Community Appraisal of Disability Access at Railway Stations in the City of Yarra

Disability Advisory Committee

D17/191767

Appraisal Reporting 2015 - 2017

PREAMBLE

This project has been instigated and guided by the Disability Advisory Committee (DAC) at Yarra City Council (YCC). The significance of this report is the provision of evidence on issues of disability access to the railway stations gathered by “true experts” in access appraisals through their lived experience of sensory and/or physical disability.

This report came to fruition due to an extraordinary determination, numerous visits and tireless data collection by project masterminds Mary Rispoli and David Brant (Community Representatives on the DAC). The engineering expertise, on-site assistance and data verification by Yarra’s Traffic Engineer, Warwick Middleton, were of utmost importance in their work.

Generous assistance of DAC member Martin Leckey and former member of DAC Margaret Bayly added to the success. The advice and assistance of Council Officers Marta Rokicki, Pia Borghesi, Nopporn Jittasilp and Simon Exon in respect of data classification and analysis, content, formatting and editorials is also gratefully acknowledged.

The case study provided by the Summer Foundation evidencing safety issues has demonstrated the urgency for action towards improvements for equal access to train commuting. A Yarra resident, who identifies himself as Bily, kindly shared his boarding experience in his electric wheelchair, which adds to the richness of this report.

Special thanks are directed to the Yarra City Council for endorsing this report and to Public Transport Victoria (PTV) for consultative remarks in the process, and for the opportunity to put forward this report. It is anticipated and hoped by DAC that PTV will take advantage of this advocacy initiative and take action on implementation of recommended improvements. This will make Yarra’s railway stations friendlier and safer for commuters with disability, and advance community cohesion.

DAC Public Transport Sub-Committee members that worked on this project are as follow:

- Mary Rispoli - DAC
- David Brant - DAC
- Martin Leckey - DAC
- Margret Bayly – former DAC
- Warrick Middleton - YCC
- Marta Rokicki - YCC
- Nopporn Jittasilp -YCC
- Simon Exon – YCC

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SECTION 1 INTRODUCTION

1.1 BACKGROUND

The community appraisal of the railway stations within the municipality of the City of Yarra (COY) has been instigated by Council's Disability Advisory Committee (DAC). The committee aims to improve the quality of life of people with disability and is made up of community representatives. The DAC is chaired by Yarra City Councillors who present advice and report to Council and to other organisations on behalf of the DAC members. Council values DAC's advice on universal access and mainstream participation, and supports DAC's advocacy for disability rights.

The DAC has frequently received complaints from local citizens with disability about difficulties in accessing public transport. Poor accessibility to public transport constrains individuals' options and choices, and limits opportunities to participate in the community, which leads to segregation from the wider community.

At the DAC meeting on 9 September 2014, members resolved to set up Public Transport Sub-committee (with involvement of representatives from Council's Strategic Transport Branch) to identify issues of accessibility to public transport, with emphasis on safety while boarding; and to advocate for improved accessibility to public transport by people with disability. Making public transport as accessible as possible would benefit not only people with disability but all other members of the community, including parents with prams, elderly, injured youth, and people with buggies.

The Sub-committee took part in numerous consultations with involvement of Public Transport Victoria, Yarra Trams, VicRoads and Strategic Transport at Yarra City Council. For example, the sub-committee participated in consultations on the design of the easy access tram stops on Nicholson St in Fitzroy.

Since September 2014, the Sub-committee conducted (with occasional assistance of Council's Traffic Engineer) on-site community access appraisals of all railway stations in the municipality of the City of Yarra. Many stations received return visits with additional DAC members whose particular disability access requirement levels were used to evidence experiential application of the data collection. For example, entry and egress from trains on critical platforms was performed by DAC members with walking frames and electric wheelchairs.

In addition, regular meetings and workshops were conducted over this period and updates were regularly tabled at DAC meetings. The collected data was audited and verified through additional site visits in March 2017.

The intent of the community access appraisals of the railway stations was to produce a report that provides evidence on the issues of compromised safety experienced by commuters with disability at the train stations in the City of Yarra; and to provide data that demonstrate priorities for improvements at the audited stations, whilst giving consideration to the level of complexity involved with these improvements. On endorsement by Council, this report will be forwarded to authorities such as Public Transport Victoria, Metro Trains, and any other relevant organisation.

1.2 GOAL, OBJECTIVES & OUTCOMES

The overarching goal of the report is:

To advocate for safer accessibility to railway stations in the City of Yarra and achieve equitable access for people with disability, utilising evidence based research and analysis of data and access requirements based on experiences of commuters with disability, with temporary health conditions, and those restricted by circumstances (e.g. prams).

The objectives and outcomes for achieving this goal include:

- Raising awareness of the relevant authorities regarding the limiting impact of poor accessibility to the railway stations on the lives of people with disability;
- Identifying data and providing analysis on issues of disability access to public transport at the railway stations in the City of Yarra;
- Providing a list of low, medium and high level of hazards and works to be undertaken for achieving better access for people with disability to local railway stations;
- Advocating for prompt removal of potential hazards at the listed railway stations;
- Engaging in consultations with the relevant authorities and providing advice on disability access for all railway stations within the municipality;
- Enabling more people to use public transport; and,
- To ensure that implemented access measures are at “best practice” level and not simply meeting minimum standards.

1.3 SCOPE & METHODOLOGY

1.3.1 Scope

This report analyses the level of accessibility at all stations in the City of Yarra, as listed in the alphabetical order:

- Burnley railway station
- Clifton Hill railway station
- Collingwood railway station
- East Richmond railway station
- North Richmond railway station
- Richmond railway station
- Rushall railway station
- Victoria Park railway station

- West Richmond railway station

The location of these stations is marked on the map in the ***Attachment 1 - Train Stations in the City of Yarra***.

In addition to the nine railway stations listed above, community access appraisal was also conducted at the new Tarneit railway station[1] for the purpose of comparison with the best practice design at this station.

Tarneit railway station meets most of the *Disability Discrimination Act 1992* (Cth) requirements including ramp access to the platforms, anti-slip surfaces, tactile ground surface indicators, and hearing loops. All the railway stations (including Tarneit station) have been appraised against the following eight disability access categories:

- Tactile Ground Surface Indicators (TGSI);
- Shelter;
- Access ramp gradient;
- Access ramp width
- Access ramp handrails;
- Wheelchair access point (WAP);
- Signage; and,
- Accessible parking bays.

Definitions of the above categories and their significance for accessibility requirements are outlined in the ***Attachment 2 - Glossary***. In addition to the accessibility categories, hazards have been recorded alongside the above categories. Identified hazards refer to:

- Narrowness of platforms at WAP (see examples)[2];
- Steepness of access ramps;
- Obstructions on pathways;
- Visibility (i.e. poor colour contrast/size of signs);
- Absence of TGSI pathway continuity; and,
- Trip hazards.

Improvements identified in addition to the eight accessibility categories and hazards are also included in the ***Appendix 3 - Appraisal Data***.

Poor quality of audio equipment and lack of announcements was not specifically addressed in the appraisal, however, they are an ongoing issues at most train stations. Announcements which are beneficial for people with disability, elderly and tourists can often not be heard across an entire train station.

[1] Tarneit railway station serves the western Melbourne suburb of Tarneit. It is on the Deer Park - West Werribee railway line in Victoria, Australia, which forms part of the Regional Rail Link

[2] https://www.dropbox.com/sh/c4n1396z1uyhqaz/AAAnASQZ4RF11EPP-HqX6u33a?dl=0

1.3.2 Methodology

The community access appraisals of the railway stations in the City of Yarra involved consultations, desktop research, site visits for data collection, workshops, data analysis, and data review for verification.

Several consultation sessions were conducted between DAC Community Representatives (who have a lived experience of disability, are experienced in disability access, and are regular public transport users) and Council Officers (representing Strategic Transport, Traffic Engineering, Parking Services and Disability Planning). These consultations aimed to identify the approach, data collection and measuring tools, roles and responsibilities, and schedule of access appraisals.

Desktop research was conducted by Council Officers (within their respected disciplines) on legislation, regulations and standards for design that meets accessibility requirements in the public transport infrastructure. This step was followed by site visits and data collection on the eight categories of accessibility (see categories listed in the section 1.3.1 above). People with a variety of disabilities visited the train stations and boarded trains, including people who use electric wheelchairs, scooters, manual wheelchairs, walking frames and people with vision impairment.

Workshops on data analysis focused on:

- Comparison of the regulatory measures with the collected data from community access appraisals;
- Outline of terminology and concepts;
- Issues of potential harm to commuters from identified hazards;
- Capacity for best practice improvements; and
- Classification of priorities for improvements.

Records were collected in the written format, photographs and video clips. Re-visiting of the railway stations was required for data verification at the completion stage of this report.

1.4 DEMOGRAPHIC PROFILE – CITY OF YARRA

The City of Yarra is undergoing significant growth in population, economic activity and housing development, and this is anticipated to continue. In the five year period between the 2011 and 2016 Census, Yarra's population increased by 14,477, or 18%, to 93,380 (ABS 2016). The population is forecast to increase to 103,191, by 2026.

Transportation is the key element for creating cities and communities that are friendly for families with children, people with disability and older people. These groups make a significant contribution to their communities and the economy, and must be enabled to live safely, enjoy good health and move around confidently.

Households with children comprise approximately 21% of Yarra households. The number of households with children (both dual and single parent households) increased from 7,053 in 2006 to 8,480 in 2016; representing a 20% increase in this household type. At the same time the Yarra population of 50 years old residents and over is growing significantly. It is expected that by 2025 over 27% of Yarra's population will be 50 years old and over.

It is estimated that 14.8% of residents[3] in Yarra have a disability. As rates of disability tend to increase with age, the proportion of Yarra residents with a disability is likely to increase. In 2006, 2,551 residents needed assistance with core activities; by 2016 this had increased to 3,138 residents.

Given that there are approximately 9,159 train trips daily in Yarra (City of Yarra Safe Travel Strategy 2016 - 2026, p.10), the railway stations in the municipality need to be upgraded to provide safe access to trains for residents and visitors of all ages and abilities.

[3] ABS 2015, Disability, Aging and Carers Survey.

SECTION 2 KEY FINDINGS

2.1 DATA OVERVIEW

Data collected in the eight categories at each railway station during accessibility appraisals is presented in the **Table 1** below (see ***Appendix 2 Glossary*** for definitions and compliance details). The terminology/references in the table are as follow:

TGSI ..... Tactile Ground Surface Indicators
P ..... TGSI at platform
E ..... TGSI at entrance to railway stations
WAP ..... Wheelchair Access Point (WAP) located at the front end of platform as a boarding point (DAC recommended 3m in width, including 750mm portable ramp)
W Ent ..... WAP sign situated on ground at entrance to platform
Shelter ..... Shelter at the front of platform above the WAP
Signage..... WAP signs situated on the ground at the entrance to platform, and at the front of platform
Ramp Gradient..... Wheelchair accessible compliance gradient indicating the steepness of ramp to train station. Current minimum gradient requirement for wheelchair access ramp is 1:6 (depending on the length).
Ramp Width ..... Preferably 2 metre (wide enough for 2 wheelchairs to pass – based on DAC committee recommendation to meet best practice)
Accessible Parking Bays The minimum number of disability access parking bays to be implemented. Standard is 1 per 50 parking bays, however, best practice is 1 bay minimum (irrespective of < 50 car parks). Council's Disability Access Parking Bay Policy is minimum 3% to be accessible parking bays)
Hazards..... Indicate a variety of objects or situations that have been considered by DAC members as dangerous, and may cause harm (details and pictures can be found in ***Appendix 2 Glossary***).
Risk Level..... High, Medium or Low - indicate which train station is most at risk in accordance to DAC recommendations.
Numbers & / ..... For example 2/9 refers to 2 out of 9 items meeting the criteria.

TABLE 1:
KEY DATA BY STATION

STATION	TGSI	Shelter	Ramp Gradient	Ramp Width	Wheelchair Access Point (WAP)	Signage*	Accessible Parking Bays	Overall Risk Level	Additional Hazards
Burnley	P. 4/4 E. 0/4	1/3	0/3	3/3	4/4	WAP 4/4 W Ent 0/4	0/3 bays	**Low**	• Worn out TGSI • Barrier hoops • Hand rail missing
Clifton Hill	P. 0/2 E. 2/2	2/2	0/4	4/4	1/2	WAP 2/2 W Ent. 2/2	2/5 bays	**High**	• Barrier hoops • P 1 station door entrance too narrow
Collingwood	P. 2/2 E. 2/2	0/2	0/2	2/2	1/2	WAP 2/2 W Ent. 0/2	0/2 bays	**High**	• See the first video https://www.dropbox.com/sh/c4n1396z1uyhqaz/AAAnASQZ4RF11EPP-HqX6u33a?dl=0
East Richmond	P. 2/2 E.2/2	1/2	0/2	2/2	2/2	WAP 0/2 W Ent. 2/2	0/2 bays	**Low**	• Hand rail missing
North Richmond	P. 0/2 E. 0/2	0/2	0/4	0/4	0/2	WAP 2/2 W Ent. 2/2	0/2 bays	**High**	• WAP dangerous – see second video https://www.dropbox.com/sh/c4n1396z1uyhqaz/AAAnASQZ4RF11EPP-

TABLE 1:
KEY DATA BY STATION

STATION	TGSI	Shelter	Ramp Gradient	Ramp Width	Wheelchair Access Point (WAP)	Signage*	Accessible Parking Bays	Overall Risk Level	Additional Hazards
									HqX6u33a?dl=0
Richmond	P. 10/10 E. 10/10 See note	10/10	0/12	11/12	1/10. Other 9 platforms are not compliant (but close to compliance)	WAP 10/10	0/2 bays	**Low**	• Blue low contrast and worn out TGSI. • External entrance TGSI. • Platform furniture. • Black poles
Rushall	P. 2/2 E. 2/2	1/2	1/3	3/3	2/2	WAP. 2/2 W Ent. 1/2	0/4 bays	**Low**	• Dark poles
Victoria Park	P. 0/2 E. 0/2	0/2	0/4	4/4	1/2	WAP. 2/2 W Ent. 2/2	0/6 bays	**High**	• P1 too narrow and close to pole
West Richmond	P. 0/2 E. 0/2	0/2	0/1	1/1	2/2	WAP. 2/2 W Ent. 0/2	0/2 bays	**Low**	• Surveillance camera on pole too dark
Tarneit	P. 2/2 E. 2/2	2/2	2/2	2/2	2/2 wide enough but no wheelchair signage	WAP is replaced by Boarding assistance sign on both platforms.	12 accessible parking bays (2 large bays).	**N/A**	• TGSI absent from access pathway from P1 to P2 to bus stop and car park.

TABLE 1: KEY DATA BY STATION									
STATION	**TGSI**	**Shelter**	**Ramp Gradient**	**Ramp Width**	**Wheelchair Access Point (WAP)**	**Signage***	**Accessible Parking Bays**	**Overall Risk Level**	**Additional Hazards**
						Platforms signs nice and large			• LCD screens (print too small)

* Note: The data recorded under the 'Signage' category refers only to the wheelchair access sign at the entrance to a platform and at the boarding point on the platform. However, all railway stations would benefit from larger print of the station names for easy reading, and by having signage that illuminates at night.

2.2 DATA ANALYSIS

The following are key observations based on analysis of the data.

AREAS FOR CONCERN

- None of the nine (9) railway stations in Yarra meet all disability compliance requirements.
- The railway stations in Yarra are particularly difficult to access for people who use wheelchairs, scooters, walking frames or have other mobility issues.
- Four (4) out of nine (9) railway stations do not have Tactile Ground Surface Indicators along all or some of their platforms.
- Four (4) out of nine (9) railway stations do not have TGSIs at the station main entry and exit points. TGSIs are required for people who are blind or with low vision, to travel safely and independently. Having TGSI at top, bottom of steps, ramps and in front of lifts is very important.
- Only two (2) out of nine (9) railway stations have shelter at the WAP (Wheelchair Access Point) on the platforms where people with disability would board the train. There are three (3) stations that have shelter at some platforms only.
- One (1) out of nine (9) stations have accessible parking bays and there is a capacity to increase a number of accessible parking bays located at railway stations.
- Four (4) out of nine (9) railway stations have enough room for a wheelchair to board the train at the WAP located at the front end of platform.
- The railway station ramps are too steep. Only one side of Rushall station meets the appropriate ramp gradient standard.
- The majority of signage could be improved. The station sign names can be larger in font size. Whilst eight (8) out of (9) railway stations had the blue and white Wheelchair Accessible Point symbols at end of platform, only four (4) out of (9) had WAP symbols at entry and exit points of the railway station.
- There are a number of hazards as perceived by the appraisal team, in and around railway stations that could be eliminated. These include barrier hoops, trip hazards, poor colour contrast (i.e. poles which are dark in colour), worn out TGSIs, narrow WAPs, furniture in the pathway at WAP and other location specific hazards.

POSITIVE DESIGN ELEMENTS

- All railway stations had adequate hand rails. There were a handful of cases where rails were missing (to be replaced).
- All Railway Stations had adequate ramp width.

SECTION 3 SUMMARY & RECOMMENDATIONS

3.1 SUMMARY

Railway stations in Yarra require upgrades to improve accessibility for people with disability, older people, those with temporary health conditions or restricted by circumstances (i.e. with prams) - and in general easier to access for all.

The City of Yarra is a strong advocate for improved disability access and urges the State Government and PTV to ensure that all residents can access all types of public transport. We encourage all agencies involved in the delivery of public transport services and infrastructure to do more than meet standards, but aspire to deliver best practice solutions to ensure accessibility for all ages and abilities.

A formal commitment to this goal is outlined in the following positioning statement:

"The Disability Advisory Committee supports the rights of all residents to access public transport in our municipality. Future redevelopment and/or upgrades of existing stations/tram stops or newly built public transport infrastructure must be designed to cater to the needs of our whole community – taking into consideration best practice universal design principles that ensure access for all."

This position of the DAC is consistent with Council's commitment outlined in the *Council Plan 2017 – 2021:*

- Strategy 6.4 - Improve accessibility to public transport for people with mobility needs and older people;
- Initiative 6.4.1 Advocate to the state government for improved accessibility to public transport services.

3.2 RECOMMENDATIONS

Recommendation 1

Council endorses this Community Appraisal Report; acknowledges outstanding effort of the Disability Advisory Committee's Public Transport Sub-Committee; and advocates to the Public Transport Victoria and Metro Trains for implementation of upgrades listed in Recommendation 2 below.

Recommendation 2

Public Transport Victoria to table this Community Appraisal Report at the Public Transport Access Committee meeting; and include the alterations and additions to the nominated Yarra railways stations (based on the findings of this accessibility appraisal) in future upgrade and maintenance programs.

Areas for upgrade include:

- More Disability Access Parking Bays;
- Installation of shelters at WAPs;
- Upgrade of ramps to a compliant grade;
- Colour contrast on poles;
- Three (3) meter width Wheelchair Access Points at front end of platforms;
- Repair of Tactile Ground Surface Indicators;
- Better signage – including larger railway station name signs;
- Wheelchairs Access Point symbols; and,
- Speakers at WAPs are checked and their functionality reinstated. (Note: The audible equipment at the railway stations has not been included in the audit as it was difficult to ascertain a reliable level of accessibility. It has been identified, however, that speakers are often unclear or inaudible. Tarneit railway station provides an example of excellence in audible information.)

3.3 PRIORITIES – HIGH, MEDIUM & LOW

Table 2 (over page) sets out improvement priorities that the DAC's Public Transport Sub-Committee believe need to be attained if the railways stations in Yarra are to be truly accessible. City of Yarra can play a key role in an ongoing advocacy to PTV for implementation of these access priorities at the railway stations.

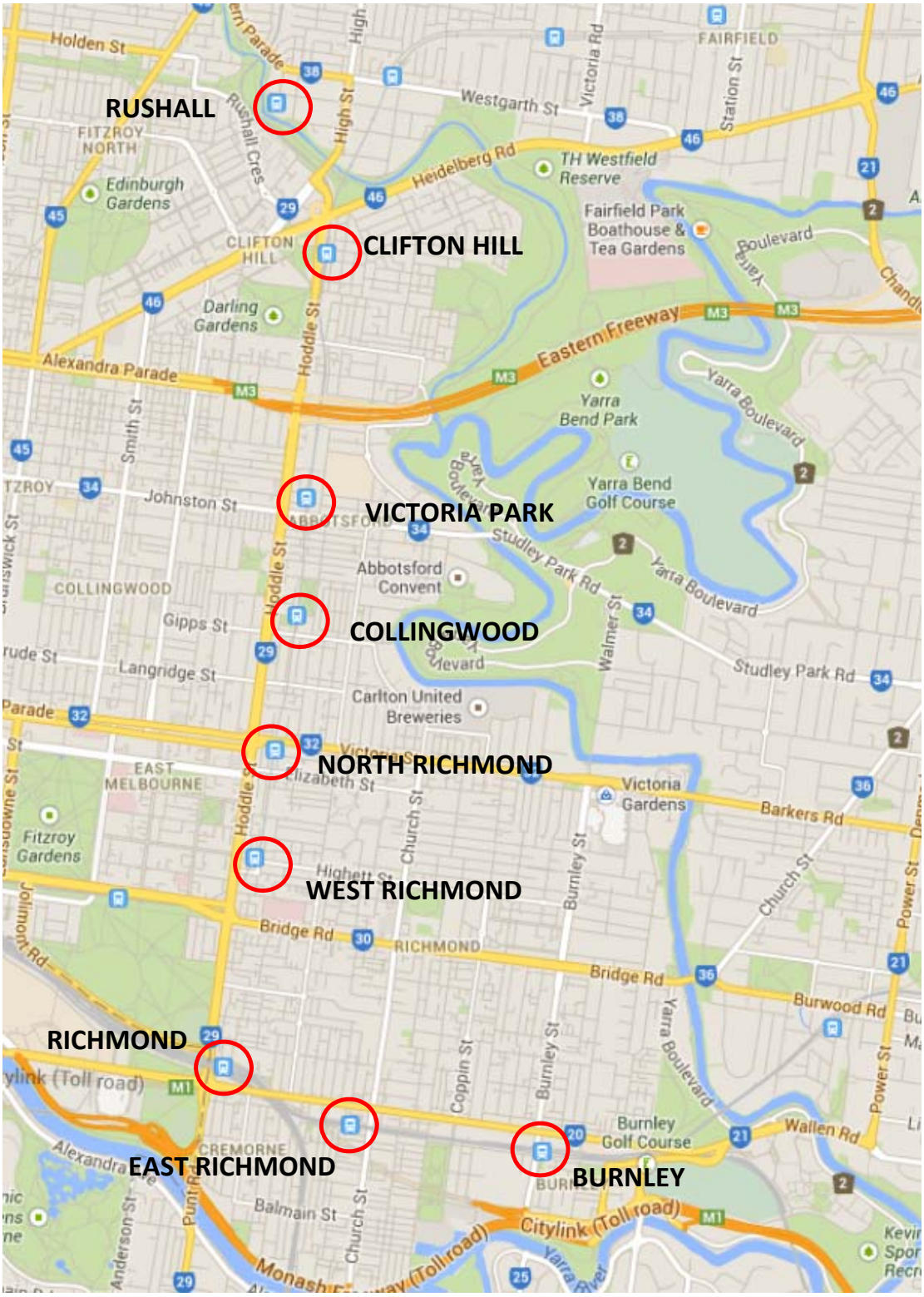
TABLE 2:
IMPROVEMENTS BY STATION

STATION	High Priority	Medium Priority	Low Priority
Burnley	• Shelter • Ramp Gradient	• TGSI • Parking Bays (YCC)	• Handrails • Signs – station name
Clifton Hill	• TGSI • WAP • Hazard- widen door	• Accessible Parking Bays (YCC)	• Handrails • Signs - station name • Hazards - bollards
Collingwood	• Shelter • Ramp Gradient • WAP	• Accessible Parking Bays (YCC) • Hazard- tow bar/install bollard • Hazard- footpath gutter- YCC	• Signs - station name
East Richmond	• Shelter • Ramp Gradient • Accessible Parking Bays	• TGSI • Signs- WAP	• Handrails • Signs - station name
North Richmond	• TGSI • Shelter • Ramp Gradient • WAP	• Accessible Parking Bay (YCC)	• Signs - station name
Richmond	• TGSI • Ramp Gradient • WAP • Accessible Parking Bays	• Handrails • Hazard - footpath	• Signs- station name & directional
Rushall	• TGSI • Shelter • Ramp Gradient • Accessible Parking Bays • Other – station crossing		• Signs – station name • Hazards – bollards/pole

TABLE 2: IMPROVEMENTS BY STATION (cont.)			
STATION	**High Priority**	**Medium Priority**	**Low Priority**
Victoria Park	• TGSI • Shelter • Ramp Gradient • WAP • Accessible Parking Bays • Hazard – pole		• Signs - station name
West Richmond	• TGSI • Shelter • Ramp Gradient • Accessible Parking Bay • Hazard – footpath at entrance	• Hazard -Pole	• Signs - station name

APPENDIX 1

Map of Stations



APPENDIX 2
Glossary

- **UNIVERSAL DESIGN PRINCIPLES**

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability.

- **ACCESSIBILITY**

Accessible public transport refers to the provision of access to public transport for all members of the community (including people with prams, older persons, those with temporary injuries or health conditions, people with disability, and those with special needs.)

Requirements include:

a) Enabling commuters to easily change to other modes of transport that are situated in close proximity to the station, for example bicycle parking/storage, car parks and bus/coach/tram stops.

b) Designing and locating the station entry and station infrastructure, as identified by its category and the ARO's requirements, to allow for physical access for all passengers (current and future).

c) Ensuring that the rail passengers' needs are taken into account, for example passenger facilities identified by the station category, and the rail operators' requirements are provided.

d) The station should be designed so that its layout is able to be comprehended by unfamiliar users, and orientation only supplemented by signage and maps.

e) New station designs and/or substantial alterations comply with the DDA and the DSAPT VRIOGS 002.1 Railway station Design Standard and Guidelines.

- **TACTILE GROUND SURFACE INDICATORS (TGSI)**

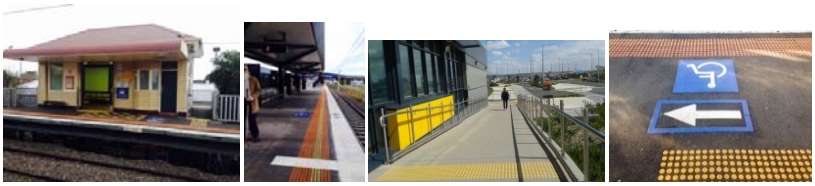
The raised dots and lines imprinted into the ground to indicate entrance points and the direction of path, for people who are blind or have a vision impairment. TGSI are located at top and bottom of ramps, along the platform, in front of lifts, escalators, entrances and in front of the information buttons area. They also indicate a continuous pathway to and from places. A high colour contrast and continuity of colour is advisable.

a) Warning TGSIs are required on train stations along the platform edge of the platform, at the top and bottom of stairs, ramps and escalators, overhead obstructions below a height of 2000mm, hazards within a circulation space or adjacent to a path of travel and at various other locations as set out in the DSAPT55. The style and dimensions of TGSIs must comply with AS1428.4.

b) Close to the edges of railway platforms continuous strips of hazards tiles 600mm wide shall be installed. However where discrete TGSI dots are used, this width may be reduced to 585mm.55.

c) The TGSI shall consist of appropriate hazard warning markers which have a luminance contrast of 30% for solid tiles and 45% for discrete units**.** *VRIOGS 002.1 Railway Station Design Standard and Guidelines.*

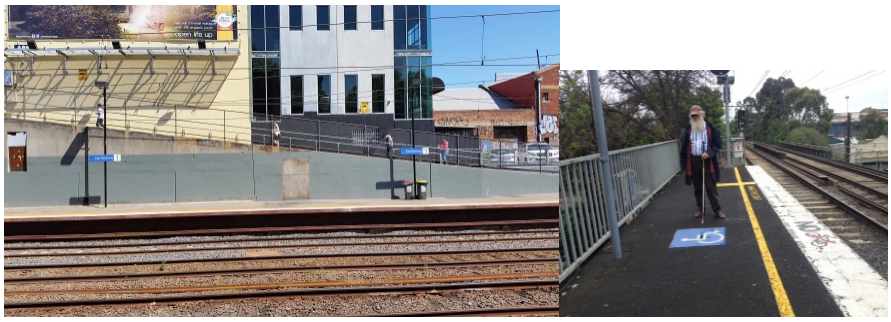
d) The colour of the TGSI dots for the stand back line is yellow and the colour of the other dots along the TGSI located at the edge of the platform is "Light Terracotta" (pathfinder specifications: 1595C Orange MB 30827)**.** *VRIOGS 002.1 Railway Station Design Standard and Guidelines.*



- **SHELTER**

Shelter at or close to Wheelchair Access Point (WAP) on platform, located at the front end of platform: to protect people from wind, sun and rain. To be closer to the WAP point is a time saver for the train drivers (see lack of shelter below).

A waiting shelter shall be provided adjacent to the first door of the train carriage. This is to allow passengers with disabilities a sheltered waiting space to allow for the driver to assist loading. *VRIOGS 002.1 Railway Station Design Standard and Guidelines.*



- **ACCESS RAMPS & LANDINGS**

Access ramps to station can be internal /external to railway station and refers to the gradient of the pathways that leads to railway station platform. The DAC recommends a 1 in 6 ramp gradient to be a much better and user friendly gradient.

The engineering design requirements for ramps and landings include:

a) Ramps shall have an unobstructed width of not less than 1800mm;

b) Ramps shall have a maximum longitudinal gradient of 1:14.49;
c) Ramps shall be provided with landings at the top and bottom of the ramp and at intervals not exceeding49;

i. For ramps of longitudinal gradients of 1 in 14: 9m.
ii. For ramps of longitudinal gradients of 1 in 20: 15m and
iii. For ramps of longitudinal gradients between 1 in 14 and steeper than 1 in 20, at intervals which shall be obtained by linear interpolation. *VRIOGS 002.1 Railway Station Design Standard and Guidelines.*

- **ACCESS RAMP WIDTH**

The width of the internal/external ramps which at railway stations. The width is important to have turnaround space and allow enough room for two wheelchairs/scooters to pass. Ramps shall have an unobstructed width of not less than 1800mm. *VRIOGS 002.1 Railway Station Design Standard and Guidelines*

- **WHEELCHAIR ACCESS POINT (WAP)**

The WAP is where the start of the platform meets the front end of the train, first carriage. The platform width is measured from platform fence line to edge of platform, where it connects with train door. This is where a person in a wheelchair, scooter or walking frame etc. enters/exits train. The train driver places a portable wheelchair ramp to create a bridge from platform to train. When in place, the portable wheelchair ramp extends 750 millimetres onto the platform.

The platform width has been measured to represent an accurate usable area for wheelchairs and scooters to safely enter/exit trains, therefore including the 750 mms. In total, a 3 metre wide platform is recommended by the DAC Committee.

Also referred to as, the Platform Setback Width the preferred width is 3500mm, fully compliant DSAPT 3145mm and minimum 2535mm. *VRIOGS 002.1 Railway Station Design Standard and Guidelines*

- **HANDRAILS & GRABRAILS**

Handrails on both sides of access ramps offer support and stability.

The engineering design requirements for Handrails and Grabrails include:

a) The design and construction of handrails shall comply with AS 1428.1;
b) The top of the handrails shall be located not less than 865mm nor more than 1000mm above the nosing of stairway tread or the plane of finished floor of the walkway, ramp or landing;
c) The end of the handrail shall be extended parallel to the surface below for a minimum of 300mm (450mm is preferred). The end shall be continuous rail, turned down 100mm or be returned fully to the end post of the wall face. Where a handrail is not continued, a tactile button shall be provided 150mm from the end;
d) Handrails shall be provided along an access path wherever passengers are likely to require additional support;
e) Handrails shall not rotate within their fittings;
f) A grabrail shall not be less than 30mm and not more than 40mm diameter;
g) A grabrail or handrail shall be provided at fixed locations where passengers are required to pay fares.


Handrails

The installation of stairway handrails shall be in accordance with the following:

a) A handrail on steps need not extend beyond the top or bottom of the steps;
b) Where there is a background wall, handrails shall have a luminance contrast factor with the wall of not less than 0.3 (30 percent). *VRIOGS 002.1 Railway Station Design Standard and Guidelines*

- **SIGNAGE & SYMBOLS**

Signage includes the railway station names, reception sign, information and signage for Wheelchair Access Points. It is advised to have a WAP sign on platform at railway station entry on all platforms, and a second WAP sign at actual WAP train entry and exit point.

The engineering design requirements for symbols used within railway station design are:

a) The international symbols for accessibility and deafness shall be used to identify an access path and which facilities and boarding points are accessible. *VRIOGS 002.1 Railway Station Design Standard and Guidelines*



- **ACCESSIBLE PARKING BAYS**

Accessible Parking Bays also known as ‘disabled parking’ bays are located at railway stations, specifically for public transport passengers.
DDA-compliant disabled parking bays shall be provided within the car park.

The ratio of disabled parking bays to generic parking bays shall be 1:5043. Disabled car parking spaces shall be marked with the access symbol on the pavement and signage. An accessible path must be provided from any disabled car parking to a

station entry, which includes ramps, walkway lighting and other facilities, all in accordance with the DSAPT. Parking layout should minimize the length of the accessible route to the platform. *VRIOGS 002.1 Railway Station Design Standard and Guidelines.* See examples below.

- **OTHER HAZARDS**

Hazards can vary across Stations. Key hazards are identified below.

Narrow Platforms

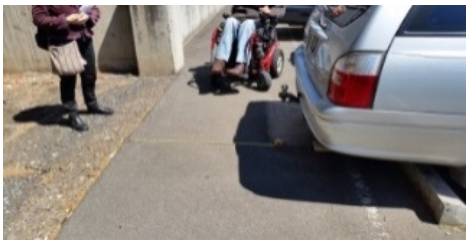
See video of a narrow platform at North Richmond Railway Station and the difficulties it causes for a person in a wheelchair (link below).

https://www.dropbox.com/sh/c4n1396z1uyhqaz/AAAnASQZ4RF11EPP-HqX6u33a?dl=0

Narrow Pathway to Train Station

At Collingwood Station cars are able to park over the designated areas and overlap and obstruct the pathway (see picture below).

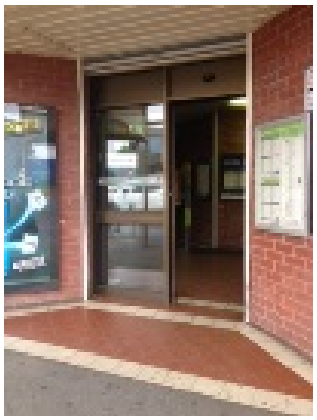
]



At Collingwood PTV car park a vehicle is parked in an undesignated spot obstructing pedestrian pathway (see picture below). A bollard could be put in place to stop vehicle from parking there and ensure better access.

Doorway Width

At Clifton Hill Station the doorway is too narrow (see picture below). It would be a relatively simple process to widen the doorway for easy access.



Steep Access Ramps

This very long steep ramp at North Richmond (picture below) is extremely difficult for a person with a disability to navigate safely. Other train stations with similar steep ramps are Collingwood, Clifton Hill, Burnley, Victoria Park and Rushall. .

Pathway Barriers

The black pole at Rushall and West Richmond Stations (see pictures below) is a hazard for people with vision impairment. It is situated right in the middle of the walkway, an easy obstacle to bump into. There is an option of putting a yellow or bright coloured strip on pole at eye level or to paint the entire pole.

Rushall Station

West Richmond Station

These barriers (see picture below) deter cyclists from riding through them but are a significant hazard for people with vision loss, people in wheelchair or scooters, and those with prams.

Blue or Worn TGSI

Absent TGSI (that are meant to indicate a continuous pathway), or Blue TGSI which has a low colour contrast (especially when asphalt is wet) makes it difficult for people with vision loss to see. The DAC advises changes to yellow or terracotta (a high contrast colour). This occurs at a number of stations (Richmond in picture below).

Poor audio/Lack of Announcements

It is difficult to hear the audio announcements if passengers are at the far end of a platform.

APPENDIX 3

Appraisal Data

Please see separate document – Appraisal Data

APPENDIX 4

Case Study

Outline below are details of a resident's experience at Collingwood Station. Noted first, is a letter from the resident, and second, some follow-up information provided on Bily's behalf (Bily has ABI and is an Ambassador for the Sumner Foundation. He enjoys independent living arrangements.

To whom it may concern,

Thank you for taking the time to listen to my feedback. I love living in the Yarra district. I hope the council continues to work towards the goal of creating a safe and accessible place to live for people with a disability.

Around 2014, I had the unfortunate experience of being hit by a train at Collingwood Station.

There is virtually no room to turn my wheelchair because of the narrow platform design at Victoria Park, Collingwood Station and North Richmond – one follows after the other making my options very limited.

On the day I had the accident, the train pulled up at Collingwood Station and I couldn't get out of the way and was hit with the full force of the train. The impact was so powerful; I broke my leg and suffered terrible pain.

Immediately following the train accident, I took myself to hospital. The doctors put my leg in a cast and admitted me for the night.

Since then I have not had the courage to use the station because the narrow ending making it unsafe to maneuver a large wheelchair.

I cannot use a taxi as a mode of transport because I now suffer from panic attacks in restricted areas.

My only option is to use trams but that option has its limitations and makes it difficult for me to get where I need go. Until the platforms are wider at the train stations in question, I am afraid I can't use the system like most other people do.

I hope you can assist me in some way; I want to be independent and keep my life moving forward.

Kind Regards,

Bily.

Follow up information on the incident confirmed the following:

- Bily always used the access boarding point as there is no other way on.
- The train driver knew Bily was hit by the train.
- Bily broke his right ankle.
- He doesn't think it was reported to Metro.
- Bily can't use taxi's so he took himself to St Vincent's hospital.
- Bily isn't able to give an exact date except for it being 2014.

APPENDIX 5

References

- Victorian Rail Industry Operations Group Standards. VRIOGS 002.1. Railway Station Design Standard and guidelines, Revision A 2011