 150 lx  Lifts See AS 1735.12  Toilet and locker rooms 200 lx  Counter tops 250 lx  General displays 200-300 lx  Telephones 200 lx  2 Many people require better artificial lighting than is normally provided. This applies particularly to older people and to all people with impaired sight.  3 For people with impaired hearing, a level of illumination of not less than 150 lx, without glare, is needed to allow for lip reading. | AS 1680.2 not extracted. |
| 20.2 | AS1428.2 (1992) Cl 19.1 | **See above at DSAPT 2002 s 20.1** |  |
| 21.1 | AS1428.1 (2001) Cl 11 | **11 CONTROLS**  **11.1 Door handles and hardware**  **11.1.1** *Design and performance*  The requirements for the design and performance of door handles, and related hardware and accessories are as follows:  (a) The door handle and related hardware shall be of the type that allows the door to be unlocked and opened with one hand.  NOTES:  1 Lever handles are preferred because doorknobs do not provide an adequate grip for people with hand impairments.  2 The handle should be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch.  3 Knobs on bolts and snibs should be designed so that they provide an easy grip for the hand.  4 In certain situations, compliance with this item may necessitate the use of sliding or power-assisted doors.  (b) Where lever handles are provided, the clearance between the handle and the back plate or door face at the centre of the handle shall be not less than 35 mm and not more than 45 mm.  (c) For doors other than fire doors and smoke doors where a door closer is fitted, the force required to operate the door shall not exceed the following:  (i) To initially open the door ..........................19.5 N.  (ii) To swing the door ......................................... 6 N.  (iii) To hold the door open between 60° and 90° ...................7.5 N.  NOTE: Where door closers are required, devices such as adjustable delayed action multisized door closers, rising-butt hinges, and the like, are recommended. |  |
| 21.2 | AS1428.2 (1992) Cl 23.2 and 23.3 | **23.2 Operation** Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.  **23.3 Door handles and hardware** The design and performance of door handles and hardware shall comply with AS 1428.1 and with the following:  (a) The shape of the door handle shall be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch. D-shaped handles will meet this requirement. Knobs on bolts and snibs shall be designed so that they provide an easy grip.  (b) Handles shall be clearly identified by colour with luminance contrast to their background of not less than 0.3 (30 percent).  (c) Where an outward opening door is not self-closing, a horizontal handrail or pull bar shall be fixed on the closing face of a side-hung door, as shown in Figure 24. | AS1428.1 not extracted.  Figure 24 not extracted. |
| 21.3 | AS 1428.1 (2001) Cl 11.1.2 | **11.1.2** *Location*  The requirements for the location of opening and locking controls for doors and gates, except in early childhood centres and swimming pool barriers, where their location shall be as required by the relevant statutory authority, are as follows:  (a) Controls that need to be grasped or turned shall be not less than 900 mm and not more than 1100 mm above the plane of the finished floor.  (b) Controls that only need to be pushed, such as panic bars on egress routes, shall be not less than 900 mm, and not more than 1200 mm above the plane of the finished floor.  (c) Controls that only need to be touched shall be not less than 900 mm, and not more than 1250 mm above the plane of the finished floor, and not less than 500 mm from an internal corner except as noted in AS 1735.12.  (d) Handles on sliding doors shall be not less than 60 mm from the doorjamb lining (see Figure 11(b)).  (e) Manual controls to power-operated doors shall be positioned above a level surface not closer than 1000 mm from the arc of a hinged door or clear of a sliding door in the open position, and the door shall remain open for a sufficient period to enable a  person with impaired mobility to pass safely through the doorway. | AS 1735.12 not extracted. |
| 21.4 | AS1428.2 (1992) Cl 23.2-23.3 | **See above for DSAPT 2002 s 21.2** |  |
| 22.1 | AS1428.2 (1992) Cl 24.1, 24.1.1, 24.1.2, 24.1.3, 24.1.4 and 24.1.5 | **24.1 Tables, counters and worktops**  NOTES:  1 No individual table, counter or worktop height and clearance beneath will suit all users with disabilities. A bench with easily adjustable height within the range of 700 mm to 850 mm from the finished floor is preferred.  2 Some users will be unable to use a bench unless it is at the correct height.  **24.1.1** *Height of unit where a single table, counter or worktop only can be provided* Where a single unit only is provided, the height to the top of the unit and the height beneath the unit shall be as follows:  (a) Height from the finished floor to the top of the unit: 850 20 mm.  (b) Height of clearance beneath the unit from the finished floor: 820 20 mm.  **24.1.2** *Height of unit where two tables, counters or worktops can be provided* Where two units are provided, the height to the top of each unit and clearance beneath each unit shall be as follows:  (a) Height from the finished floor to the top of the unit:  (i) 1st unit: 750 20 mm.  (ii) 2nd unit: 850 20 mm.  (b) Height of clearance beneath unit, from the finished floor:  (i) 1st unit: 730 20 mm.  (ii) 2nd unit: 820 20 mm.  **24.1.3** *Width of seating spaces* In order to provide a wheelchair seating space, the minimum clearance width between the legs or other fixtures beneath a table, counter or worktop on at least one accessible face of the unit shall be 800 mm.  **24.1.4** *Knee and foot clearance* A minimum clearance beneath the table, counter or worktop at wheelchair seating spaces shall be maintained as shown in Figure 25.  **24.1.5** *Length of top of counter* Where a counter is provided for general use, a length of the counter of not less than 900 mm shall be provided which is in accordance with this Clause (24). A clear floor space in front of this part of the counter shall be provided in accordance with Clause 6.3. | Figure 25 not extracted  **Clause 6.3 Circulation space for 360****wheelchair turn** The space required for a wheelchair to make a 360turn shall be not less than 2250 mm by 2250 mm.  NOTE: A space of 2450 mm by 2450 mm is preferred. |
| 22.3 | AS1428.2 (1992) Cl 24.3(a), (c) and (d) | **24.3 Beds** Beds shall comply with the following:  (a) The height of the space between the base of a bed and the finished floor shall be not less than 150 mm.  NOTE: This clearance is necessary for the use of a hoisting device.  (c) The height of the mattress top shall be not less than 480 mm and not more than 500 mm above the finished floor when compressed by a weight of 90 kg.  (d) Where appropriate, a telephone, and controls for operating radio, TV, air-conditioning, lights and signals shall be accessible from the bed. |  |
| 23.1 | AS1428.2 (1992) Cl 27.2 | **27.2 Seating in pedestrian areas** The design and installation of seating shall be as follows:  NOTES:  1 Seats should generally be 450 mm high but where a high proportion of elderly users are anticipated, heights up to 520 mm are preferred.  Children and small people may prefer seats as low as 350 mm high. Where possible, a range of seat heights should be provided.  2 A typical park bench is shown in Figure 32.  3 For outdoor tables, see Clause 24.  (a) The front of the seat shall have a clear space between any legs at ground level to within 150 mm of the front edge of the seat, and to within 100 mm of the seat height to allow for rearward adjustment of feet when rising (see Figure 32(b)).  (b) Where armrests are provided, the top surface of the armrests shall be at a height of 260 40 mm above the seat.  NOTES:  1 Armrests should be provided for all seats.  2 The armrest should be within the centre of gravity of the seat.  (c) The front edge of the seat shall have a minimum radius of 30 mm.  (d) No edge or projection shall have a radius of less than 5 mm unless protected from contact with the user.  (e) The seat shall drain free of water. | Figure 32 not extracted. |
| 24.1 | AS1428.2 (1992) Cl 28 | **28 GATEWAYS AND CHECKOUTS**  **28.1 General** The international symbol for access (see AS 1428.1) shall be used to designate where access is available.  **28.2 Width** Where gateways and checkouts are installed, at least one barrier opening shall be not less than 820 mm wide.  **28.3 Ticket or coin feed height** The ticket or coin feed points shall be at a height of 800 mm to 900 mm from the finished floor. Any controls needed to operate these machines shall have tactile applications for vision-impaired users.  NOTE: The ticket or coin feed point placed on the top surface of the unit will provide better access for people with disabilities of the hands or upper limbs.  **28.4 Barriers** Any barrier shall be not less than 1200 mm past the ticket or coin feed point in the direction of travel  (see Figure 34).  NOTE: Roll bars should not be provided. Flaps are preferred. | AS 1428.1 not extracted  Figure 34 not extracted. |
| 25.3 | AS1428.2 (1992) Cls 29.1, 29.2 and 29.3 | **29 VENDING MACHINES**  **29.1 Height** The height of the operative components shall be between 500 mm and 1200 mm above the trafficable surface.  NOTE: Where practicable, knee and foot clearance should be provided beneath the machine.  **29.2 Controls** Controls shall comply with the following:  (a) The required operating force for any control shall not exceed 19.5 N.  NOTE: Where possible, knobs should not be used. Where they are used, they should be of sufficient size and texture to allow grip by fingers or palms.  (b) Controls shall be clearly identifiable by touch and sight.  NOTE: Preferred controls include D-handles or pulls, levers and sensors.  (c) Controls shall have a tactile surface to facilitate use by vision-impaired persons.  **29.3 Illumination** Illumination shall be provided in accordance with Clause 19.1. | **19.1 Illumination levels** Illumination levels shall be uniform and comply with the requirements for maintenance illumination set out in AS 1680.2.  AS 1680.2 not extracted |
| 25.4 | AS1428.2 (1992) Cl 6.2 | **6.2 Circulation space for 180****wheelchair turn** The space required for a wheelchair to make a 180turn shall be not less than 2070 mm in the direction of travel and not less than 1540 mm wide.  NOTE: A space of 2270 mm in the direction of travel and 1740 mm wide is preferred. |  |
| 26.1 | AS1428.2 (1992) Cl 21.1 | **21.1 General** Where a sound amplification system is provided, a listening system to aid hearing-impaired people shall be installed or made available and shall cover at least 10 percent of the total area of the enclosed space. A sign  indicating that an assistive hearing device is installed or is available shall be provided in accordance with Clauses 16  and 17 at the main door or doors to the enclosed space. Where the listening system does not cover the total area of the enclosed space, the boundaries of the area served shall be designated by such signs.  NOTE: It is recommended that 10 percent of each classification of seating within an auditorium be provided with a listening system. | **Clause 16 SYMBOLS**  **16.1 International symbol for access** The form and use of the international symbol for access shall comply with AS 1428.1.  **16.2 International symbol for deafness** The form of the international symbol for deafness shall be as follows:  (a) The symbol for deafness shall consist of two elements, viz. a stylized ear and diagonal slash on a plain square background.  (b) The proportional layout of the symbol for deafness shall be in accordance with Figure 19. [Figure 19 is not extracted]  (c) The colour of the symbol shall be white on a blue background. The blue shall be B21, UltraMarine of AS 2700 [not extracted] or similar.  **16.3 Size of international symbols for access and deafness access** The size of the international symbols for access and deafness access shall be not less than that given in Table 1.  26.2 (a).JPG  **Clause 17 SIGNS**  **17.1 General** Signs shall be easily comprehended and shall comply with the requirements in AS 1428.1, and with this Clause (17).  **17.2 Height of letters in signs** The height of letters in signs shall be not less than that given in Table 2.  26.2 (b).JPG |
| 26.2 | AS1428.2 (1992) Cl 21.1 | See above at DSAPT 2002 s 26.1 |  |
| 29.2 | AS1428.2 (1992) Cl 24.1.7 | **24.1.7** *Distance between tables* The distance between tables shall be as shown in Figure 27. | Figure 27 not extracted. |

# Appendix 3 CRC Research Projects

## Rail Station Access

<http://www.railcrc.net.au/project/project/station_access>

The research project investigates access to train stations, the potential for conflict between the various modes used and management of these access modes to meet customer needs and suggests ways to improve a customer’s station experience. Through improvements to station access design other access modes can be supported and overall transit ridership can be increased

Research report: Attachment 1

## Platform Access

<http://www.railcrc.net.au/project/project/platform_access>

This scoping project was developed to explore a feasible, robust and cost effective engineering solution to overcome difficulties experienced by passengers, in particular passengers with reduced mobility, in accessing passenger trains via railway platforms. This project is designed to review current technology to recognise practicable gap-closing solution for access to platforms and carriages, and where appropriate to identify and suggest new technologies to address these issues in passenger operators around Australia.

Research report: Attachment 2

Carriage Way Access (Stage 1 and Stage 2)

<http://www.railcrc.net.au/project/project/carriage_way_access>

The aim of the research project is to recognise practicable “way-finding” solution for access to platforms and carriages.

Research report: Attachment 3

1. Significant Steps Report, 2005, Atkins Research for Department of Transport (UK). [↑](#footnote-ref-1)
2. Significant Steps Report, 2005, Atkins Research for Department of Transport (UK). [↑](#footnote-ref-2)