Stage 2 Consultation response to Reforms of the Disability Standards for Accessible Public Transport (DSAPT) 2002

To: Department of Infrastructure, Transport, Regional Development, Communications, and the Arts

Email: DisabilityTransport@infrastructure.gov.au

Authors:

Jane Britt, Policy and Advocacy Team Leader ▮▮▮▮▮▮@bca.org.au

Jackson Reynolds-Ryan, National Policy Officer ▮▮▮▮▮▮▮▮▮▮@bca.org.au

9th August 2022

Contents

1. Introduction

1.1 About Blind Citizens Australia (BCA)

Blind Citizens Australia (BCA) is the peak national representative organisation of and for the over 500,000 people in Australia who are blind or vision impaired. For nearly 50 years, BCA has built a strong reputation for empowering Australians who are blind or vision impaired to lead full and active lives and to make meaningful contributions to our communities. BCA provides peer support and individual advocacy to people who are blind or vision impaired across Australia. Through our campaign work, we address systemic barriers by promoting the full and equal participation in society of people who are blind or vision impaired. Through our policy work, we provide advice to community and governments on issues of importance to people who are blind or vision impaired. As a disability-led organisation, our work is directly informed by lived experience. All directors are full members of BCA and the majority of our volunteers and staff are blind or vision impaired. They are of diverse backgrounds and identities.

1.2 About people who are blind or vision impaired

There are currently more than 500,000 people who are blind or vision impaired in Australia with estimates that this will rise to 564,000 by 2030. According to Vision Initiative, around 80% of vision loss in Australia is caused by conditions that become more common as people age[1].

Australians who are blind or vision impaired can live rich and active lives and make meaningful contributions to their communities: working, volunteering, raising families and engaging in sports and other recreational activities. The extent to which people can actively and independently participate in community life does, however, rely on facilities, services and systems that are available to the public being designed in a way that makes them inclusive of the needs of all citizens – including those who are blind or vision impaired.

2. Blind Citizens Australia's submission

Blind Citizens Australia (BCA) welcomes the opportunity to respond to the Stage 2 Consultation for the Reforms of the Disability Standards for Accessible Public Transport (DSAPT) 2002.

This submission will focus specifically on the impact for people who are blind or vision impaired, relating to the issues identified in using public transport pertaining to navigation of public transport by people who are blind or vision impaired.

3. Submission context

This submission is based on existing legislation and frameworks, noting gaps in the fulfilment of requirements laid out in existing documentation. The pertinent acts and legislation are:

1. The Disability Discrimination Act 1992 (Cth) (Austl.)

2. United Nations Convention on the Rights of Persons with Disabilities (CRPD) 2006

3. Australia's Disability Strategy 2021-2031 (this strategy coordinates the implementation of the UNCRPD)

4. Disability (Access to Premises–Building) Standards 2010

4. Introduction

Blind Citizens Australia (BCA) welcomes the opportunity to respond to the Stage 2 consultation for DSAPT. In responding to the Reforms, we strongly recommend that the regulatory option is implemented throughout, in every section of DSAPT. It is essential that accessibility measures for transport are mandated, not merely optional in their implementation.

The regulatory options allow for aligned obligations to be met under the Disability Discrimination Act (DDA) 1992, whilst enabling Australia, as a signatory to the United Nations Rights on the Persons of Disabilities (CRPD) 2006 to comply with the CRPD. Article 9 - 'Accessibility' of the CRPD stipulates that:

> "States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia: a) Buildings, roads, transportation, and other indoor and outdoor facilities, including schools, housing, medical facilities, and workplaces…"

Further, Article 9 stipulates that:

> "States Parties shall also take appropriate measures:
>
> a) To develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public;
>
> b) To ensure that private entities that offer facilities and services which are open or provided to the public consider all aspects of accessibility for persons with disabilities."

An update to the existing DSAPT will assist in ensuring Australia meets its obligations under the CRPD. In a report published in October 2020 to the Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability (Disability Royal Commission), Professor Ron McCallum conducted a thorough analysis of Australia's performance against the CRPD benchmarks. In considering the intersection between the CRPD and transport systems, it was noted:

> "In 2013 and again in 2019, the CRPD Committee expressed its concerns about the length of time it was taking to ensure full transport accessibility and recommended that measures be put in place to ensure mandatory implementation of the standards and monitoring of compliance"[2].

Further, in its report to the CRPD Committee in July 2019, the Australian Human Rights Commission (AHRC) conveyed its view that the transport standards and the premises standards have been weakened by failures to ensure consistent application and implementation.

It is incumbent upon the Australian Government to ensure regulatory options are implemented with an obligation for transport providers and services to comply with a revised DSAPT. Further, it is the prerogative of the Government to ensure that length of time is reduced for compliance with Standards, and that "consistent application and implementation" as noted above, is ensured. Finally, harmonisation with the Disability (Access to Premises–Building) Standards 2010 is critical.

5. Part 1: Transport Standards Principles

5.1 Reporting

In terms of reporting by transport providers and services on DSAPT compliance, BCA recommends implementing mandatory reporting on the asset. Self-reporting against compliance plans does not provide the type of regulatory oversight and accountability provided by the regulatory option of mandatory reporting on assets.

The mandatory reporting on the asset would also have targets dates for upgrading noncompliant infrastructure. At present, prolonged delays on updates have led to inadequate provisions for accessibility for some transport services.

Further, BCA asserts that a national compliance reporting framework (The Framework) would clearly stipulate the nature of data collection including methodology, reporting mechanisms, and impacts on outcomes, which has been absent previously in terms of data collection and reporting. It would assist in compliance with DDA and the CRPD, providing a mechanism by which reporting on compliance can be undertaken. Further, BCA supports Sub-Option 2, which provides a robust solution, whereby mandatory reporting can be aligned with the parts of the Standards most applicable for that particular transport option.

In terms of whether enough clarity is provided to ensure people with disability would be able to access public transport without discrimination under the regulatory option, this can only be determined with sighting The Framework, and having a clear understanding of the methodology by which data will be collected, reported upon, and how outcomes will be measured; in sum, it will be determined by the execution of mechanisms underlying The Framework.

Compliance data should be made public, to ensure accountability across all public transport providers in meeting their obligations. Further, it would enable transparent reporting against Article 31 of the CRPD – 'Statistics and Data Collection', for the purpose of fulfilling our international obligations as a signatory to the Convention.

5.2 Equivalent access

In general principle, it is recommended that utmost effort is made to adhere to DSAPT before any alternative options are considered, in removing disability discrimination in access to public transport services by providers. At present, BCA strongly preferences full adherence to DSAPT above the equivalent access provision provided in the Transport Standards in section 33.3 Equivalent access.

BCA supports the regulatory option, whereby a new performance solution process would be developed, with a caveat that if agreement upon the performance solution process cannot be garnered, that the disability community is consulted about ensuring any solutions ensure the dignity of people with disabilities is upheld in enabling access to public transport. BCA would accept alternative accessible solutions if the development of proposed solutions included adequate consultation and participation with the disability community, on the provision that genuine co-design with the disability

community is undertaken, from the outset of developing the performance solution process, to implementation and evaluation of the process. Alternate solutions work well when co-designed, however it is ineffective when imposed by transport providers.

The timeframe also needs to be considered if exemptions are being applied for in relation to the project. For example, five years is not a temporary stay of meeting obligations and equivalent access being implemented instead. Equivalent access should not be a temporary de facto from compliance.

5.3 Rideshare

BCA has received feedback from our members about issues in access to rideshare sharing some intersections with those issues experienced with taxis, in addition to issues that are unique to the rideshare industry. Consequently, BCA supports the regulatory option being applied here, in which rideshare services will explicitly be identified within the Standards, and the same standards applied to taxis will also be applicable to rideshare services.

BCA joined with blindness service providers, Vision Australia, and Guide Dogs NSW / ACT to conduct a survey in 2020, capturing the experiences of people who are blind or vision-impaired who have used taxi or rideshare services in NSW in the past three years, excluding the current period of the COVID-19 pandemic. The survey aimed to capture the experiences of taxi or rideshare users who are blind or vision-impaired since the deregulation of the taxi industry occurred in NSW. The survey was made available to all members from the 12th to 15th of May 2020 and participants filled in their responses either directly in the form or contacted one of the researchers to provide their responses to be input into the survey. Information was collated by the host website and disseminated to researchers in each organisation.

Survey demographic information

The demographic information from our survey were:

- 171 participants responded to the survey, with a majority residing in metropolitan NSW (104 or approx. 60% of participants); 45 lived in regional, and 22 lived in rural areas.

- 96 out of 171 participants used a white cane (approx. 56%), 49 had a dog guide, 18 used a mini guide or a similar mobility device and 28 used no mobility aid.

In terms of ride share service, only 117 participants answered questions about rideshare service and the results were:

- 92 out of 117 participants use a ride share service less than monthly (approx. 79%), 13 people used it weekly, 7 people monthly and 5 people daily.

- 25 out of 117 participants experienced less than helpful service (approx. 21%).

- For participants who have experienced less than helpful service or experienced direct or indirect discrimination, a majority experienced it 1-5 times in the past 3 years.

- Majority of participants did not lodge a complaint after a poor experience. Out of those who did lodge complaints, the majority did not receive satisfactory results.

Ride share service issues

Participants in the survey referred broadly to the rideshare service, Uber with a couple of references made to Ola and Shebah. Some participants noted they do not use rideshare at all because they do not accept TTSS vouchers. Others noted they do not feel safe using rideshare while others only use rideshare now due to experiencing many issues with taxi service. A participant noted that drivers asked inappropriate questions about their disabilities and made them feel uncomfortable.

Participants reported the same issues repeatedly when accessing rideshare services:

1. Refusal of service due to seeing eye or guide dog.

2. Rideshare service arriving and leaving again after being unable to locate the passenger who cannot see them to alert them to their presence.

3. Passenger being unsure of where to wait or being unable to identify the car number or driver to ensure they are getting in the correct car.

4. Driver dropping passengers at the incorrect location.

5. App is inaccessible (Shebah).

Ride share complaints process issues

Participants reported the same issues when accessing complaints processes used by rideshare companies:

6. Unable to find where in the app to lodge a complaint (difficulty accessing).

7. Lack of follow-up about outcome of a complaint (e.g., driver suspension or re-education etc.) except for a refund on the trip.

Several participants noted that they were satisfied with the response by Uber after they made complaints, with swift resolution of the complaint (e.g., driver suspension). One participant stated that Ola also resolved complaints but not as quickly or as well as Uber does.

Choosing rideshare or taxi services

Participants were split over their preferences for taxis or rideshares. Some participants will not use rideshare based on their concerns that they do not accept Taxi Transport Subsidy Scheme (TTSS) vouchers, a belief that they are not insured, and participants have concerns about their safety. Elaborating on the last point, participants stated concerns about identifying the driver and car without being able to see the number plate or driver. A point of difference here is also that taxi companies have a requirement for a tactile/braille taxi ID number to be displayed on the door, for people who are blind or vision impaired to identify the car they are entering. Some participants will not use taxi services due to prior poor service and now exclusively use rideshare services due to feeling safer and receiving better service i.e., picking them up and dropping them at the correct location.

A disturbing theme which emerged was the issue of drivers in both taxis and rideshares asking inappropriate questions of passengers about their disabilities, their personal lives and making them either uncomfortable or scared.

A repetitive theme was also that participants accessing taxi services in regional or rural areas tend to have more positive experiences due to building relationships with the people who drive for these services. A substantial portion of issues raised were noted to have occurred in metropolitan NSW.

Consultation questions about rideshare

In terms of the consultation questions, more information is needed to indicate exactly what would be covered in terms of rideshare services within DSAPT. Regarding the question about whether a lack of clarity around rideshare service compliance with DSAPT contributes to people experiencing discrimination, the answer is complex. Unfortunately, the discriminatory experiences that people who are blind or vision impaired experience with rideshare services equally apply to taxi services, despite this lack of clarity. In effect, what is needed is not just clarity that DSAPT applies equally to rideshare and taxi services, but a strengthening of the regulatory terms that do apply to both services, to reduce the incidence of discrimination. For example, any refusal for service to a person who is a handler of a dog guide should automatically result in action being taken in terms of violating the DDA, rather than the person with disability needing to lodge a case to the AHRC.

Case study: BCA member, Victoria

"I am an avid taxi user. I particularly like a taxi because it has a safety button on the inside of the unit so if anything makes me nervous, I can contact someone.

Traditionally the colours of the Taxis have always been yellow. Therefore, easy to identify in a taxi bay or pulling up to you in a location. I don't like the movement forward if [taxis are] going to use their own colour.

I am also not an Uber user as although in the app it tells you the kind of car and numberplate approaching. Being visually impaired I do not know what cars look like as in a Holden or a Ford. Also, the fact that Uber cars can be of many assorted colours makes it difficult for them to stand out. And with Uber not having any uniform we can hop in a car with any random stranger.

I generally find that taxi drivers are more willing to assist you. As an Uber driver is not."

Other issues for rideshare and taxis

The rise of electric vehicles due to improved environmental footprint has also meant that pedestrians who are blind or vision impaired are placed at greater risk when wayfinding across driveways, roads, or any shared spaces where there are electric vehicles; the lack of sound means that audible wayfinding through determining the location of moving traffic in relation to the person's position is thwarted. This places pedestrians who are blind or vision impaired at risk of injury, or death. This extends to rideshare vehicles which are hybrid or electric vehicles.

Although this is not directly in the transport standards, it is critical that it is addressed as an adjacent supporting measure of ensuring safety of people with disabilities. BCA calls bodies responding to the DSAPT stage 2 consultation to advocate for federal and state governments to take a strict approach to the regulation of minimum noise emissions from hybrid and electric vehicles to maximise the safety of pedestrians who are blind, deafblind or vision impaired. This would mean mandating the installation of an Acoustic Vehicle Alerting System (AVAS) in all electric and hybrid vehicles registered in Australia and working with offshore car manufacturers for the Australian market to ensure that AVAS is installed without an off-switch (UN regulation 138-01). Further, we encourage Australia to be a signatory to UN regulation 138-01 relating to silent vehicles. This mandate request extends to all electric and hybrid vehicles, including those used to provide rideshare and taxi services in Australia.

"I was nearly hit by an electric vehicle exiting a driveway near my local supermarket. I was not aware of their presence, and the driver told me after he rolled down his window to apologise,

that he was not aware I had been waiting to cross. I am now very wary, even scared, of travelling in my local environment because I am never sure if there is an electric vehicle idling nearby or not, and if it may take-off into my walking path" – BCA member, Queensland.

"…obviously, electric cars taxis buses and things will be a concern of the future. They need some sort of audio beacon so we can hear them" – BCA member, Victoria.

6. Part 2: Information, Communication and Wayfinding

6.1 Better communication of accessibility features

BCA supports the proposed regulatory option. We agree that this approach would improve the clarity and consistency of terminology across various modes, networks, and jurisdictions, which is likely to have a flow on effect of building the confidence of users to travel on public transport.

We remain concerned that communication to passengers about service changes in many cases relies on visual methods, and that information about what passenger assistance is available at stations – even whether stations are staffed or not – remains inconsistent.

During our consultations, one member noted:

"Staff are helpful, but cannot always be located. My own station is usually not staffed. There are Help buttons on the station, but these are hard to find. A single contact number would mean I could travel to places with which I am not familiar and know that I could plan on receiving assistance"

We note that even in areas that have communication systems in place (such as text message alerts), these systems often rely on community knowledge of its existence, and of individual passengers taking the initiative to use it. Similarly, while including information about changes to service as part of regular updates in mailing lists is a useful form of communication, it must not be the only form, as it assumes a level of engagement by service users, and immediately disadvantages visitors and other non-regular users. To be effective, communication about changes in service or other important announcements should have consistency in terms of design and placement – especially in relation to billboards or other comparable items that may pose a safety hazard to a person who is blind or vision impaired.

"I have used the text number to ask for assistance when I was travelling in Brisbane to get assistance at my station to get off at Central, to attend the ANZAC Dawn Service. The staff were helpful in communicating to let me know the support had been organised, and I had a smooth trip getting in, being assisted to the exit of the station, and being assisted after the ceremony ended to get back to my platform, and home again. I wish this dedicated service was available across all transport, and especially when I travel interstate, which I do frequently" – BCA member, Queensland.

6.2 Timely provision of information

BCA supports the proposed regulatory option. If adopted, we believe the new regulatory approach will help ensure access to journey information and updates is widely accessible, thereby improving the experiences of people who are blind or vision impaired in their use of public transport.

In feedback from members, currently much of the information provided to people who are blind or vision impaired is outdated by the time they attempt to travel. We heard concerns about public transport apps where updates have broken the accessibility features. All apps and communication channels must be designed to work with systems such as voice over, screen reader etc.

We do note that the impact of the regulatory option is likely to be mostly on customer service staff, who will be required to provide direct assistance until the request can be "fulfilled in a timely manner". While we believe this is a positive step forward, we would like to see operators take responsibility for providing disability awareness training to frontline staff, and to ensure that flexibility is built into timetables to help prevent staff becoming annoyed or frustrated when asked to provide information to a person with disability.

6.3 Real time reporting

BCA supports the proposed regulatory approach. We believe these changes will improve the public transport experience for people who are blind or vision impaired; however, if these are not mandated and if the guidance is not followed, people with disability will continue to experience difficulty in accessing real time information to help plan and complete their journey, or to give feedback or make necessary requests for assistance, as noted by the consultation document.

Feedback from members indicated a strong feeling that whenever there is a service disruption, little to no consideration seems to be given to the needs of people with disability. For example, there might

be an instruction to alight from a train and instead board a rail replacement bus; however, in many circumstances there is very little specific information about where to board the replacement bus or which platform a replacement train will be departing. These unexpected disruptions often occur stations which are unfamiliar, and members have found that other passengers are usually in a rush, and staff are distracted and not looking out for people who might need help.

Members also provided feedback that public transport apps are also slow to reflect service changes. One member in New South Wales commented:

> "Trains on my line have been disrupted frequently lately due to various landslides, but services were still showing up although they had been cancelled and there was simply no information about replacements. Sometimes replacements were not provided, leaving people unable to get home. Information about the number of carriages on a train is also often incorrect, which can mean you are standing at the wrong place on the platform when your train arrives and is shorter than expected."

Another member from Queensland shared:

> "orientation and mobility instruction [for people who are blind or vision impaired] at train stations where a change of train line is needed focusses on getting off a specific platform to change lines, and then catching the next train at another specific platform. If there is a service disruption, or a line is closed, it requires going to an unfamiliar platform and means wayfinding is challenging. It would help greatly if there was a way to communicate with staff about the change, and the assistance that I need to catch the next train at an unfamiliar platform."

6.4 Passenger location during journey

BCA supports the regulatory approach of Sub-Option 2. We believe this option provides greater detail and specificity, including standards around audio announcements of next stop broadcasts via hearing augmentation systems, and greater detail on side door options.

During our consultation, members in Melbourne provided feedback that audio announcements of next stop on the 'Smart Buses' often does not function properly, which adds to the difficulty of travelling on the bus network. Similarly, the PA system on the Melbourne train network was reported to be frequently muffled and distorted. It is worth noting that the audible announcements on the Melbourne Tram network generally received positive feedback for their clarity, consistency, and accuracy.

The problem is not isolated to Melbourne. Members in locations across Australia reported frustration with the lack of audible announcements on buses. In feedback we received, some members talked about finding 'workarounds', including using GPS based apps to determine their location; however, these apps are not always accurate, resulting in members missing their stop.

We also have concerns about the proliferation of advertisements on the outside windows of buses and light rail. These advertisements create shading over the windows, compromising the view of the outside from within the vehicle. Members with vision impairment commented that it can be very difficult to keep track of their current location, which makes it difficult to know when their destination stop is approaching. It is clear from our consultation that missed stops, and inaccurate or unclear information, can erode the confidence of people who are blind or vision impaired in using public transport networks.

> "The advertising on the outside of buses often obscures the view outside the bus, which means I no longer have the use of the small amount of residual vision that I have to identify landmarks to work out where I am during my trip. It has meant that I have disembarked at the wrong stop on occasion, either too early or too late" - BCA member, Queensland.

6.5 Print size and format

At present, section 27.3 stipulates:

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

2) Copy must be black on a light background.

The regulated option would enable the following to be added to this section:

- Copy must be black on a light background or achieve a 75 per cent luminance contrast between text and background.

- Font weight must be semi-bold or bold.

- Text must be left justified with a ragged right margin.

BCA supports the regulated option, since it would enable people who are vision impaired i.e., who have residual vision, to be able to read printed information at transport venues, on transport, and access transport-related printed communications. At present, wayfinding presents a major challenge for people who are vision impaired, with one factor being that print is inaccessible at wayfinding locations, or emergency stop points etc. on transport or at transport boarding points. Providing only

braille is insufficient for this purpose; large, high contrast signs are also needed. Further, printed materials about transport are often inaccessible, e.g., timetables, due to small font size and/or poor contrast.

6.6 Letter heights and luminance contrast of signs

There are currently stipulations around letter heights and luminance contrast of signs, however this could be finessed with refinement. BCA supports the regulatory option, whilst making some additional recommendations. Neither option 2 nor 3 is sufficient alone; noting that the Viewing Distance formula results in the figures listed in the table under Clause 17.2 under AS 1428.2. It needs to be extended to consider:

1. Location in terms of the impact of lighting on reading the print

2. Location in terms of any physical barriers to getting closer to the print source (see next section).

Clause 17.3 also needed to be extended. Under AS 1428.2 it states: "luminance factor… shall be not less than 0.3 (30 percent)". We believe that research has shown that 30 percent is not adequate and that, to enable visual detection for people who are vision impaired, small, or narrow building elements – especially those serving safety purposes – should be required to possess a minimum 73-77% luminance contrast[3].

Further, it is critical that user testing is conducted to ensure that type and luminance contrast enable people who are vision impaired accessing the static, non-braille and non-tactile signs can see them.

It is recommended that this section is considered in conjunction with sections 6.5, and 6.7 in this submission; alone it does not provide enough specification to ensure that it will be operational in the capacity for which it is intended. We also note the regulatory options in 'Part 3. #37 – Lighting' of the consultation document are useful in specifying the colour temperature of 'task lighting', which is defined as "dedicated lighting provided to enable the completion of an activity", for example reading a sign or interacting with a fare system.

6.7 Location of signs

BCA supports the regulatory option, and in particular Sub-Option 2 for location of signs, with a caveat that user testing is conducted to ensure that any provisions ensure that people who are vision

impaired can see them or people who are blind can find the braille information connected with the sign if applicable. Further, we support it with the proviso that signage information is also clearly conveyed in other communications, e.g., in websites about the transport venue or service, or in other communications; this supports people with disabilities in planning prior to leaving home to wayfind to a transport venue and/or wayfind to the transport service boarding point.

> "Timetable information at both bus and tram stops is printed in font sizes that are too small, and the information is often displayed higher than at eye level which makes it difficult, if not impossible, to read" – BCA member, Victoria.

6.8 Braille embossed (printed) specifications

BCA does not support either the regulatory or non-regulatory options. Instead, our recommendation is for broader consultation with community representatives with the expertise in braille to guide any amendments beyond the status quo.

The information presented about braille in the consultation RIS is inaccurate. The braille code currently used in Australia is Unified English Braille (UEB), and contrary to the consultation RIS, the Rules of UEB was developed in the 1990s, and it is maintained by the International Council on English Braille (ICEB), not by the Australian Braille Authority. It was formerly recognised by the ICEB in 2004, to be "substantially complete" and "could be recognized as an international standard and considered for adoption by individual countries"[4]. It was formerly adopted in Australia in 2005.

BCA recommends that the options listed in the consultation RIS are discarded in their entirety and a regulatory option is developed in consultation with braille experts. Further there needs to be a clear stipulation between braille labelling and braille signage to ensure consistency in application of any measures under this section.

Neuropsychological research on braille reading shows correlation between the process of braille reading and specific cortical functions. In particular, Mašić et al. found "sighted people recognize and process letters by their visual characteristics in the visual cortex, whereas in Braille reading, the somatosensory system is responsible for letter perception"[5].

Research has additionally focussed on the distinct neuropsychological processes attached between reading uncontracted and contracted braille and there are suggestions it is not straightforward in terms of cortical processing when a person switches between uncontracted (grade 1) braille and grade 2 braille. Consequently, debate has raged across English-speaking countries, namely USA,

Canada, England, and Australia, about whether students should be taught both codes, or either grade 1 or grade 2 braille. We highlight research by Gale, cited by Clunies-Ross in this debate:

"The issue of whether to teach Grade 1 or Grade 2 to beginning users of braille continues to cause heated debate in Australian schools. In integrated classrooms there is an increased emphasis on using Grade 1 braille, which is perceived as easier to teach and to manage, she explains. However, this can encourage staff who have 'rudimentary braille skills' to fail to sharpen and update these… to help pupils move on to Grade 2 when they are ready.

Australia also suffers from a lack of specialist teachers qualified in visual impairment. New technology has revolutionized the education of students [who are vision impaired], but Gale cautions the extent of its role, pointing out that 'its use should never be regarded as a substitute for hard copy Braille.[6]"

Due to this distinction in reading either code, having all information in both would require little additional effort; both grade 1 and grade 2 information should be produced e.g., braille information in grade 1 and grade 2 for evacuation on a plane.

Therefore, BCA recommends a new regulatory option is developed in consultation with braille experts, led by the Australian Braille Authority. This regulatory option would require simultaneous production of transport-related information in both uncontracted (Grade 1) and contracted braille, and where practical, presented together in a bound volume.

6.9 Braille and tactile lettering for signage

BCA supports the regulatory option for braille and tactile lettering for signage. Although there is some level of clarity provided within the regulatory option, BCA strongly recommends that user testing is conducted wherever braille and tactile lettering for signage are implemented to ensure people who are blind or vision impaired can access either the braille, the tactile lettering, or both, as applicable.

6.10 Lifts: Braille and tactile information at lift landings

Braille and tactile information at lift landings is covered under 'AS1735.12 (1999) – Lifts, escalators and moving walks, Part 12: Facilities for persons with disabilities'. The standards were additionally added to a revision in 2020. Section 6.4.1.2 Control devices for destination control systems of AS1735.12 (2020) includes references to touchscreen.

The regulatory option with the amendments to existing standards, and considering requirements already stipulated under the Disability (Access to Premises–Building) Standards 2010, provides additional measures providing assurance for wayfinding at lift landings for people who are blind or vision impaired, however they need to be amended to also include references to touchscreens and accessibility provisions where the touchscreen access remains inaccessible for people who are blind or vision impaired. The increasing presence of touchscreens at lift landings has created additional barriers for access, due to being generally inaccessible to people who are blind or vision impaired. Section 6.4.1.2 Control devices for destination control systems of AS1735.12 (2020) needs to explicitly cover accessibility measures where touchscreen systems mean that someone who is blind or vision impaired cannot access information at a lift landing, including access to the lift itself, and therefore the premise in which it is located.

6.11 Lifts: Audible wayfinding

BCA supports Sub-Option 2 under the regulatory option. This approach to audible wayfinding, including audio information arriving at platform landings or landings in road reserves, parking or passenger loading areas. Further, the inclusion of basic orientation information would assist where a lift car opens from both sides, depending on the landing orientation for different levels. For people who are blind or vision impaired, this information would not only provide orientation to the landing, but also the ability to exit the lift car safely. The only caveat would be that any directional information is developed in consultation with people who are blind or vision impaired, to ensure that the audible information for wayfinding provided is able to be interpreted and followed accurately.

At present, wayfinding from the lift is challenging without audible cues for people who are blind or vision impaired. Braille on the lift interior on buttons helps to make selections about the floor level, however if the lift is making multiple stops, especially where it goes up and back down again before reaching the floor the person wants, it is impossible to establish where the floor the person requires is located, unless there are other lift car passengers to ask for assistance. Further, it is challenging to work out where to exit a lift if it opens from both sides.

This regulatory option update would enable people who are blind or vision impaired to efficiently use lifts and continue wayfinding to a destination.

For people who are blind or vision impaired, audible cues are also needed where a locality has multiple lifts. 'AS1735.12 (2020) section 6.2 – door openings' does not have any indicators for audible cues for which lift might be opening for wayfinding to the lift in the first instance.

6.12 Lifts: Reference for lift car communication and information systems

'AS1735.12 (1999) – Lifts, escalators and moving walks' is outdated and does not have any requirements around listening systems in lifts, and although the 2020 update 'AS1735.12 (2020) – Lifts, escalators and moving walks' makes reference to listening systems, however, it was written about general public lifts, not specifically lifts at public transport locations, nor does it capture the use of the listening system for audible announcements about service updates. This means there are no provisions for providing information that may be provided visually on electronic boards to enable people who are blind or vision impaired to access the information. Further, it disadvantages people who are deafblind and cannot access the visual nor auditory information, especially where they use hearing aids and the audible information provision is not extended to the hearing loop used by the hearing aid.

BCA support the regulatory option which would enable the amendment of current standards to incorporate a hearing system in lifts at public transport locations, and this hearing system must also be used for emergency communications. Further, this hearing system would be supported by the regulatory option being adopted under Lifts: Emergency communication systems in lift cars.

6.13 Information and communication technologies (ICT) procurement

There are presently insufficient provisions for the procurement of information and communication technologies (ICT) used by transport service providers for their products. Consequently, ICT system access is inconsistent across different transport networks, across states and territories in Australia. People with disabilities are disadvantaged in frequently being unable to access the ICT products associated with public transport systems e.g., ticketing systems including turnstiles and machines for purchasing tickets, baggage drop-off systems, transport timetable/service status audio-visual information etc. AS/EN301549 (2016) sets out original requirements for this, with an update in 2020, which in addition to other updates, raised the minimum standard from Web Content Accessibility Guidelines (WCAG) from WCAG 2.0 Level AA to the standard of WCAG 2.1 Level AA.

BCA supports Sub-Option 5 for anything web-based under the regulatory option, whereby AS/EN301549 (2020) in addition to WCAG 2.1 Level AAA is required.

The experience of using ICT software associated with transport was mixed. For some systems, there were minimal or no issues, but for other systems, it was very inaccessible.

> "The ferry service is very good and safe. Purchasing tickets online is messy as they used to be purchased on boarding; pre-Covid. They are not a PTV service so will not accept my Travel Pass but will accept Companion Card if they know in advance…again, a messy ticketing issue on the computer" – BCA member, Victoria.

BCA further supports user testing of ICT systems, from the initial stage of procurement to implementation of ICT systems; a system being compliant with WCAG 2.1 does not necessarily ensure it is intuitive for use with a screenreader.

6.14 Mobile web systems

BCA supports the regulatory option with Sub-Option 5: "The Transport Standards would be amended to require compliance with AS/EN301549 (2020) and prescribes additional minimum WCAG 2.1 AAA requirements". In addition to this Sub-Option being implemented though, it is strongly recommended that co-design and user testing is a standard principle for the procurement and implementation of mobile web systems. A system being compliant with WCAG does not necessarily ensure that it is intuitive for use with screenreading technology.

Several members reported issues with accessibility of information on internet sites:

> "Public Transport Victoria website has become more difficult to use. It appears to have become slower and at times is unable to display the requested timetable information and eventually gives up" – BCA member, Victoria.

6.15 Accessible fare system elements

BCA supports the regulatory option, with Sub-Option 3: "The Transport Standards would be amended to include new requirements for fare and ticketing systems, including compliance with AS/EN301549 standards for fare system hardware and software, rather than a performance standard, and additionally compliance with WCAG requirements". This Sub-Option would be beneficial for people who are blind or vision impaired because "fare system elements must meet the requirements of

AS/EN301549 section 5.1.3.1 Audio output of visual information, section 5.1.3.3 Auditory output correlation, and section 8.5 tactile indication of speech mode". This would enable access that is not entirely dictated by visual access to the fare system. Further, wayfinding to fare systems is improved when auditory cues are used for people who are blind or vision impaired to be able to navigate to the physical stop point for the system and complete a transaction.

> "I have been involved in user testing for upgrades to the smart ticketing system in south-east Queensland. The touchscreen technology that has been used has been quite user unfriendly for someone who has minimal vision; it has been challenging to navigate the screen and make correct selections" - BCA member, Queensland.

7. Part 3: Accessibility at stations, stops, wharves and access routes

7.1 Continuous accessibility on access paths

BCA supports the regulatory approach in this section.

We note that under the Cost Benefit Analysis (CBA) in the consultation paper there are no financial or operational impacts thought to be associated with this approach, while the benefits to people with disability are clear.

7.2 Flange Gaps

BCA supports the regulatory approach proposed in Sub-Option 2. This option includes greater detail on the specific construction requirements for flange gaps by linking to 'AS1742.7 – Manual of uniform of traffic control devices'. We also welcome the proposal to update the Transport Standards Guidelines and/or The Whole Journey Guide, to include advice for improving accessibility where flange gaps are located within access paths at level crossings.

We note however that level crossings by their very nature pose a safety risk to pedestrians and other road users. While the proposed regulatory options will improve safety if they are adopted, there is more that can be done beyond this. In particular, we welcome and commend the work being done by the Victorian Government to remove many of the state's most dangerous level crossings, and we encourage other jurisdictions to follow this approach.

7.3 Resting points

BCA supports the proposed regulatory approach, with the caveat that we do not support the fourth dot point: "allocated spaces at resting points do not require signage or ground marking".

BCA feels this goes against the spirit of the proposed regulatory updates in other areas, and we encourage signage to be included wherever possible.

7.4 Requirement for handrails in overbridges and subways

BCA supports the proposed regulatory approach. As noted in the consultation document, knowledge that handrails are in place in all overbridges or subways will help give people who are blind or vision impaired the confidence to use them. In various ways, and across multiple consultations, members have expressed their concern, highlighted in the document, that designers are given flexibility to decide case by case where to install handrails.

We welcome the level of detail in the regulatory approach, including the specific guidance on the importance of continuous handrails for wayfinding, and design specifics on the outside diameter to ensure that children and those with smaller hands are still able to use the rails.

As in other sections throughout the document, we give the caveat that we do not believe premises to which the Premises Standards apply should be exempt from the updated Standards.

7.5 Location of Fare System Elements

BCA supports the proposed regulatory approach. We welcome the level of detail in this approach, including the design requirements to reduce glare and improve wayfinding, and the cross referencing with other parts of the Standards to ensure fare system elements are installed in an appropriate location (see Section 6.15).

We note that there are several instances where the phrase 'where possible' has been used. As in other sections of our submission, we provide the caveat that where these new design requirements are thought to not be possible in a particular location, the importance of community engagement and user testing is even greater. To fully support this regulatory approach, we would like to see specific guidelines around what can be deemed 'possible'.

7.6 Allocated spaces and priority seating in waiting areas

BCA supports the regulatory approach. We welcome the specific guidance that braille and tactile signage should be provided to identify priority seats in waiting areas; however, we are concerned at the inclusion of the phrase 'where practicable'. We urge this to be removed from the regulatory approach.

7.7 Emergency call buttons in accessible toilets

BCA supports the proposed regulatory approach of Sub-Option 2.

In particular, we welcome the inclusion in this Sub-Option of a requirement for braille and tactile signage to identify emergency call buttons, and specific luminance contrast requirements.

7.8 Poles, objects, and luminance contrast

Luminance contrast remains an area where significant research needs to be conducted to ensure an appropriate specification for contrast is applied in public areas to assist in wayfinding for people who are blind or vision impaired. At present, testing and calculating the luminance contrast between two surfaces is provided in the Australian Standard 'AS1428.1 (2009) – Design for access and mobility' and is referenced in the Premises Standards. Section 13.1 covers luminance contrast for doorways, doors, and circulation space at doorways, pointing to a minimum of a 30 percent contrast standard, with Appendix B (AS 1428.1 2021) providing further insight into the provision of luminance contrast. It is however known that the 30 percent luminance contrast stipulation is insufficient. Further, it should be noted that this is stipulated as a minimum, not an absolute figure for an appropriate percentage of luminance contrast.

Anecdotally, the evidence provided by people who are vision impaired when wayfinding in public transport determines that the contrast is insufficient in many instances e.g., it is difficult to identify the waist-height bollards at train/tram/light rail infrastructure which have no contrast or luminance. Further, the contrast is impacted by different visual backgrounds plus how the contrast appears visually in different light. For example, a contrast may be sufficient in one condition i.e., with a particular background and/or lighting, but it may not be enough in a different condition i.e., against a different background and different lighting. This issue is compounded when a background is not fixed

or immoveable. It is worth noting that the term 'background' is without definition in the current standards.

In the words of one BCA member:

> "particularly in locations that I am not familiar with, I can find it very difficult to locate bus stops, particularly where there is not actually a bus shelter at the stop. The poles and signs indicating the bus stop are not distinctive enough. Use of brightly coloured poles indicating the bus stop and larger signage would help. The same applies with identifying tram stops, especially as they no longer are always located immediately before intersections" – BCA Member, Victoria

BCA supports the regulatory option, with Sub-Option 2 preferred whereby it applies to all public areas, however notes that professional input is needed with proper user testing to establish a better luminance contrast standard. AS1428.1 (2021) and Appendix B needs to be reconfigured on the basis of this professional input and advice.

7.9 Lighting

BCA gives in principle support to the Option 3, Sub-Option 1 within the regulatory approaches; however, we note the high levels of industry jargon in this section. In our consultation with members, we heard that the most common issues related to lighting are to do with glare, with low light, and with the consistency of light provided.

8. Part 4: Accessibility of boarding and alighting and egress of infrastructure

8.1 Notification by passenger of need for boarding device

Notification by passenger of a need for a board device also extended to communications for a passenger to require assistance when alighting or disembarking from a transport service. BCA members who are blind or vision impaired have reported that difficulties in finding staff assistance, firstly because some train or bus stations are unstaffed, and some smaller train stations do not have stationed staff there at all.

A BCA member in NSW shared:

"I would like to see a dedicated number where people with disability could contact when they need help… Station staff have advised me to call [the] stations I am travelling to if I would like assistance when I arrive. It is difficult to locate these individual numbers. Staff are helpful but cannot always be located. My own station is usually not staffed. There are Help buttons on the station, but these are hard to find. A single contact number would mean I could travel to places with which I am not familiar and know that I could plan on receiving assistance."

Further, across all transport services, our members who are blind or vision impaired have reported that there are occasions in which staff assistance would be beneficial. These include wayfinding at an unfamiliar station or transport venue, or where there are changes to the operation of the transport including closed platforms, requiring people to go a different, often unfamiliar part of the transport venue. Finally, assistance at train stations from guards can prevent injuries[7] or even death, by providing support through a boarding device or by sighted guide technique whereby someone who is blind or vision impaired holds the elbow of the guard to be supported to step up to, or step off, a train.

BCA therefore supports the regulatory option, and Sub-Options 2 in both instances, however we strongly recommend that the mandatory stationing of guards on trains to provide assistance at train platforms is included within this standard.

In addition to the support for the regulatory option, BCA recommends consistency across train networks whereby stepping from the carriage of the train to the platform or vice versa is level, not a step up, or a step down. This lack of consistency across the network presents challenges for ensuring safety when embarking or disembarking across the gap from the platform to the train or vice versa.

8.2 Portable boarding ramp edge barriers

BCA supports the regulatory option with Sub-Option 3 preferred, whereby a perspective requirement for edge barrier heights is set, with reference to 'AS3856.1 (2021) - Hoists and ramps' for people with disabilities. People who are blind or vision impaired require ramp edge barriers for safe use of portable boarding ramps, and this Sub-Option provides the best provision for safe access for people who are blind or vision impaired.

8.3 Boarding ramp and removable gangway definitions

BCA supports the regulatory option whereby definitions for boarding ramps and removable gangways are clear, and therefore, from an operational perspective, edge barrier mechanisms used as an

appropriate option to mitigate injury to people with disabilities, who may fall off the edge when alighting or disembarking from a ferry service if these barriers are not present.

8.4 Nominated assistance boarding points

BCA supports the regulatory option 2, whereby there would be an amendment to section 8.8 "Notification by passengers of need for boarding device for nominated assistance points". This would enable greater consistency across transport networks for nominated assistance boarding points. At present, the inconsistency in locality of boarding points for different transport options e.g., at platforms for trains or buses, has created challenging wayfinding conditions for people who are blind or vision impaired. Any regulation that improves this consistency across transport networks would be welcomed.

BCA has also had additional feedback about infrastructure surrounding areas where the transport boarding points are located needed to be sufficient for safe access by people with disabilities. A BCA member in Queensland provided the following example:

> "I have a bus that stops outside my back gate, (about fifty metres up the road), and goes into the city. This is very convenient if traveling inbound. However, if you're returning from the city, the bus of course stops on the opposite side of the road. The road my gated community backs onto is reasonably busy, even if it isn't a thoroughfare as such. If I wanted to get the bus home from the city, I would have to manage a quite busy road to cross with no traffic lights or pedestrian crossing. As I am hearing impaired, this would be like taking my life in my hands, so I don't do it. Similarly, if I wanted to catch the bus to my nearest train station, (on the outbound route), I would have to cross to the opposite side of the road from where my complex is to do so, which again is not safe.

> My point is that… infrastructure must support whatever form of public transport one cares to mention. It's no good not being able to safely navigate across a busy road and not be able to complete your route with an assurance that you'll make it in one piece! It has rendered the complete use of bus travel for me inaccessible… public transport and its supporting infrastructure has not been designed in an inclusive manner."

A BCA member in Victoria shared a similar issue:

> "The main issue I have found in the areas I do frequent relates to the positioning of the transport in relation to shops, train stations etc. For example, in Victoria at the Werribee Plaza,

the bus bays used to be right outside the front door within a 10-metre walk…The bus bays are all now located at the rear of the Plaza to the right-hand side. Upon alighting from the bus, you need to cross over some slightly irregular paving. You can choose to cross the road in front of the entrance exit to the BWS alcohol drive-through. Then walk to the left to the corner of the car park. Which unfortunately is where the guiding markers [tactile ground surface indicators] stop. You then actually have to walk to the right to then locate the actual crossing to enter the Plaza.

Getting across the bus bay is not too difficult my concern is that you then have to cross a major section of road. We all know that the drive-through bottle shop can be quite busy.

Option B in moving across the bus bays is to go to the left over a windy path. Then cross at a zebra crossing. That zebra crossing happens to be right in front of the roundabout… [on a] major traffic thoroughfare… between Derrimut Road and all cars entering the car park.

I can see at least two or three other locations [for the bus bays] where both visually impaired and or disabled people would not need to cross so much of a high traffic area to enter the Plaza."

Another issue which arose was that once someone had accurately been able to wayfind to a nominated boarding assistance point, because multiple services stopped there e.g., different bus numbers on different routes, it was challenging to identify the needed service.

"If I catch my bus anywhere else, several buses will stop as they often travel the same route. This is annoying for me and the drivers. [I am] expected to carry a large card with number 60 on it" – BCA member, Victoria.

"I can find the bus interchange using the ground, directional markers and tactile ground surface indicators however, the problem arises once I'm at the spot - I can't identify which bus is which, meaning that I have often got to the right spot to get on, only to find myself travelling on the wrong bus number. I hold up a sign with the numbers I want on it once I reach the boarding point, but it doesn't always mean I get on. I know there are electronic boards with service information that others can read, but I can't see it, so if the bus service is stopped for some reason, it doesn't turn up, and I'm left wondering if I missed my bus or whether I'm actually in the right spot" – BCA member, Queensland.

"Geelong bound trains seem to run from many different platforms which is very annoying, and I have often raced between platforms. Again, a reliance on the ability to hear the

announcements is important. There is a smaller visual screen at the top of the concourse at the… street end that may help (if you can see it)" – BCA member, Victoria

8.5 Identification of Lead Stops

BCA supports the regulatory option. We agree that people who are blind or vision impaired will benefit from changes that enable them to locate the appropriate boarding area of a lead stop more easily, leading to greater confidence in their ability to travel independently.

In particular, we welcome the specific guidance that identifiable lead stops can be achieved using a combination of cues including overhead and tactile signs, tactile ground surface indicators (TGSIs) and smartphone wayfinding or other electronic device solutions, along with customer liaison officers who can assist people with disability to locate the lead stop.

8.6 Pontoon Boarding Points

BCA does not fully support any of the options provided in this section. Whilst, in principle, we support the regulatory approach as it provides greater consistency and certainty for people with disability, we feel it is incomplete.

It is worth noting that all boarding points at pontoon are staffed. This means that as each person embarks and disembarks, the staff member is available to help with navigation and can provide personalised assistance. This helps mitigates a lot of the risks involved and is an approach we would like to see replicated across public transport networks.

However, given the unique hazards for pontoon boarding, we would also like to see specific guidance included on appropriate placement of TGSIs, and a requirement for braille and tactile signage that provides information about the site, the manner in which functional stability has been achieved, any unique hazards that a passenger should be aware of, and clearly identifies the entry point.

8.7 Bus, Tram, and Light Rail Boarding Points on Infrastructure

BCA supports the approach of regulatory Sub-Option 2. We agree that there is a safety benefit for passengers in general in ensuring that boarding points at bus, tram and light rail stops will be firm and aligned with the conveyance.

Similarly, all passengers, but particularly those who are blind or vision impaired, will be able to travel with greater confidence and safety given the elimination or reduction of the slopes involved.

8.8 Hail-and-ride boarding points on Infrastructure

Whilst BCA supports the principle behind the regulatory approach in this section, we would like to see additional measures included. The regulatory proposal requires that routes offering hail-and-ride services must have accessible boarding points but does not provide detail on how accessible boarding points are chosen and has no requirements for these boarding points to be clearly identifiable to people who are blind or vision impaired.

8.9 Accessible Taxi Ranks

BCA supports the proposed regulatory approach of Sub-Option 3. We support the requirement for installation of warning TGSIs where an accessible taxi space is at the same grade as the adjacent footpath, and that temporary taxi ranks will have the same specifications as permanent taxi ranks.

We also welcome the specific guidance for the connection of accessible taxi ranks via access paths, to the accessible entrances of local facilities and attractors.

> "I have found it very difficult to find taxi ranks at times, due to the inconsistency in how and where the TGSIs [tactile ground surface indicators] are located and other tactile markers leading to the waiting point. Often the taxi rank is indicated by a sign, which depending on contrast and lighting, I may or may not be able to see, and often have to ask someone passing by if I have found the taxi rank, after using Google maps to navigate to the stop, or by using my local knowledge that a rank is somewhere along that street.
>
> Another issue I have is that I may have found the rank, but then I need to call and order a taxi, however I do not know exactly what location to provide to the operator unless I know the street name or adjoining street names. Sometimes the operator cannot locate the exact spot I am waiting and asks for more information, which I cannot provide due to having little useable distance vision " - BCA member, Queensland.

8.10 Accessible Passenger Loading Zones on Street

BCA supports the proposed regulatory approach of Sub-Option 3. In particular, we welcome the requirement that accessible passenger loading zone vehicle spaces that are at the same grade as the adjacent footpath must include warning TGSIs as per AS/NZS1428.4.1 (2009) Clause 2.5 and Figure 2.5 (B).

9. Part 5: Accessibility in conveyances

9.1 Grabrails on access paths

BCA supports the regulatory option whereby new technical specifications for grabrails beside access paths on conveyances have accessibility requirements to ensure they meet the needs of people with disability. We note, however, that the references to luminance contrast stipulate a measure of "at least 30 percent" i.e., 30 percent is not the absolute figure to be applied as a maximum but as a bare minimum standard. Anecdotally, it is known that a 30 percent luminance contrast is vastly insufficient for people who are blind or vision impaired.

BCA therefore strongly recommends that in addition to the regulatory option, the stipulation for luminance contrast is a higher percentage, determined through co-design and user testing with people who are blind or vision impaired. Further, we recommend the inclusion of a kick rail with grab rails to stop mobility aids including a white cane becoming stuck under the grab rail when a person who is blind or vision impaired is wayfinding near it.

9.2 Grabrails in allocated spaces

BCA supports the regulatory option whereby Transport Standards section 11.7 is amended, to include provisions for the location and layout of grabrails. We do however note that the luminance contrast provision given to be "at least 30 per cent" is insufficient for people who are vision impaired. BCA recommends strongly that this is vastly increased, and further, that co-design is conducted to establish an appropriate baseline measurement for people who are vision impaired wayfinding in an area with grabrails.

In relation to sections 9.1 and 9.2, in both sections, BCA would like to note that a dome button placed at the bottom of handrails are not a replacement for TGSIs, i.e., they are not interchangeable with

TGSI. If a dome button is used in environments were the TGSI is excluded e.g., ferries or buses, that is acceptable however, note that they are not interchangeable with TGSIs.

9.3 Appropriate seats on booked services

BCA supports the regulatory options whereby "the Transport Standards would be amended to include requirement for booking seats appropriate to a passenger's needs and specify the nature of appropriate versus accessible seating for people with disability".

People who are blind or vision impaired would benefit from regulation with improved clarity around accessible seating, including defining clearly what "accessible" means, with clear provisions around what will happen if other passengers have already booked allocated seat/s. The requirement is particularly important for people who are blind or vision impaired travelling with dog guides, for the handler to know where they will be able to have their dog guide rest once aboard the service.

9.4 Conveyance dwell times at stops

BCA welcomes the consultation about "requirements for dwell times at stops that permit people with disability to be safely seated". This is a critical issue for people with disabilities, and particularly for people who are blind or vision impaired, who need sufficient time for wayfinding to a seat with their mobility aid, e.g., a cane, or their dog guide, or wayfinding assistive technology, and time once finding a seat to safely settle themselves and/or their dog guide. A failure to provide appropriate dwell times at stops may result in significant injury to a person with disability when the service resumes motion.

This is particularly pertinent in situations where the driver cannot see the passenger. For example, a train guard may not be able to see a passenger however they can ensure a passenger is safely seated before the doors are closed and they alert the driver they can proceed. On bus or tram services, it would be the responsibility of the driver to ensure the passenger is safely seated before driving onwards, by seeing them using their revision mirrors or by turning around.

BCA supports the regulatory option whereby "dwell times at stops must permit passengers, including those with disabilities, to safely alight and to board and be safely seated, be securely located, or be securely positioned in allocated spaces before the conveyance resumes movement".

9.5 Stairs on trains

BCA supports the regulatory option whereby the Standards are updated to include "modality specific requirements for stairs on trains" with updates to Section 11.3 Handrails on steps. BCA further supports Sub-Option 2 for new requirements.

In addition to the regulatory option stipulations, BCA strongly recommends though that the luminance contrast measure needed is significantly higher than "at least 30 per cent luminance contrast" for handrails against contrasting backgrounds; it is known that this is not enough luminance contrast for people who are vision impaired. Further, BCA recommends that there is a surface indication of the stairs to enable a person who is blind or vision impaired using a mobility aid like a white cane can feel the surface change, in light of the fact that, "TGSIs are not required at train, tram and light rail stairs and steps".

Specifically, BCA recommends that the area in front of the stairs is indicated by a textured, non-slip surface with the ability for clear detection visually with appropriate luminance contrast, and through obvious textural change for a white cane being run over the surface. Further, the luminance contrast must be appropriate, and applied surrounding the entire area of the TGSIs.

9.6 Stairs on ferries

BCA supports the regulatory option, whereby "the Transport Standards would be amended to include new requirements for ferry stairs and handrails along ferry stairs". Further, we recommend that Sub-Option 3 is implemented, noting similar concerns to above about no TGSIs. Specifically, BCA recommends that the area in front of the stairs is indicated by a textured, non-slip surface with the ability for clear detection visually with appropriate luminance contrast, and through obvious textural change for a white cane being run over the surface.

In addition to this amendment, we also strongly recommend that the luminance contrast measure needed is significantly higher than "at least 30 per cent luminance contrast" for handrails against contrasting backgrounds; it is known that this is not enough luminance contrast for people who are vision impaired.

9.7 Stairs on buses

BCA supports the regulatory option, whereby "the Transport Standards would be amended to include updated requirements for stairs on buses, including accessibility features", particularly section 14.4 Compliance with 'Australian Design Rule 58—conveyances' being amended.

BCA recommends an additional update though, to accommodate the fact that "TGSIs are not required at steps or stairs in a bus". Specifically, BCA recommends that the area in front of the stairs is indicated by a textured, non-slip surface with the ability for clear detection visually with appropriate luminance contrast, and through obvious textural change for a white cane being run over the surface.

Further, BCA strongly recommends though that the luminance contrast measure needed is significantly higher than "at least 30 per cent luminance contrast" for handrails against contrasting backgrounds; it is known that this is not enough luminance contrast for people who are vision impaired.

9.8 Doorway contrast and height

BCA welcomes the move to address the fact the "transport Standards have no requirement for luminance contrast for solid and glazed doors and have no minimum height for conveyance doors and creates a risk of a passenger striking the upper door frame with their head". This includes updating 'S1428.2 (1992) – Design for access and mobility', Clause 11.5.1, and other amendments that will also ensure harmonisations between the 'Disability (Access to Premises–Building) Standards 2010 (Premises Standards)' and DSAPT. Clause 13.1 references luminance contrast between solid doors or their surrounds with adjoining surfaces, and this also needs updating.

BCA supports the regulatory option making the aforementioned updates however, we strongly recommend that the percentage for luminance contrast is significantly higher than 30 percent. It is known anecdotally that this level of luminance contrast is insufficient and ineffective for people who are vision impaired when they are wayfinding in their environment.

10. Part 6: Implementation

BCA would like to see the process of implementation be updated to incorporate a mixture of approaches.

In terms of the approach around compliance dates for upgrade, at present the 'Transport Standards, Schedule 1 - Target dates for compliance' consists of a series of staggered compliance dates against individual sections of the Transport Standards. This means operators and providers must fully comply with the requirements of the specified sections for existing assets by the target dates specified in Schedule 1.

There are a couple of issues identified within the Consultation paper, including that:

> "staggered compliance target date approach taken in Schedule 1 of the Transport Standards focuses on specific sections/components of existing assets and may not be fit-for-purpose for measuring compliance."

Another complicating factor is that Schedule 1 may overlap with revisions made in the wake of this Consultation process.

Overall, BCA expresses grave concerns that the target date approach has not yielded appropriate time frames for existing assets to be updated, unless an incident triggers updates across the board; in short, the time frame applied is often too long. An example of this is provided within Schedule 1 for access paths: "for example, access paths must be 25 per cent compliant within five years, 55 per cent compliant within 10 years, 80 per cent compliant within 15 years and 100 per cent compliant within 20 years".

The time frames needed to be truncated with more ambitious benchmarks; 10, 15, or even 20 years to wait for upgrades compromises safety for people with disabilities wayfinding on access paths, where the upgrades have not been applied. The risks of these upgrades being delayed means people with disabilities are placed at higher risk of injury or death when wayfinding along these access paths. This equally applies across all areas in Schedule 1.

In terms of cost-benefit analysis, a benefit that has not been considered in the consultation paper is that there is a cost when someone is injured due to an asset not meeting contemporary Transport Standards. The benefit is in mitigating this cost by ensuring that assets are compliant with current Standards.

Further, as noted in the consultation paper, the benefit of implementation options 1 and 2 are "accessibility for people with disability will be improved as existing assets are upgraded to comply with enhanced accessibility requirements identified through this reform process. This may lead to increased confidence and independent travel for people with disability".

A benefit noted for option 3 is "an opportunity to update the Transport Standards more frequently if updates are not applied retrospectively". Further to this, the cost incurred of retrofitting assets can be substantial; a striking example has been the New Generation Rollingstock (NGR) accessibility upgrade program in Queensland, which cost \$335.7 million[8]. This accessibility upgrade took place to accommodate issues in which the gangway between seats was too narrow and passengers using a wheelchair could not get through the train carriage to reach the wheelchair accessible toilet.

None of the approaches alone are sufficient, rather a combination of approaches is recommended for upgrading assets. A trigger can, and should, enable the upgrade of all of a particular asset type. An upgrade schedule is also needed however it needs to be shorter timeframes.

BCA, therefore, recommends that a mixture of all three proposed implementation options is adopted, with further consultation to ensure that timeframes are appropriate for upgrade for individual aspects of assets, or entire assets.

11. Other comments

BCA welcomes the Stage 2 consultation on DSAPT for the opportunity to contribute to the modernisation of the Standards. We would like to comment though on a few aspects of the consultation process.

Firstly, accessing the Australian Standards through the portal within the Australian Standards website was highly inaccessible, requiring assistance to locate the needed Standards for this consultation, and further being incredibly challenging to read on the website.

Second, throughout the consultation paper, consultation with stakeholders with referenced, however it is unclear who was consulted and when they were consulted. For the sections relating to people who are blind or vision impaired, BCA nor fellow stakeholders across this sector were consulted.

Finally, release of information gathered from the Stage 1 consultation would have assisted greatly in preparation of response to the Stage 2 consultation.

12. Recommendations

BCA strongly recommends the following actions:

Part 1: Transport Standards Principles

Reporting

- Regulatory option, Sub-Option 2 - for mandatory reporting on the asset, targets dates for upgrading noncompliant infrastructure, and clearly stipulated processes for data collection and reporting under The Framework.

Equivalent access

- Regulatory option - for new performance solution process, however with an additional recommendation for co-design and user testing when implementing the new performance solution.

Rideshare

- Regulatory option - rideshare services will explicitly be identified within the Standards, and the same standards applied to taxis will also be applicable to rideshare services.

- UN regulation 138-01 adopted by Australia for installation of Acoustic Vehicle Alerting System (AVAS) for electric vehicles, including taxi and rideshare electric and hybrid vehicles.

Part 2: Information, Communication and Wayfinding

Better communication of accessibility features

- Regulatory option - Standards amended to include new requirements for defining accessibility terminology and communication of accessibility features.

- Communication is in multiple formats, not just in visual formats.

Timely provision of information

- Regulatory option - accessible public transport information is provided in a preferred format and in a timely manner.

Real time reporting

- Regulatory option - Passengers who require service-related information, who wish to communicate service-related information, or who need assistance or help on service-related matters must be able engage in real time communication with the transport operator or provider before boarding, while the conveyance is in transit and after alighting.

- This course of action is also needed when service disruptions occur, and a passenger may need to take actions to continue their journey, including changing services.

Passenger location during journey

- Regulatory option, sub option 2 - visual information display of next stop must be visible from all seats and allocated spaces.

- Advertising on the outside of buses and other public transport with outward facing windows must not obscure the ability of a passenger who is vision to use any visual information they can perceive outside the transport service for determining location during their journey.

Print size and format

- Regulatory option - update requirements to specify font weight and text justification for large print.

Letter heights and luminance contrast of signs

- Regulatory option, however, neither sub option 2 or 3 is sufficient alone, further adjustments are recommended; consideration of location in terms of the impact of lighting on reading the print, and in terms of any physical barriers to getting closer to the print source (see next section).

- Clause 17.3 also needed to be extended. Under AS 1428.2 it states " luminance factor… shall be not less than 0.3 (30 percent)" however this luminance contrast is insufficient for people who are vision impaired; the baseline needs to be considerably higher.

- User testing is conducted to ensure that type and luminance contrast enable people who are vision impaired accessing the static, non-braille, and non-tactile signs.

Location of signs

- BCA supports the regulatory option, Sub-Option 2 - Section 17.2 and section 17.3 would be amended to combine requirements for signage location that pertains to conveyances, premises, and infrastructure in one section, with further additional requirements.

- Signage information must be clearly conveyed in other communications, e.g., in websites about the transport venue or service, or in other communications.

Braille embossed (printed) specifications

- Neither the regulatory nor non-regulatory options. Instead, our recommendation is to scrape all options and engage in broader consultation with community representatives with the expertise in braille to guide any amendments beyond the status quo.

- All transport-related documents provided in grade 1 and grade 2 braille, preferably in the same volume.

- Clear stipulation between braille labelling and braille signage.

Lifts: Braille and tactile information at lift landings

- Regulatory option - amendments to existing standards (section 13.1), and considering requirements already stipulated under the Disability (Access to Premises–Building) Standards 2010.

- Section 6.4.1.2 Control devices for destination control systems of AS1735.12 (2020) needs to explicitly cover accessibility measures that do not rely on visual feedback alone, with a lack of tactile guidance for touchscreen systems to ensure people who are blind or vision impaired can still gain access to a lift, and lift landing.

Lifts: Audible wayfinding

- Regulatory option, Sub-Option 2 - specific guidance on how succinct audio announcements should be provided in lift cars.

- Any directional information is developed in consultation with people who are blind or vision impaired, to ensure that the audible information for wayfinding provided can be interpreted and followed accurately.

- AS1735.12 (2020) section 6.2 door openings must be amended to include indicators for audible cues to identify which is lift is opening, to assist in wayfinding to the lift. It is problematic for people who are blind or vision impaired, determining which lift has opened at a locality that has multiple lifts.

Lifts: Reference for lift car communication and information systems

- Regulatory option - the amendment of current standards to incorporate a hearing system in lifts at public transport locations.

Information and communication technologies (ICT) procurement

- Regulatory option, Sub-Option 5 - AS/EN301549 (2020) in addition to WCAG 2.1 Level AAA is required.

- User testing of ICT systems, from the initial stage of procurement to implementation of ICT systems.

Mobile web systems

- Regulatory option with Sub-Option 5 - requiring compliance with AS/EN301549 (2020) and prescribes additional minimum WCAG 2.1 AAA requirements.

- User testing of mobile web systems, from initial stages of procurement through to implementation.

Part 3: Accessibility at stations, stops, wharves and access routes

Continuous accessibility on access paths

- Regulatory option.

Flange Gaps

- Regulatory option - Sub-Option 2. In the longer term, BCA recommends the removal of level crossings.

Resting points

- Regulatory option - with caveat to remove Fourth Dot Point.

Requirement for handrails in overbridges and subways

- Regulatory option - no exemption for premises covered by Premises Standards.

Location of Fare System Elements

- Regulatory option - with caveat to remove references to 'where possible.'

Allocated spaces and priority seating in waiting areas

- Regulatory option - with caveat to remove references to 'where practicable.'

Emergency call buttons in accessible toilets

- Regulatory option - Sub-Option 2.

Poles, objects, and luminance contrast

- Regulatory option - Sub-Option 2. Proper user testing needed to establish better luminance contrast standard.

Lighting

- Regulatory option - Option 3, Sub-Option 1.

Part 4: Accessibility of boarding and alighting and egress of infrastructure

Notification by passenger of need for boarding device

- Regulatory option - Sub-Option 2. In addition, BCA recommends mandatory stationing of guards on trains to aid at platforms, and consistency across networks for platform levels.

Portable boarding ramp edge barriers

- Regulatory option - Sub-Option 3.

Boarding ramp and removable gangway definitions

- Regulatory option.

Removable gangway design—ferries

- Regulatory option.

Nominated assistance boarding points

- Regulatory option.

Identification of lead stops

- Regulatory option.

Pontoon boarding points on infrastructure

- No options supported. Regulatory Option is best but does not go far enough.

Bus, tram, and light rail boarding points on infrastructure

- Regulatory option - Sub-Option 2.

Hail-and-ride boarding points on infrastructure

- Regulatory option - with additional measures included.

Accessible taxi ranks

- Regulatory option - Sub-Option 3.

Accessible parking spaces in infrastructure off-street carparks

- Regulatory option - Sub-Option 3.

Part 5: Accessibility in conveyances.

Grabrails on access paths

- Regulatory option - with caveat that 30% luminance is not sufficient. Further recommend that a kick rail is included.

Grabrails in allocated spaces

- Regulatory option - with caveat that 30% luminance is not sufficient. This applies to all topics in this section that refer to 'at least 30% luminance'.

Appropriate seats on booked services

- Regulatory option.

Conveyance dwell times at stops

- Regulatory option.

Stairs on trains

- Regulatory option - Sub-Option 2.

Stairs on ferries

- Regulatory option - Sub-Option 3.

Stairs on buses

- Regulatory option.

Doorway contrast and height

- Regulatory option.

Part 6: Implementation

- A mixture of all three proposed implementation options is adopted, with further consultation to ensure that timeframes are appropriate for upgrade for individual aspects of assets, or entire assets.

---

[1] Vision2020. Eye health in Australia. Retrieved from http://www.visioninitiative.org.au/common-eye-conditions/eye-health-in-australia

[2] McCallum, R. (2020). The United Nations Convention on the Rights of Persons with Disabilities: An assessment of Australia's level of compliance. https://disability.royalcommission.gov.au/publications/united-nations-convention-rights-persons-disabilities-assessment-australias-level-compliance-research-report

[3] Lukman, A. (December 2017). Developing Design Criteria Based on Visual Perception of People with Vision Impairment Using Contrast Cues.

[4] International Council of English Braille (2021, 21 November). International Council on English Braille (ICEB) Unified English Braille (UEB). https://iceb.org/ueb.html

[5] Mašić, V., Šečić, A., Trošt Bobić, T. i Femec, L. (2020). Neuroplasticity and Braille Reading. Acta Clinica Croatica, 59. (1.), 147-153. https://doi.org/10.20471/acc.2020.59.01.18.

[6] Clunies-Ross, L. (2005). Windows of perception: a review of the literature concerning uncontracted and contracted literary braille. British Journal of Visual Impairment, 23 (2), 67-74

[7] Nilsson, A. (2022, July 23). Martin Stewart recalls train accident that cost him an arm and a leg as fight rages in NSW over rail safety. https://www.news.com.au/national/nsw-act/politics/martin-stewart-recalls-train-accident-that-cost-him-an-arm-and-a-leg-as-fight-rages-in-nsw-over-rail-safety/news-story/5fb02de05988c2c6d35e8b13f3229269

[8] Department of Transport and Main Roads. (2022, 15 July). New Generation Rollingstock. https://www.tmr.qld.gov.au/projects/New-Generation-Rollingstock