

Does information from Public Transport Victoria's Journey Planner align with real life accessibility for people in wheelchairs?

An analysis of three Melbourne train stations

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Executive Summary

The Federal Government introduced legislation in 1992 recognising that people with disabilities experience significant discrimination and disadvantage. The *Disability Discrimination Act 1992 (Cth)* set out to provide people with disabilities the same access to education, employment and transport as those without disabilities. The subsequent legislation, the *Disability Standards for Accessible Public Transport 2002 (Cth)* introduced requirements of all public transport providers to allow equal access for people with disabilities. This legislation recognises that limitations in accessing public transport is a significant factor in the disadvantage experienced by people with disabilities. This disadvantage encompasses lower employment rates, less access to education, higher reliance on others, lower participation in political and civil life and lessened independence.

The legislation has been recognised as playing an important role in lessening the disadvantage for people with disabilities. However, critics argue that it does not provide for the full solution to disability access requirements. A crucial requirement for accessing public transport, that is not within the legislation, is the provision of information about accessible public transport services.

This research has looked at the provision of information about accessibility by addressing the question ‘Does the available information from Public Transport Victoria’s Journey Planner align with real life accessibility for people in wheelchairs at selected Melbourne train stations?’. This has been approached through a mixed methods methodology. With a qualitative analysis of the legislation and related policies and a quantitative analysis of their application at three train stations in Melbourne, convergent validation was utilised to gain a deep understanding of the findings from the two methods.

The research shows that government aims to go beyond its obligations under the legislation and approach accessibility from a whole journey perspective. A significant part of this approach in the policies is to provide detailed pre-journey planning information about the accessibility of stations and services. The site visits to East Malvern, East Richmond and Holmesglen stations show that this is not occurring, and the information provided does not correspond with the accessibility of the stations.

The results of this research cannot be generalised to other stations in the train network, due to the limited number of train stations visited. However, it is clear that further research would be warranted to determine if these circumstances are faced throughout the network. It is recommended that Public Transport Victoria update the information provided through Journey Planner, and on the website, to accurately reflect the accessibility of the train stations visited. This will provide more accurate journey planning information for people in wheelchairs. If this is done across the network it will be a large step towards enabling access to the train system and increased independence for people in wheelchairs to make the decision on what journey is best suited for them.

Introduction

It is widely recognised that people with disabilities experience significant disadvantage in access to education, employment, social inclusion and participation in political and civil life (Stevens, 2007; Department of Infrastructure and Regional Development [hereafter DIRD], 2017; Public Transport Ombudsman, 2013; Velho et al., 2016). Inaccessible public transport is a contributing factor to this disadvantage, with transport providing the ability for people to access the world around them, or conversely posing a barrier to access if a person is unable to engage with the transport infrastructure.

With a shift in thinking to the social model of disability, government is increasingly looking to remove barriers in the built environment for people with disabilities. This is true in the public transport space in Australia, with the introduction of the *Disability Discrimination Act 1992 (Cth)* and the *Disability Standards for Accessible Public Transport 2002 (Cth)* (Transport Standards). This research will provide a brief overview of the requirements of government under the legislation and the implications this has for public transport accessibility. It will then examine the policy aims of both the Commonwealth and Victorian governments to go beyond these legislated Transport Standards. Both levels of government have expressed a desire to address accessibility issues from a 'whole of journey' approach, with an important aspect of this approach being the provision of information about accessible services and infrastructure.

Current research shows that the provision of information about accessible public transport services and infrastructure is a key factor in influencing and encouraging the use of these services (DIRD, 2015; DIRD, 2017; Public Transport Ombudsman, 2013; Stevens, 2007). However, there is limited research to show whether the information currently available about the accessibility of public transport services and infrastructure is accurate.

The aim of this research is to examine the alignment of the real-life accessibility of train stations in Melbourne against the information provided by the Public Transport Victoria Journey Planner application. As stated by Stevens (2007, p. 265) "...[t]he most commonly used and recognised 'badge' of disability is the wheelchair". Due to the limitations in time for this research project, the focus has been restricted to the needs of people in wheelchairs. This restriction is necessary as there are different requirements under the legislation dependent on the accessibility need. The Transport Standards impose requirements in relation to vision impairments, such as symbols, signage and tactile surfaces. There is not scope in this research project to assess the accessibility of the stations and the adherence to the requirements for all types of disabilities. In addition, while Public Transport Victoria's Journey Planner has an option to select services and stations which are wheelchair accessible, it does not feature an option for other accessibility requirements. With this

limitation in the options of Journey Planner it would not be possible to compare the real-life accessibility of a station, to the information provided by Journey Planner for other disability types.

Literature Review

Access to public transport is important for increasing the opportunity for people with a disability to participate in all facets of public life. The *Disability Discrimination Act 1992 (Cth)* has enshrined the right of people with disabilities to have equal access to education, employment and transport (Productivity Commission, 2004). People with disabilities experience significant disadvantage with lower employment rates, increased social exclusion and limited ability to participate in political life (DIRD, 2017; Public Transport Ombudsman, 2013; Stevens, 2007; Velho et al., 2016). Limitations in access to public transport for people with disabilities is a significant barrier to independence and inclusion and increases the reliance on others (Currie and Stanley, 2007). People with disabilities can face a range of limitations, for some their disability may mean they are unable to drive, making accessible public transport of greater importance to allow for independent movement.

With a shift in the theoretical framework from a medical model of disability to a social model of disability over the past two decades the discourse regarding accessibility of public transport for people with disabilities has changed dramatically (Audirac, 2008; Stevens, 2007; Velho et al., 2016). Scholars and government in Australia and around the world are increasingly focusing on how the environment and infrastructure of public transport should be altered to aid accessibility for people with disabilities, with the introduction of legislation, standards and a growing focus on universal design (Audirac, 2008; DIRD, 2015; Smith, 2008; Stevens, 2007). This literature review will outline the multiple barriers public transport can form for people with disabilities. Further, the ways public transport infrastructure can be inaccessible, and the current methods for removing these barriers will be reviewed. This literature review will focus on the specific concerns regarding access to train stations for people in wheelchairs, and the difficulties with making long term changes to remedy these concerns. Finally, the barriers raised by the lack of information provided by transport service providers, and the potential for an improvement in accessibility by removing this obstacle will be addressed.

Infrastructure Accessibility

There are two main frameworks in disability theory, the medical model and the social model (Audirac, 2008; Stevens, 2007; Velho et al., 2016). The social model of disability was developed in the 1960s, and has become increasingly important in transport planning over the previous two decades (Velho et al., 2016). Under this model it is considered that throughout the population each person has a variety of abilities (Iwarsson and Ståhl, 2003) and it is the relationship to the built environment that imposes barriers and determines whether a person's abilities are a disability (McCluskey, 1987; Meyers et al., 2002; Velho et al., 2016). However, most established public transport systems were built when the medical model of disability was dominant (Velho et al., 2016), and it was the individual person's impairment that limited their access from society (Velho et al., 2016). These established

transport systems, including Melbourne's train system, contain ongoing infrastructure elements that form a myriad of accessibility barriers to people with disabilities (DIRD, 2017; Public Transport Ombudsman, 2013).

Universal design is an international philosophy of design that crosses the boundaries of disciplines (Audirac, 2008). It sits within the social model of disability in considering that disability and ageing are 'within the context of normal expectations of the human condition' (Audirac, 2008, p. 4). DIRD 'Whole of Journey Guide' outlines that Universal Design is a factor that should be considered when planning for a public transport system that is accessible from start to finish. The seven principles of Universal Design afford that space will be designed to provide for inclusion of all abilities with a design that is equitable, flexible in use, simple and intuitive, requires minimal physical effort and is appropriately sized for all users (Audirac, 2008; Mace, 1988).

In the Australian context, accessibility of public transport is governed by the *Disability Discrimination Act 1992 (Cth)* and the subordinate legislation the *Disability Standards for Accessible Public Transport 2002* (the Transport Standards). The Transport Standards provide the requirements for access including paths, ramps, lifts, stairs and toilets. There is debate amongst scholars about whether a focus on the Transport Standards to address disadvantage faced by people with disabilities is the best approach. Smith (2008) argues that Australia's anti-discrimination legislation is primarily enforced by victims, through a complaints mechanism, and the introduction of the Transport Standards was an important mechanism for change by placing requirements on operators instead of those who may have been discriminated against. However, Church and Marston (2003) in the context of the US legislation and standards, argue that through a standards based approach it is easy to overlook the quality of access provided to people with disabilities. They use an example of the extra time it can take for a person in a wheelchair to get between two places, as a result of having to go to a ramp or lift, when others can take the stairs for the most direct route. Through a standards based approach the location may meet the required access standard, but this does not capture other difficulties faced by a person with a disability (Church and Marston, 2003). Others are of the view that the Transport Standards are important and have increased accessibility, but solely focusing on the Transport Standards does not lead to fully accessible infrastructure (Audirac, 2008; Public Transport Ombudsman, 2013).

Impact of inaccessible public transport

It is widely recognised that inaccessible public transport can isolate people with disabilities from economic, social and political life (DIRD, 2017; Public Transport Ombudsman, 2013; Velho et al., 2016). DIRD identified that in Australia accessible public transport is a key factor is the capacity of a person with a disability participating in the economy. In Australia there are 4.3 million people with disabilities; of those aged between 15 and 64 only half participate in the workforce (DIRD, 2017).

Lack of access to public transport can lead to increased isolation from the community and restrictions to a person's independence. Chenoweth and Stehlik (2004) found that people with disabilities are more likely to become socially isolated and rely more heavily on family. People with a disability are more likely to experience this social disadvantage through a combination of factors, however access to transport is one (DIRD, 2017).

Many disabilities can restrict people's access to driving, and if this is combined with inaccessible public transport, it can lead to a reliance on other people and reduced independence for the person with the disability (Audirac, 2008; DIRD, 2017).

Accessibility concerns about train stations

Stevens (2007) discusses the accessibility issues faced in Japan, that these issues are also challenging for other countries with accessibility standards. In particular it is noted that in the Japanese context the trains are very accessible, however the train stations are lacking ramp access and in many cases elevators are difficult to find or need to be opened by station staff (Stevens, 2007). This research was conducted from the perspective of one individual, however, is reiterated in other scholars' concerns about disability access separating people from the mainstream flow of traffic (Church and Marston, 2003; Stevens, 2007).

Research in other contexts, including London (Velho et al., 2016), the USA (Audirac, 2008) and Australia (DIRD, 2015), demonstrate that there are wide concerns about access to train stations for people with disabilities. Namely, the gradient of ramps, the interface of the station to the street, and the use of lifts as the only access method. Disability advocacy groups raise concerns about lift-only access to stations. With no ramps, the breakdown of a station lift strands the person with a mobility impairment. (DIRD, 2017; Stevens, 2007; Victorian Council of Social Service, 2014).

Accessibility in Melbourne

In Melbourne, although 98% of the metropolitan train fleet is accessible, only 55% of the metropolitan train stations are accessible (DIRD, 2015). To further elaborate, while there is a high level of accessibility between the train platform and the train itself, there is a disconnect between the street and the platform. DIRD states that the government has flagged that the targets for accessibility will be difficult to meet without significant extra funding, or significant funding provision. It is clear from the submissions to DIRD that Melbourne's train stations are not widely accessible to wheelchairs. However, it is not clear in the publicly available information which stations are inaccessible, as Public Transport Victoria (2013) state: "...[m]ost metropolitan train stations (except Heyington Station) are accessible for people using mobility devices. Some metropolitan stations have ramps to enter the station and platforms. However, some stations require people with a mobility aid to be assisted to

access them”. It is unclear in this information which stations make up the 55% of accessible stations, and which are the 45% of inaccessible stations. Additionally, Public Transport Victoria (PTV) do not publish information stating the accessibility requirements that are used in the Journey Planner application, making it difficult to determine the basis upon which a station is considered wheelchair accessible and if this aligns with the Transport Standards.

It is not only the physical infrastructure that poses a barrier for people with disabilities. It has been identified by government and disability advocates that the provision of information about the accessibility of transport is a further barrier both in Australia and other countries struggling to implement transport infrastructure standards (DIRD, 2015; DIRD, 2017; Public Transport Ombudsman, 2013; Stevens, 2007; Victorian Council of Social Service, 2014). The ‘Whole Journey Guide’ (DIRD, 2017) points to pre-journey planning information as being a key part of encouraging the use of public transport for people with disabilities. This is an aspect of the public transport journey that disability groups have highlighted takes significant time for people with disabilities and if people can be confident they can complete their journey through pre-planning this encourages further use of public transport (DIRD, 2017; Victorian Council of Social Service, 2014).

Compliance or Whole-Journey approach – real life accessibility

The literature shows that Australia is not alone in facing challenges to remove barriers for people with disabilities to access the public transport system. The legislation and the associated Transport Standards focus on compliance of operators with specific measurements for accessible features such as ramps, lifts, toilets and boarding facilities (Smith, 2008). However, there is debate among scholars regarding whether focus on compliance with the Transport Standards is the best way to improve accessibility or whether the focus also needs to be on the quality of this access (Audirac, 2008; Church and Marston, 2003; Smith, 2008; Stevens, 2007). DIRD has looked beyond the Transport Standards and found that pre-journey planning is a key barrier to accessibility. There is little research in the Australian context on whether the available tools for pre-journey planning accurately reflect the accessibility for people with disabilities.

Methodology

This research was conducted using a mixed methods research methodology. The design of the research is a parallel mixed methods project (Tashakkori and Teddlie, 2009). This parallel mixed methods research design was undertaken with the qualitative and quantitative information collection and analysis being connected and each section feeding into the other for data collection and analysis (Tashakkori and Teddlie, 2009). This methodology has been used for the purpose of triangulation, or convergent validation, of the findings from the two methods (Fielding, 2012). This methodology was chosen as mixed methodology, through convergent validation, provides a wider understanding of the findings from different perspectives (Fielding, 2012; Shih, 1998).

In this research, I have adopted a post-positivist paradigm (Bailey, 1996). A post-positivist paradigm is one in which social phenomena exist in an objective sense and can be studied independent of the researcher (Bailey, 1996; Miles and Huberman, 1994). This paradigm has been adopted to acknowledge that the Transport Standards which lie at the base of the analysis have set requirements for allowing access for people in wheelchairs, regardless of the variety of abilities throughout the population. This research will be assessing the Transport Standards, associated policies, and an objective analysis of their implementation at three train stations.

Review of the Disability Discrimination Act, Transport Standards and policies

The qualitative section of the methodology was a review of the following documents:

- *Disability Discrimination Act 1992 (Cth)*
- *Disability Standards for Accessible Public Transport 2002 (Cth)*
- The Whole Journey: A guide for thinking beyond compliance to create accessible public transport journeys (DIRD, 2017)
- Review of the Disability Standards for Accessible Public Transport 2002 (DIRD, 2015)
- Accessible Public Transport in Victoria: Action Plan 2013-2017 (Department of Transport, Planning and Local Infrastructure, 2013 [hereafter DTPLI, 2013])
- PTV Implementation Plan 2013-2017 (Public Transport Victoria, 2013a)

The qualitative review of the legislation and policies was conducted through an inductive approach (Thomas, 2006). The inductive review of these documents sought to determine the important themes which arose in regards to accessibility of train stations (Thomas, 2006; Strauss and Corbin, 1998).

The information gathered from this review informed the second section of the research design. This section was a pilot study of site visits to undertake quantitative research of the application of the Transport Standards at train stations in metropolitan Melbourne. The information obtained at the site

visits was then compared to the Public Transport Victoria Journey Planner mobile phone application and website information regarding disability access to the stations visited.

Site Visits

The site visits were conducted to gather information on how the selected train stations adhered to the requirements of the Transport Standards. The selection of train stations was a purposeful sample (Quinn Patton, 2002; Tashakkori and Teddlie, 2009) with particular characteristics of stations being included in the sample selection and other characteristics being excluded. This sampling method was chosen to enable the description and analysis of a sub-group of Melbourne's train stations in further depth within the scope of this research (Palinkas et al., 2015). It is recognised that the sampling method employed, and the small sample size reduces the ability to generalise the results of this project to the rest of the stations in the Melbourne metro train system, this study has been undertaken as a pilot study to inform further research into the field (Flyvbjerg, 2006; Van Teijlingen and Hundley, 2001).

The sample population for the site visits had the following characteristics:

- Ramp access: as if there is no ramp, for example Heyington station, there is no wheelchair accessibility to measure.
- No lift access: as under the Transport Standards the station would be accessible on this basis. While there are further concerns within the disability community regarding lifts being the only access point (Stevens, 2007), an assessment of these concerns is outside of the scope of this study. As such, stations with lifts were excluded from the sample.
- In Zone 1: to limit the site visits to older stations with the intention of testing the accuracy of the Public Transport Victoria Journey Planner information against stations built prior to the introduction of the Transport Standards.
- On the Glen Waverley line: for convenience purposes, due to time constraints of this project.
- With no current works undertaken: as any findings on stations with works being undertaken would be made redundant when the works finished.

The three stations selected for site visits were East Richmond, East Malvern and Holmesglen.

At each site the following aspects of the stations were recorded to determine their compliance with the Transport Standards:

Standards	Compliance requirements
Access paths from street into station	1200mm wide
Access paths inside station	1200mm wide
Manoeuvring Area inside station	2070mm in direction and 1540mm wide
Ramp from street to station	4 degrees (if ramp is longer than 1900mm)
Ramp inside station	4 degrees (if ramp is longer than 1900mm)
Ramp landings	at intervals of 9m
Stairs	Not the only access

Figure 1 - From the Transport Standards

Each site was then selected on Journey Planner as both an origin and a destination, with 'Wheelchair Accessible Stop Only' and 'Wheelchair Accessible Services Only' settings selected.

A comparison of the accessibility of the station based on the Transport Standards against the information provided on Journey Planner is shown in the discussion section of the report. This comparison was undertaken using both the Journey Planner Application on an Apple iPhone and using the Journey Planner website.

Results and Discussion

Following on from the parallel mixed methodology research design, the results and discussion section will be in stages, with the qualitative analysis of the legislation and policies detailed first (Tashakkori and Teddlie, 2009). This analysis feeds into the quantitative analysis of the site visits which is examined in the final section of the results and discussion chapter. As a whole, the results and discussion chapter will detail the findings and analysis of each part of the research to show the breadth of understanding from the triangulation of the different types of analysis.

Disability Discrimination Act 1992 and Disability Standards for Accessible Public Transport 2002

The *Disability Discrimination Act 1992 (Cth)* is the primary piece of legislation applicable across Australia with the intention to reduce discrimination against people with disabilities. The aim of this legislation, as outlined in Section 3 of the Act, is to eliminate discrimination against people with disabilities and promote recognition of people with disabilities. Specifically, its objective is to increase access for people with disabilities to education, transport and employment opportunities (Disability Discrimination Bill, 1992; Productivity Commission, 2004); to change attitudes toward people with disabilities and to promote their human rights (Disability Discrimination Bill, 1992).

The aims of the legislation are to be enacted through a variety of measures including complaint resolution, implementation of subordinate legislation which require discriminatory practices to be eliminated and the creation of agencies such as the Human Rights and Equal Opportunities Commission (*Disability Discrimination Act (Cth)*; Australian Human Rights Commission, n.d).

In 2002, the *Disability Standards for Accessible Public Transport 2002 (Cth)* (Transport Standards) were introduced with the purpose to “enable public transport operators and providers to remove discrimination from public transport services” (Section 1.2(2) of the Transport Standards). This legislation is subordinate legislation to the Disability Discrimination Act and sets out specific standards for public transport. These standards are measurable, applicable to a range of different transport types, and have set compliance dates which are monitored by the Australian Human Rights Commission (Section 67 of the Disability Discrimination Act (Cth)). The Transport Standards, and the compliance of operators and service providers, are reviewed every 5 years by the relevant Minister (Section 34.1 of the Transport Standards).

For the context of this research there are particular parts of the Transport Standards relevant to people in wheelchairs and their ability to access train stations. These parts are:

- Access paths: under Part 2 of the Transport Standards an access path must allow for unhindered passage along a ramp, walkway or landing with a width of 1200mm.

- Manoeuvring areas: under Part 3 of the Transport Standards a manoeuvring area must allow for a 180-degree wheelchair turn. To do so it must be no less than 2070mm in the direction of travel and 1540mm wide.
- Ramps: under Part 6 of the Transport Standards a ramp longer than 1900mm can have a maximum gradient of 1 in 14 (which equates to 4°), which must be consistent along the ramp length. There must be landings at intervals of no more than 9m.
- Stairs: under Part 14 stairs must not be the only means of access.

The Transport Standards have a compliance structure which allows for new and existing infrastructure to be brought into compliance over an extended period of time after the legislation was introduced. From the date the Transport Standards came into effect all new infrastructure was required to be built in compliance with the Transport Standards (Section 33.1). Schedule 1 of the Transport Standards provides for the ongoing compliance of pre-existing infrastructure. Under this Schedule, by 31 December 2017 90% of infrastructure was to be compliant with the Transport Standards (Schedule 1, Part 3). By 31 December 2022 all infrastructure is to be compliant with the Transport Standards (Schedule 1, Part 4).

The introduction of the Transport Standards reflects the change in attitude from the medical model to the social model of disability (DIRD, 2017). This is evident in that the Transport Standards require the built environment to enable access for people with a wide range of abilities. The implementation of the Transport Standards is a step towards removing physical barriers that inhibit participation in society for people with disabilities (Productivity Commission, 2004). The Disability Discrimination Act has been credited with improvements in fields such as telecommunications, banking and education (Productivity Commission, 2004). The objective of the legislation to promote community acceptance of people with disabilities is considered somewhat successful (Productivity Commission, 2004).

However, the legislation has been criticised due to its complaints based approach to removing disability discrimination, which places the onus on the potential victim of discrimination to lodge a complaint (Public Transport Ombudsman, 2013; Smith, 2008). These criticisms raise concerns that a section of society who are already vulnerable are being required to ensure compliance with the legislation, by raising complaints in which there is a significant power imbalance. Additionally, the compliance-based approach of the Transport Standards has been criticised for its potential to separate people with disabilities from the general population. Critics state that rather than moving toward Universal Design outcomes, infrastructure can comply with individual standards while not creating an overall accessible journey (DIRD, 2017; Department of Social Services, 2010). One such criticism is the choice to install lifts at train stations. When building new infrastructure, in order to comply with the Transport Standards for accessibility, many projects choose to install lifts rather than ramps. This meets the requirements of the Transport Standards, however is criticised as it is not

inclusive design for people in wheelchairs (DIRD, 2017; Stevens, 2007). There are also concerns about the implications of faults with lifts and the lack of accessibility when lifts are out of order (Rosier and McDonald, 2011). Universal Design principles aim to provide for infrastructure that is appropriate for all users (Audirac, 2008). The Transport Standards do not follow these principles as infrastructure can be built to comply, while separating people in wheelchairs from the general population.

Policies

In this research a number of policies have been reviewed, both national and Victorian, which show that the government has intentions to go beyond the Transport Standards and approach accessibility from a whole of journey approach rather than compliance with individual standards (DIRD, 2015; DIRD, 2017; DTPLI, 2013; Public Transport Victoria, 2013a).

DIRD completed the mandated, five yearly 'Review of the Disability Standards for Accessible Public Transport 2002' (the Review) which found that the implementation for physical accessibility is lagging behind the requirements of the legislation and the structure of the Transport Standards does not reflect a whole of journey approach to accessibility. In the Review it was identified that 55% of metropolitan train stations in Victoria are accessible. This is in line with the target for 2012 set out in the legislation but is significantly less than the target for 2017. Submissions from states across Australia indicate that the 2017 targets set by the Transport Standards are unlikely to be met without substantial funding.

The Review called for an update to the Transport Standards in their current form, including consideration of updates to the requirements for provision of information in light of new technologies which enable the provision of up to date information about public transport and a person's location in their journey. The Review identified that there needs to be a whole of journey approach to accessibility, with the Transport Standards and their implementation creating 'islands of accessibility' (DIRD, 2015, p. 134). For a whole of journey approach, it was identified that a range of stakeholders and different levels of government need to work in an integrated manner. The Review recognised that transport trips start at the planning stage and the inclusion of journey planning information is vital for people with disabilities.

This call for a whole of journey approach to accessible public transport was mirrored in further policy documents including DIRD 'The Whole Journey: A guide for thinking beyond compliance to create accessible public transport journeys' (The Whole Journey Guide). The Whole Journey Guide stemmed from the 'Review of the Disability Standards for Accessible Public Transport 2002' and provided an in-depth analysis of how accessibility can be approached from a whole of journey standpoint. It identifies that there are multiple components to a journey:

- Pre-journey planning: accessing information

- Journey start and end: travelling to the station
- The transport station, stop or terminal
- The transport service
- Interchanges
- Return journey planning (DIRD, 2017)

The Whole Journey Guide identifies that pre-journey planning and return journey planning are important stages of the trip for people with disabilities, as they need to ensure they can complete their journey and to ensure this, need to confirm the accessibility of the transport options. The provision of information for journey planning is not a requirement of the Transport Standards. A key concern identified in the Whole Journey Guide is that people with disabilities often need to use multiple sources to gather the required information to confirm they can undertake their journey. This is true of the information provided by Public Transport Victoria on the website, which notes that some stations require people with a mobility aid to be assisted to access the station (Public Transport Victoria, 2013). It advises people to contact Public Transport Victoria, via telephone, for further information on accessible services (Public Transport Victoria, 2013). The Whole Journey Guide recommends that a rich data set on the accessibility of facilities, in a variety of formats, would enable easier planning for people with disabilities (DIRD, 2017).

The Victorian Department of Transport, Planning and Local Infrastructure released an Action Plan for 2013-2017 with the objective of providing universal access to services and facilities by removing barriers (DTPLI, 2013). The Action Plan again refers to the need for a whole of journey approach and the requirement for access to information for people with disabilities. The Action Plan notes that compliance with the Transport Standards is important, but the focus of government has moved to overall accessibility of the network, including the connectivity of different transport options. The focus of the Transport Standards on individual elements and the long-term compliance schedule can lead to a segmented approach to accessibility which does not result in an overall accessible system. The Action Plan commits to going beyond these requirements and improving the network. The Action Plan recognises that Victoria has a way to go until the entire system is accessible for people with mobility issues, as the existing infrastructure requires significant upgrades and if this is done in a segmented fashion it will not lead to an overall accessible network, rather individual areas of accessibility. Rather the Action Plan sets out priorities to lead toward whole journey accessibility. A key priority of this plan is to provide information to assist people with disabilities in planning journeys. The Action Plan again highlights the importance of providing travel planning information to people in wheelchairs to lead to an accessible transport system.

Public Transport Victoria released an Implementation Plan (2013a) detailing its approach to a 'whole of journey' accessible public transport system. This plan details Public Transport Victoria's intention

to both meet the Transport Standards and go further in a move to overall accessibility. This plan outlines Public Transport Victoria's role in the Action Plan for 2013-2017. A key action for Public Transport Victoria in this plan states: 'Information detailing accessible entry points, allocated spaces and seating on public transport services and facilities (e.g. lifts, ramps, toilets) will be prepared for major metropolitan and regional railway stations, and transport interchanges' (Public Transport Victoria, 2013a, p. 11)

This action was intended to be completed by June 2015, and it is important to note that the action is for this information to be prepared for major stations, not all stations. Limiting the collation of this rich data to major stations does not align with the Review of the Transport Standards (DIRD, 2015) and the Whole Journey Guide (DIRD, 2017). Additionally, this information is not clearly displayed by Public Transport Victoria in the information it provides about accessible train stations. Both the Review and the Whole Journey Guide stressed the importance of detailed pre-journey planning information. Highlighted by the Whole Journey Guide is the importance of this information being available for the entire network, not limited to major stations. This shows there is still work for Public Transport Victoria to do to provide detailed information about the accessibility of its stations. It is clear from the Review (DIRD, 2015) that Victoria has assessed the accessibility of its train stations, as it has reported on the number of stations considered accessible. It is unclear why this information, regarding which stations are and are not accessible, is not publicly available to enable straight forward pre-journey planning for people in wheelchairs.

It is clear from these four policies that while the government recognises the importance of the Transport Standards, it also recognises their shortcomings. All of these policies have highlighted the need to go beyond compliance with the Transport Standards and approach accessibility from a whole journey perspective, with journey planning information being a key part of this approach. The policies, in particular the Implementation Plan, indicate that the government is unnecessarily limiting its targets in regards to the provision of information about accessible train stations and services.

Site Visits

At each of the site visits the requirements of the Transport Standards relevant to people in wheelchairs, as highlighted in Figure 1, were examined to determine whether the train station was accessible for a person in a wheelchair. The information provided on Public Transport Victoria's Journey Planner was then assessed to determine whether it correlated with the real-life accessibility of the station.

East Richmond



Figure 2 - East Richmond Station (sourced from nearmap, 2018)

The outbound side of the station did not meet the requirements of the Transport Standards to be accessible from the street to the station for people in wheelchairs. There are two possible street entrances to the outbound side of the station, a ramp from Church Street or stairs from the car park. The ramp from Church Street is longer than 9m and varied between 4° and 6° along its length. It did not have ramp landings as required by the Transport Standards. The access to the car park from the outbound side of the station was a set of three stairs. Inside the station on the outbound platform met the accessibility requirements for path width and manoeuvring area; however, this is somewhat irrelevant as a person in a wheelchair would be unable to gain access to the platform from the street.

The inbound side of the station has two possible entrances, one from Church Street and another from a car park adjoining Adolph Street. It is accessible from Adolph Street, but inaccessible for Church street. Similarly, to the outbound platform, the ramp from Church street does not meet the requirements of the Transport Standards with the angle varying between 5° and 7° and it does not have ramp landings. However, the ramp to the car park is 4°, meeting the accessibility requirements. There is a small set of stairs to the car park, however in line with the Transport Standards this is not the only means of access. All access paths and manoeuvring areas are the required widths.

In comparing the accessibility of this site to the information provided on Journey Planner it was found that the inaccessibility for people in wheelchairs for the outbound platform was not reflected in the information provided through the Journey Planner phone application.

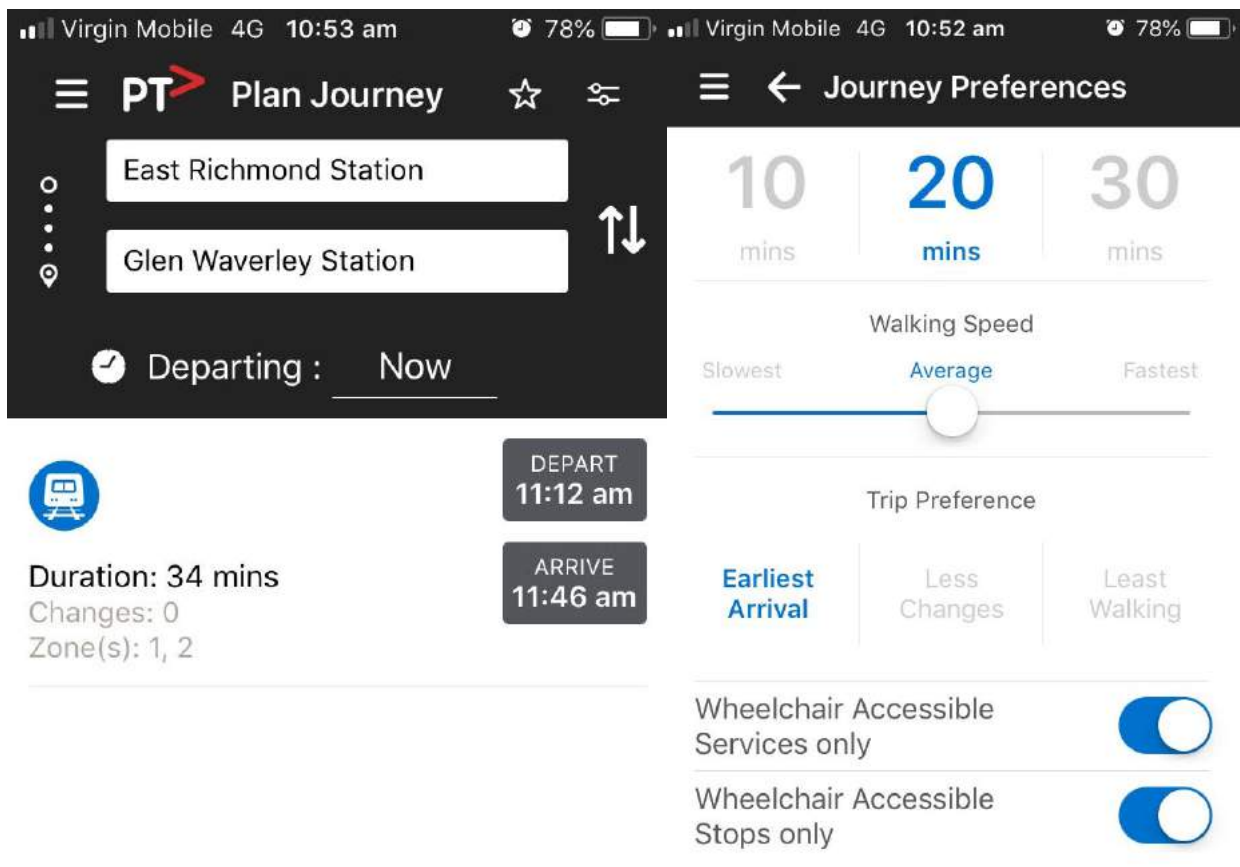


Figure 3 - Journey Planner Phone application, viewed 3 May 2018

Figure 3 shows that when selecting Wheelchair Accessible services and stops only the phone application directed you to board the train at East Richmond heading outbound. As per the measurements at East Richmond, it is not a wheelchair accessible stop in this direction.

On the Public Transport Victoria website Journey Planner, when selecting wheelchair accessible services and stops only, it once again advises you to board the train at East Richmond heading outbound. This is shown in Figure 4.

Journey planner

Departing at **Thu 03 May, 8:15pm**

Journey results

From **East Richmond Station (Richmond)**

To **Glen Waverley Station (Glen Waverley)**

Departing **Thu 3 May 2018, 8:15pm**

Depart **Thu 8:10pm**

Arrive **Thu 8:44pm**

Duration 34 minutes

Zone(s) 1, 2

[Route map](#) >

Figure 4 – Journey Planner (PTV, n.d, viewed 3 May 2018)

East Malvern

Figure 5 – East Malvern (sourced from nearmap, 2018)

The outbound platform at East Malvern does not meet the accessibility requirement of the Transport Standards based on the ramp overpass to the platform. This ramp is 5° from the carpark up and ranges between 5° and 8° from the overpass to the outbound platform. It is longer than 9m and does not have landings at the required intervals.

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Figure 6 – Ramp from carpark to overpass, 5°

This is the sole access point to the outbound platform. When comparing this to the information provided by Journey planner, the mobile phone application advises to catch the train heading outbound, as seen in Figure 7. Similarly, the online Journey Planner advises to catch the train at East Malvern travelling outbound.

Virgin Mobile 9:44 am 97%

PT Plan Journey

East Malvern Station

Glen Waverley Station

Departing : Now

Duration: 16 mins
Changes: 0
Zone(s): 2

DEPART 9:51 am
ARRIVE 10:07 am

Journey results

From East Malvern Station (Malvern East)
To Glen Waverley Station (Glen Waverley)
Departing Sat 5 May 2018, 9:45am

Depart Sat 9:31am
Arrive Sat 9:47am

Duration 16 minutes
Zone(s) 2

View journey

Route map

Figure 7 – Journey Planner East Malvern Outbound (PTV, n.d, viewed 5 May 2018)

The inbound platform at East Malvern has an accessible ramp from the street to the station with the ramp being 4°. This platform does not have stairs as the only means of access, however the station is not accessible due to the access path inside the station. The width of the path to enter the station at the Myki machines is narrower than 1200mm as seen in Figure 8. This is due to the central support in the automatic sliding doorway.



Figure 8 – Inbound platform. Doorway centre does not allow for 1200mm access path

When assessing the accessibility of the inbound platform against the information provided on the Journey Planner application, it is shown that the information does not align. The phone application, as seen below, advises to board the train at East Malvern in the inbound direction. This misaligned information is also reflected on the web journey planner.

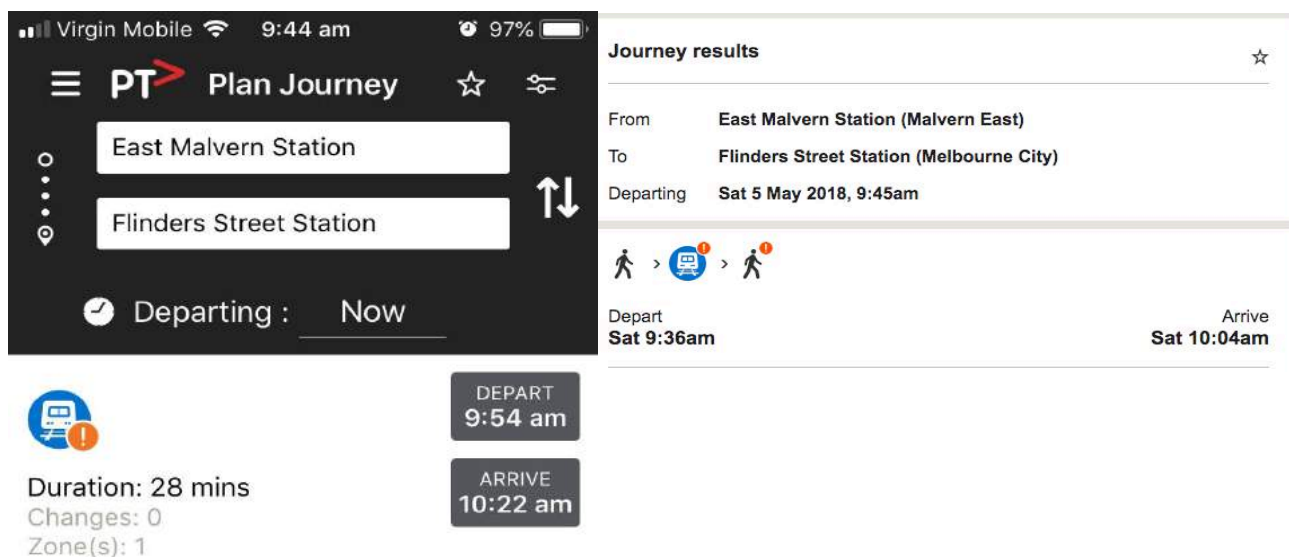


Figure 9 - Journey Planner East Malvern inbound (PTV, n.d, viewed 5 May 2018)

Holmesglen

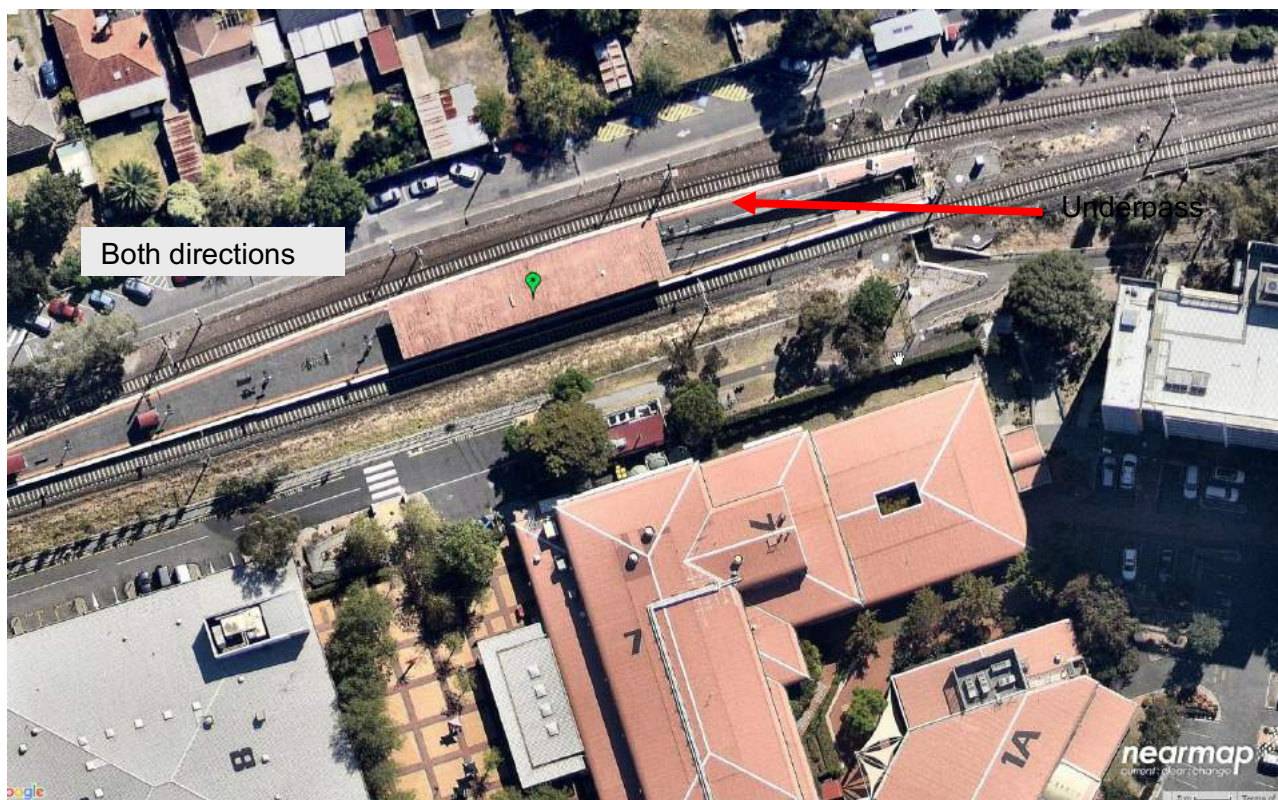


Figure 10 – Holmesglen Station (sourced from nearmap, 2018)

Both the inbound and outbound platforms of Holmesglen station are accessed via an underpass. There are multiple routes to the underpass including from the Holmesglen TAFE campus to the south, Stirling Avenue to the north and Warrigal road to the East.

The access paths from the street to the station and inside the station meet the width requirements for accessibility; however similarly to the other stations visited the ramp access to the station means it does not meet the requirements for wheelchair accessibility. There is a short ramp from the Holmesglen TAFE entrance, which is curved and varies between 3° and 5°, this joins the underpass leading to the ramp entry to the station which is between 5° and 6° along its length. It is longer than 9m and does not have landings, this can be seen in Figure 11. As each of the entrances to the station meet at this ramp to access the platforms, the steepness of this ramp results in the train station not meeting the accessibility requirements of the Transport Standards.



Figure 11 – Ramp from underpass to Holmesglen Station

Once again, when comparing the real-life accessibility of this station to the information provided on the Journey Planner application it does not provide an accurate representation. The phone application advises to board the train at Holmesglen for travel in both the inbound and outbound direction. This is also reflected in the website information for travel.

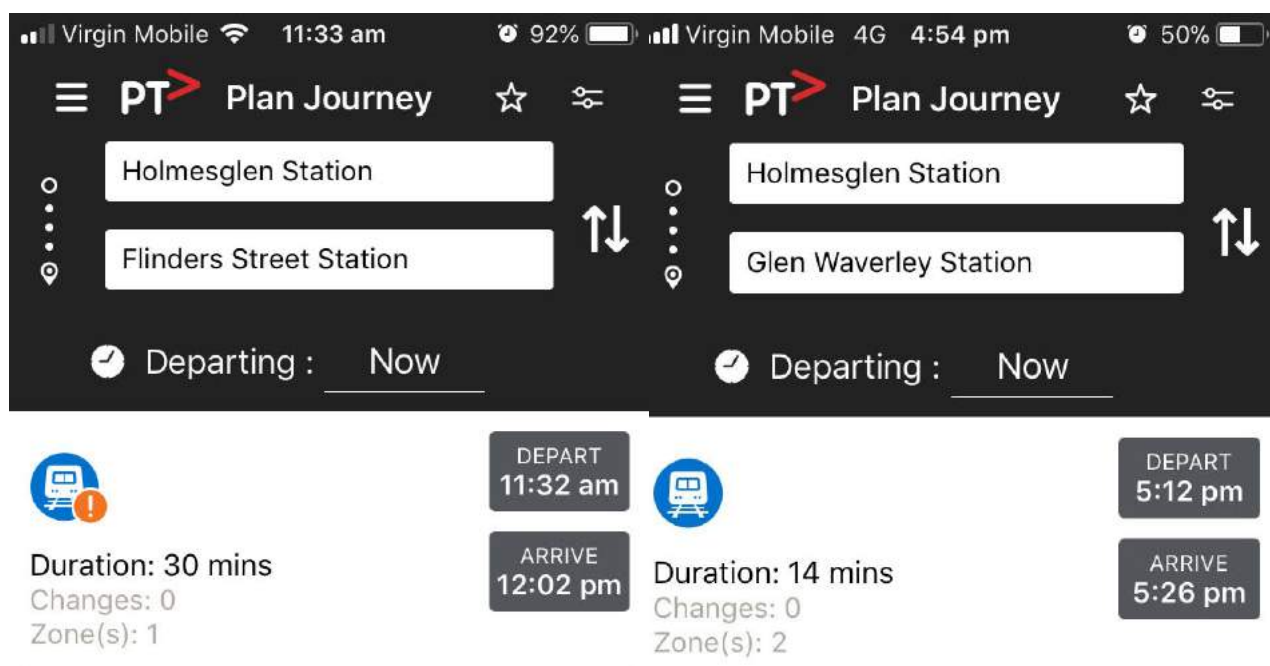


Figure 12 – Journey Planner Holmesglen inbound and outbound (phone application)

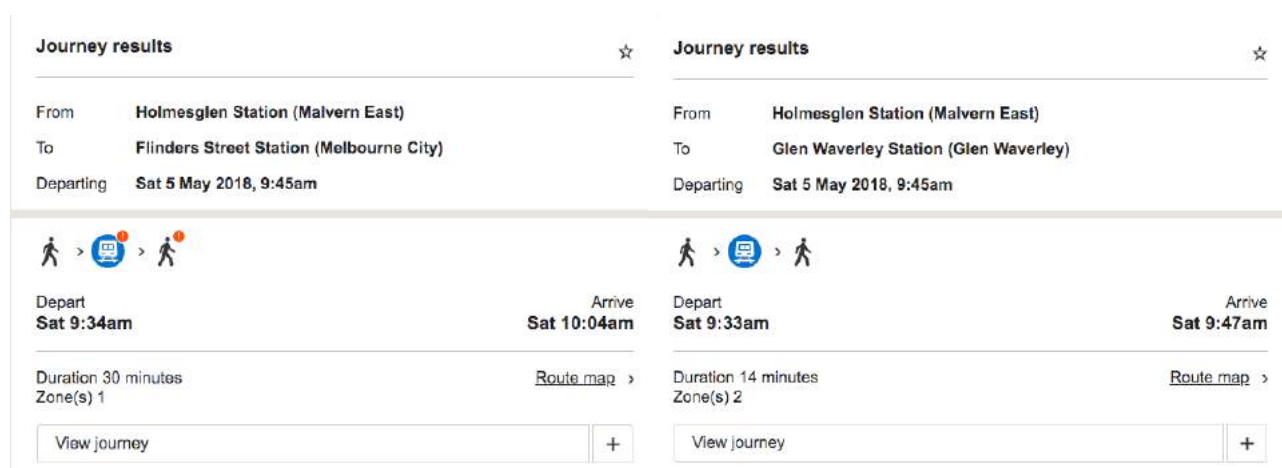


Figure 13 – Journey Planner website inbound and outbound (PTV, n.d, viewed 5 May 2018)

Site Visit Summary

	East Richmond		East Malvern		Holmesglen	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Access Paths	Y	Y	N	Y	Y	Y
Manoeuvring areas	Y	Y	Y	Y	Y	Y

Ramp angle	N- Church St	N	Y	N	N	N
	Y – Adolph St car park					
Ramp Landings	N – Church st	N	N/A	N	N	N
	N/A Adolph St					
Stairs not only access	Y	Y	Y	Y	Y	Y
Accessible?	Y	N	N	N	N	N
Journey Planner accurate	Y	N	N	N	N	N
Note	The ramp from Aldoph street was less than 9m – did not require landing		Inbound doorway access path at myki machines not wide enough	Ramp overpass too steep	Ramp from underpass to platform too steep	

It is clear from the above summary of the site visits that the Journey Planner application does not accurately reflect the accessibility of the stations examined in this research. The application was accurate only for the station which met the accessibility requirements of the Transport Standards, East Richmond – inbound. It remains unclear what accessibility requirements PTV have used for Journey Planner application.

Recommendations and implications

This research has implications from both a legislative and policy perspective. DIRD has suggested that the 2022 targets of the Transport Standards will not be met in Victoria. It is clear from this research that the policy aims of going beyond these targets are not currently being met for the stations within the scope of the research. As this is a pilot study, it is recommended that further research be conducted to determine if the issues identified at the stations in this study are systemic across the metropolitan and regional network. After the finalisation of further research, the government would then be positioned to consider the resources it needs to invest to meet both the legislated targets and its own policy targets.

There are specific actions that can be implemented from the findings of this research paper. These actions relate to the three stations visited, however may extend beyond these stations with further research.

Recommendation 1: Public Transport Victoria to amend the information on the Journey Planner phone application and website to accurately reflect the wheelchair accessibility of East Richmond, East Malvern and Holmesglen.

Recommendation 2: Metro Trains to replace the doorway at East Malvern to allow an access path width which would make the inbound platform wheelchair accessible.

Recommendation 3: Public Transport Victoria to provide public information identifying the stations which are accessible, and those which are not, as per the Victorian government's submission to the 'Review of the Disability Standards for Accessible Public Transport 2002' (DIRD, 2015).

Recommendation 4: Public Transport Victoria to provide rich data to the public about the accessible and inaccessible features of train stations, sourced from Victorian government's submission to the 'Review of the Disability Standards for Accessible Public Transport 2002' (DIRD, 2015). This will allow people in wheelchairs to determine the best journey option for them.

Conclusion

This research examined the accessibility of East Richmond, East Malvern and Holmesglen train stations for people in wheelchairs against the Disability Standards for Accessible Public Transport. The objective of this was to determine whether the information provided by Public Transport Victoria, through its Journey Planner application, accurately reflects the accessibility of these stations. These site visits were completed with the background of both the legislated Transport Standards and policy objectives of government to go further than the Transport Standards in an 'whole of journey' approach to accessibility.

A parallel mixed methods research approach was utilised with the legislation analysed to determine the requirements of government when it comes to wheelchair accessibility at train stations. Four policy documents were studied through an inductive analysis to determine the aims of government regarding transport accessibility for people in wheelchairs. This qualitative analysis was then triangulated with the quantitative information gathered at the three site visits. Together, this gave a complete picture of what government is aiming to do and what it is actually accomplishing.

This research shows that at all three stations there is limited wheelchair accessibility, with East Malvern inbound platform being the only platform accessible under the requirements of the Transport Standards. However, the information on Journey Planner does not accurately reflect this, with both the mobile phone and web platforms showing the three stations to be accessible in both directions. Although this research was a pilot study, and the results cannot be extrapolated to the whole train system, it indicates that the government is not achieving its policy aim of providing accurate information about disability access. It is clear from the literature and the policies that the provision of accurate information is a key part of creating an accessible journey. The information being provided by Public Transport Victoria is not accurate and if the government is seeking to pursue its policy aims, this is an important place to start.

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