PUBLIC TRANSPORT ADVOCACY PLAN
ADVOCATING FOR A BETTER PUBLIC TRANSPORT NETWORK AND SERVICE

GTAConsultants
IN CONJUNCTION WITH

City of
GLEN EIRA

GLEN EIRA
CITY COUNCIL

Data sourced from Glen Eira City Council, Department of Transport and PTV. Research references are included in the endnotes.

Title of the document and cover image were updated in September 2019.

EXECUTIVE SUMMARY

Glen Eira's residents mostly commute to workplaces outside the municipality, and most, 66 per cent, commute to work by car. Council's *Integrated Transport Strategy* has set the goal to 'strive for a 50:50 mode share of car and non-car trips by 2031'. With very few opportunities to significantly increase road capacity for private vehicles, this goal aims to provide alternate transport options to help relieve congestion and improve wellbeing.

Glen Eira City Council has engaged GTA Consultants to investigate and develop a rationale for what improvements it should be advocating for over the next four years.

The State Government of Victoria's responsibilities include the provision of public transport, so Council will be advocating to the State Government for these network improvements in Glen Eira.

To assist in achieving this goal of 50:50 mode share, this report provides a short list of infrastructure and services improvements that can be reasonably achieved on the public transport network to make it more inclusive and reliable.

One major part of an inclusive and reliable public transport network is one that has frequent services, so people only have a short wait to board, or interchange, between services. Residents who have access to high quality and frequent public transport services are less likely to drive compared to the residents that don't. Figure 1 shows the current frequency and catchments by stop for Glen Eira. Higher frequency catchments are in green and lower frequency catchments are in yellow and orange. As people are more willing to walk further for a high frequency service, these catchments are larger than the catchment for low frequency stops.

The map shows that Glen Eira is a tale of two cities. The northern parts of the municipality have relatively good access to the public transport network and the central north-south spine along the Frankston line also providing good public transport access. However, the southern parts of the municipality are not nearly as well served.
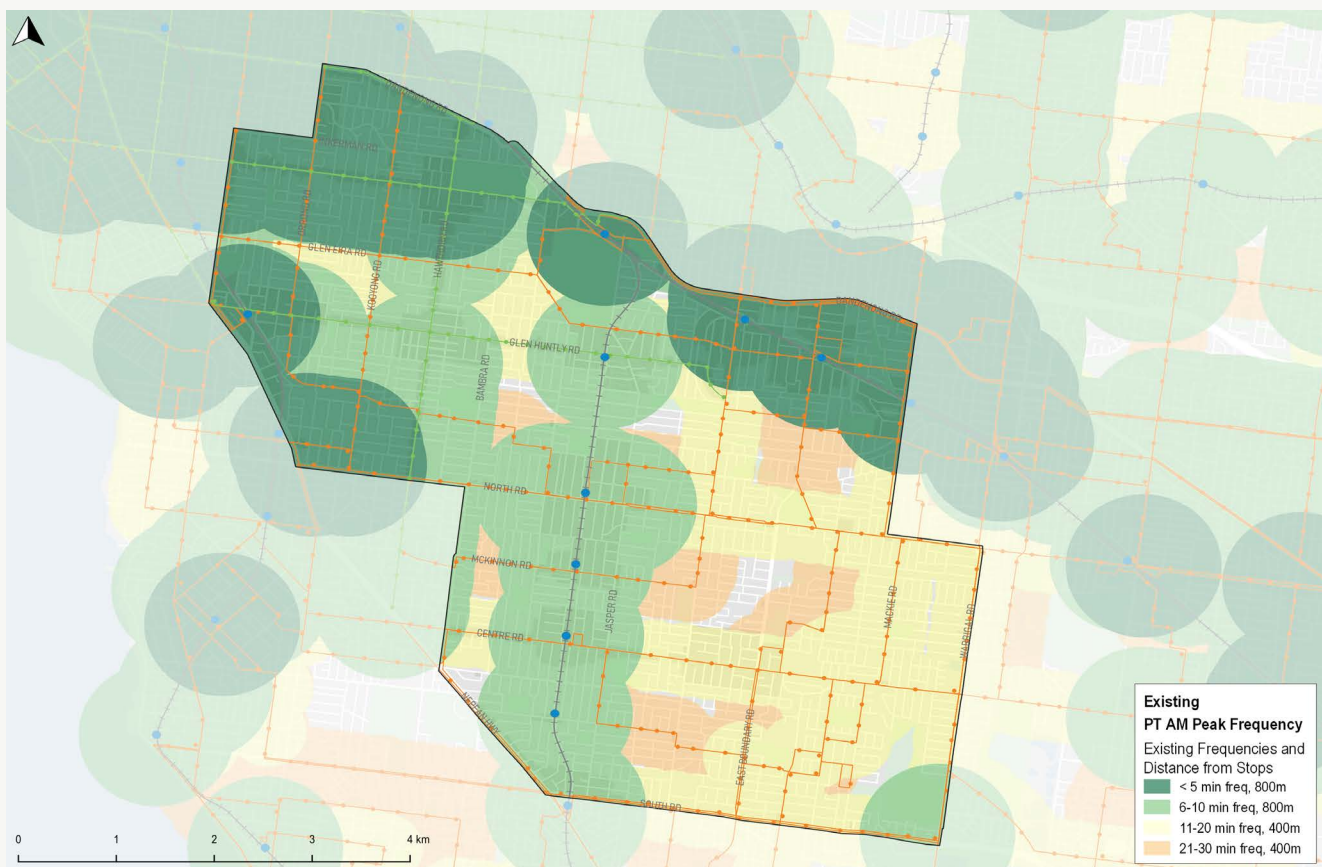
Figure 1: Current Frequency and Catchment Map for Glen Eira public transport stops

Figure 2 shows patronage at public transport stops across the municipality. In Glen Eira, the highest usage of public transport (shown in Figure 2) is also where it is the most frequent (shown in Figure 1).

This report advocates for frequency improvements to increase public transport usages as well as other initiatives grouped into four categories of Safety, Connectivity, Stations and Infrastructure and Network Efficiency.

A total of 16 initiatives are outlined for advocacy as follows:

Safety

> Level crossing removals – advocating for a quality solution to the final two level crossings.

> On-board vehicle safety – including CCTV, help point intercoms, PSOs.

> Better lighting around stops and stations.

> Journey testing for people with a disability.

> Crossing to and from stops.

Connectivity

> Starting premium bus service for Bentleigh East.

> Higher frequency public transport services.

> Increased span of hours for bus services.

> Caulfield to Rowville light rail.

Stations and Infrastructure

> Rebuild Caulfield railway station and improve connectivity.

> More bike parking at stations.

> Real-time display information at all train stations and key tram/bus stops.

> Level access tram stops and low floor trams

Network Efficiency and Behaviour Change

> Encourage workplaces to build/locate near railway stations.

> Ensure station parking is used by transport patrons only.

> Encourage walking and cycling to stations.
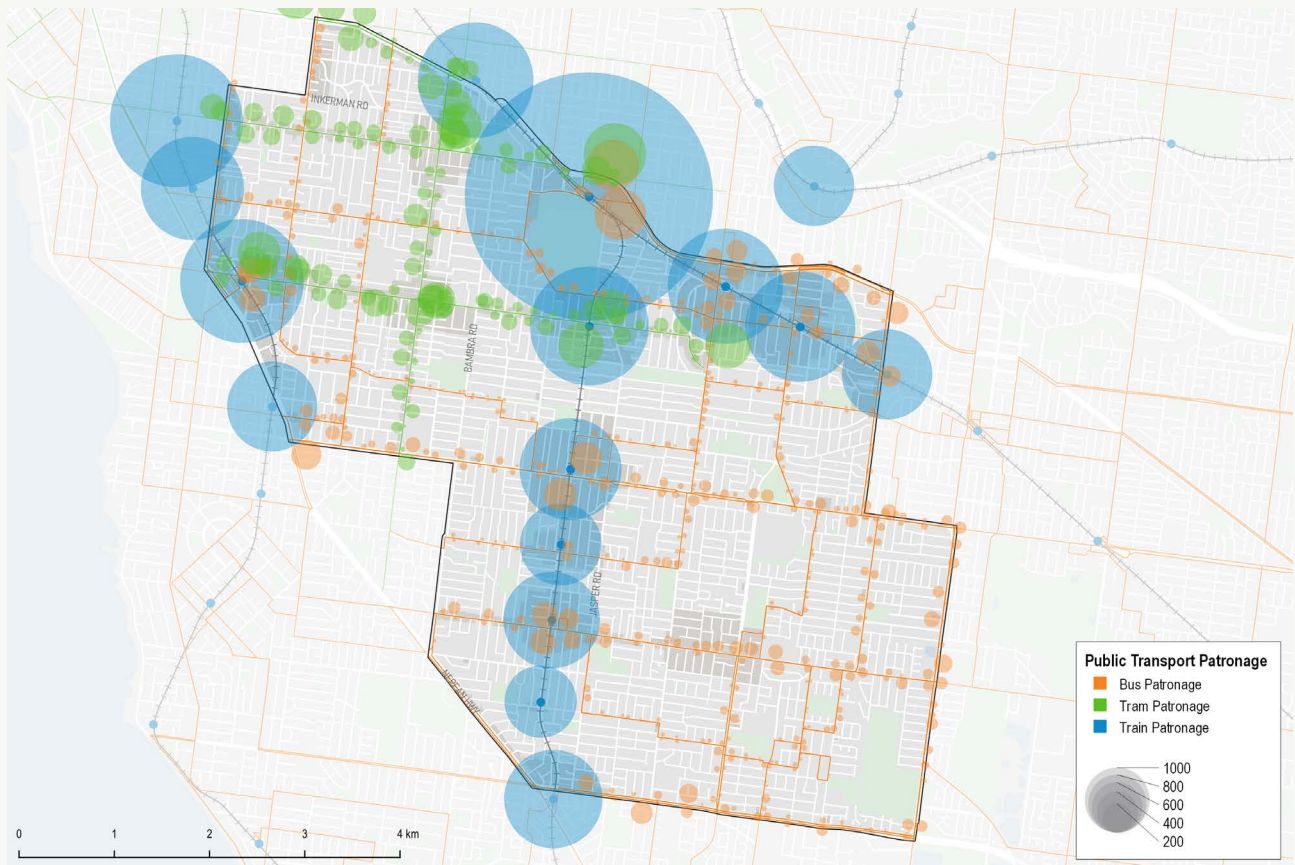
Figure 2: Current Average Weekday Public Transport Patronage by stop

Legend:

Public Transport Patronage
- Bus Patronage
- Tram Patronage
- Train Patronage

1000
800
600
400
200

Map labels: INKERMAN RD, BAMBRA RD, JASPER RD

Scale: 0 — 1 — 2 — 3 — 4 km

EXECUTIVE SUMMARY

This map shows the location of the initiatives detailed in this plan

Figure 3: Advocacy Initiatives

Public Transport Initiatives

- Level Crossing Removals
- Premium Bus Service Route
- Premium Bus Service Stops
- Higher Frequency PT
- Increased Bus Hours
- Caulfield to Rowville Light Rail
- Rebuilt Caulfield Station
- More Bike Parking at Stations
- Low Floor Trams

Key Destinations
- Community Facilities
- Arts & Culture
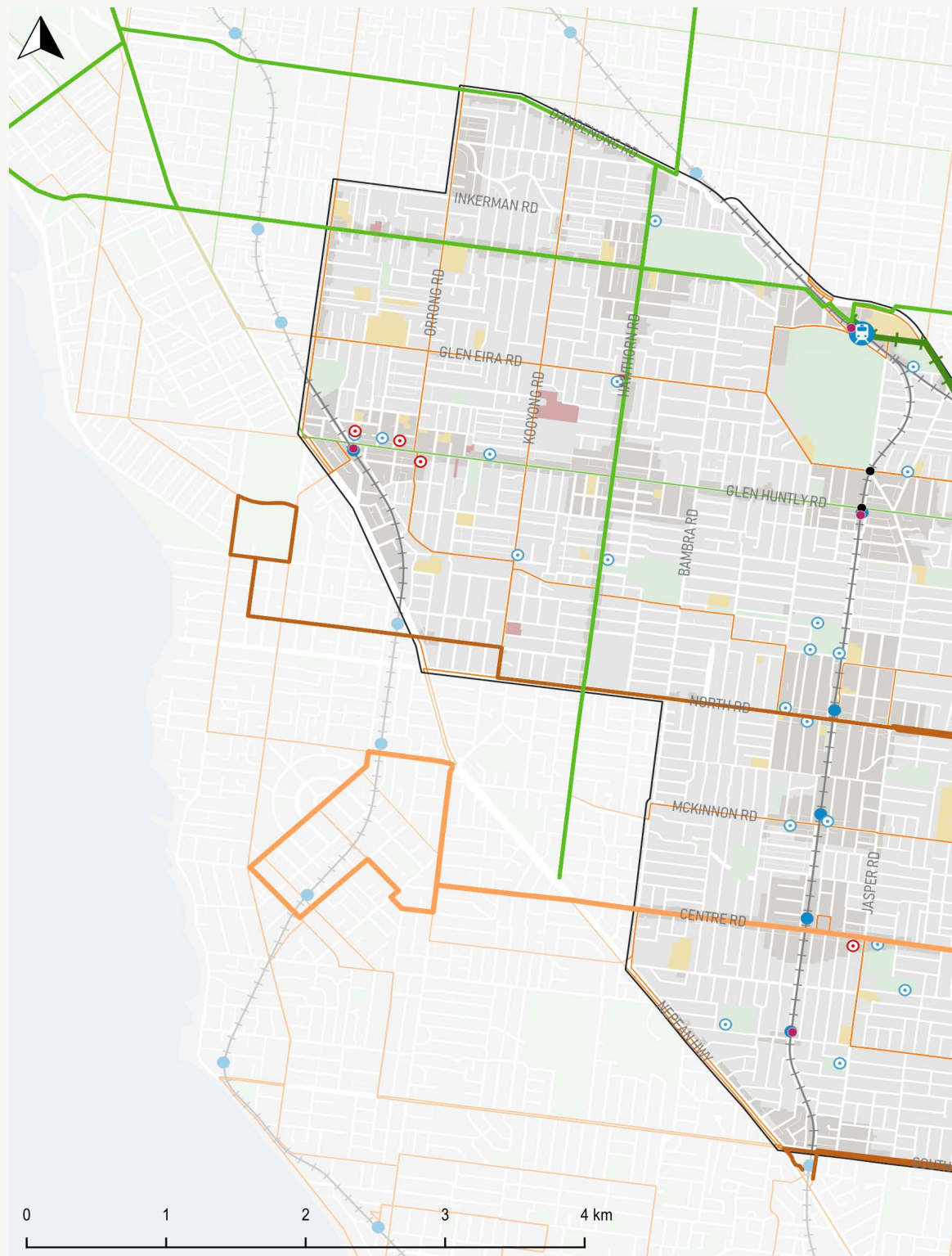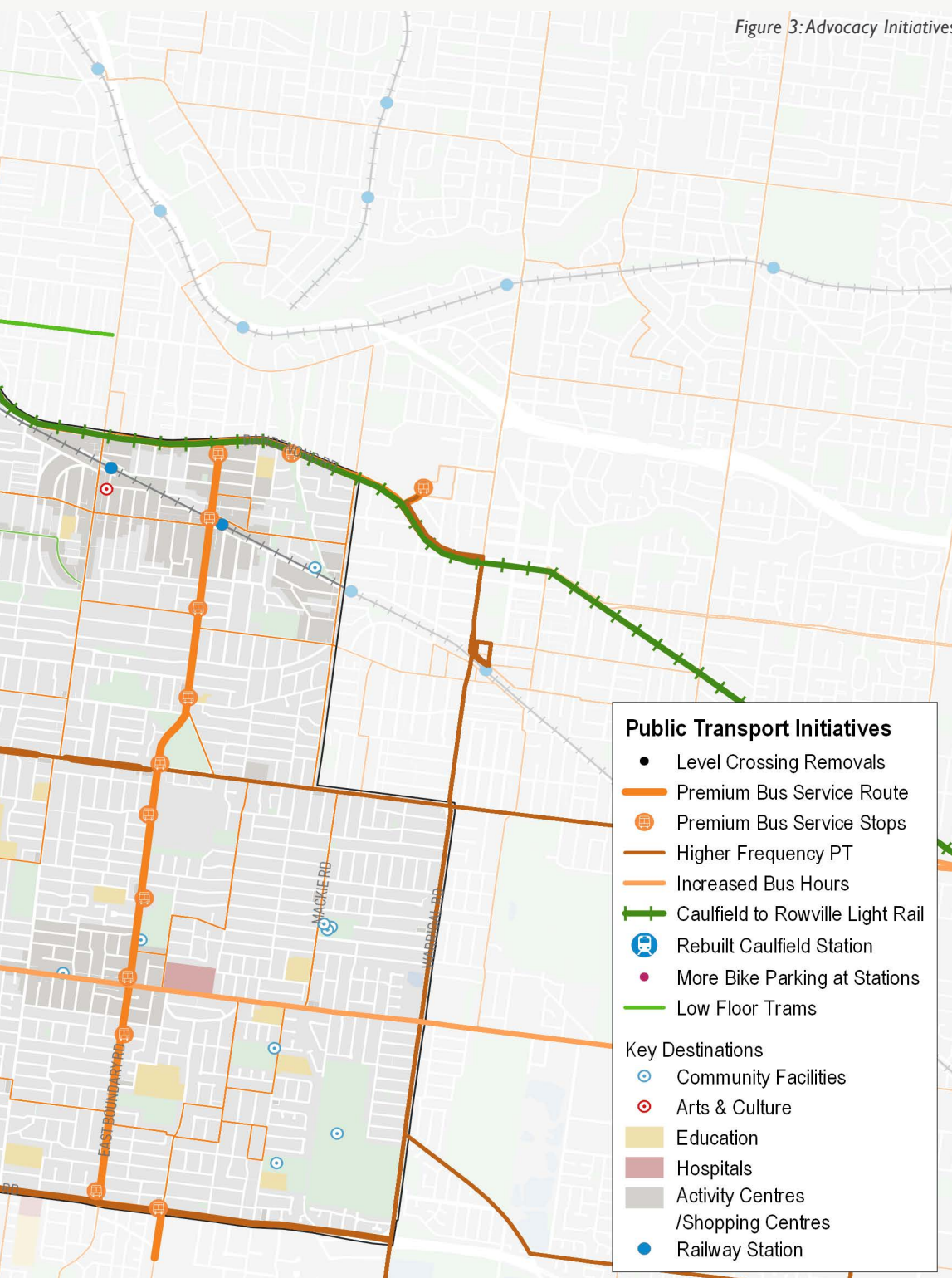- Education
- Hospitals
- Activity Centres /Shopping Centres
- Railway Station

INTRODUCTION

PURPOSE

This report provides the council and community with the priority public transport initiatives that should be advocated for, or delivered, to increase public transport usage within the next four years. It provides data and research to support the value and need of the selected initiatives.

BACKGROUND

Council's *Integrated Transport Strategy 2018-2031* provides the strategic direction for this report. The *Integrated Transport Strategy* reflects Council's plans and policies and the connections to relevant State Government documents.

Community consultation undertaken between 2016 and 2018 formed the basis for the *Integrated Transport Strategy*. Many of the initiatives in this report are in response to the concerns of the community.

KEY ROUTES

> Dandenong Road

> Nepean Highway

> Balaclava Road

> Hawthorn Road

> North Road

> East Boundary Road

> Murrumbeena Road

> South Road

Figure 4: ITS Express Routes

VISION AND OBJECTIVES

The *Integrated Transport Strategy* strives for a 50:50 mode share of car and non-car trips by 2031. Based on Australian Bureau of Statistics (ABS) data from 2016, non-car mode share is currently 34 per cent of trips from the City of Glen Eira.

To achieve this aim, the use of non-car alternatives will need to increase where appropriate (walking, cycling, public transport and working from home) by making these options as safe, convenient, fast, reliable and attractive as possible. This report includes initiatives that support a public transport network that is safer, more reliable and convenient, faster and more attractive than today's system and provides the additional capacity to cater for a growing number of residents.

A key part of the *Integrated Transport Strategy* relevant to this Report is the network of express public transport routes, a map of which is shown in Figure 4.

RECENT TRANSPORT IMPROVEMENTS

Council has previously advocated for public transport improvements in Glen Eira, which has seen the following projects delivered:

> Level crossing removal on the Dandenong and Frankston lines.
> New stations at Bentleigh, Ormond, McKinnon, Carnegie, Murrumbeena and Hughesdale.
> Bike parking at stations.
> Extension of the bus route 703 to Middle Brighton on Sundays.
> Changes to bus routes 822 and 823.

The State Government has recently announced the introduction of the new bus route 627, running between Chadstone and Moorabbin, seven days-a-week. The alignment is shown in Figure 5, assuming a 20 minute frequency in the peaks.
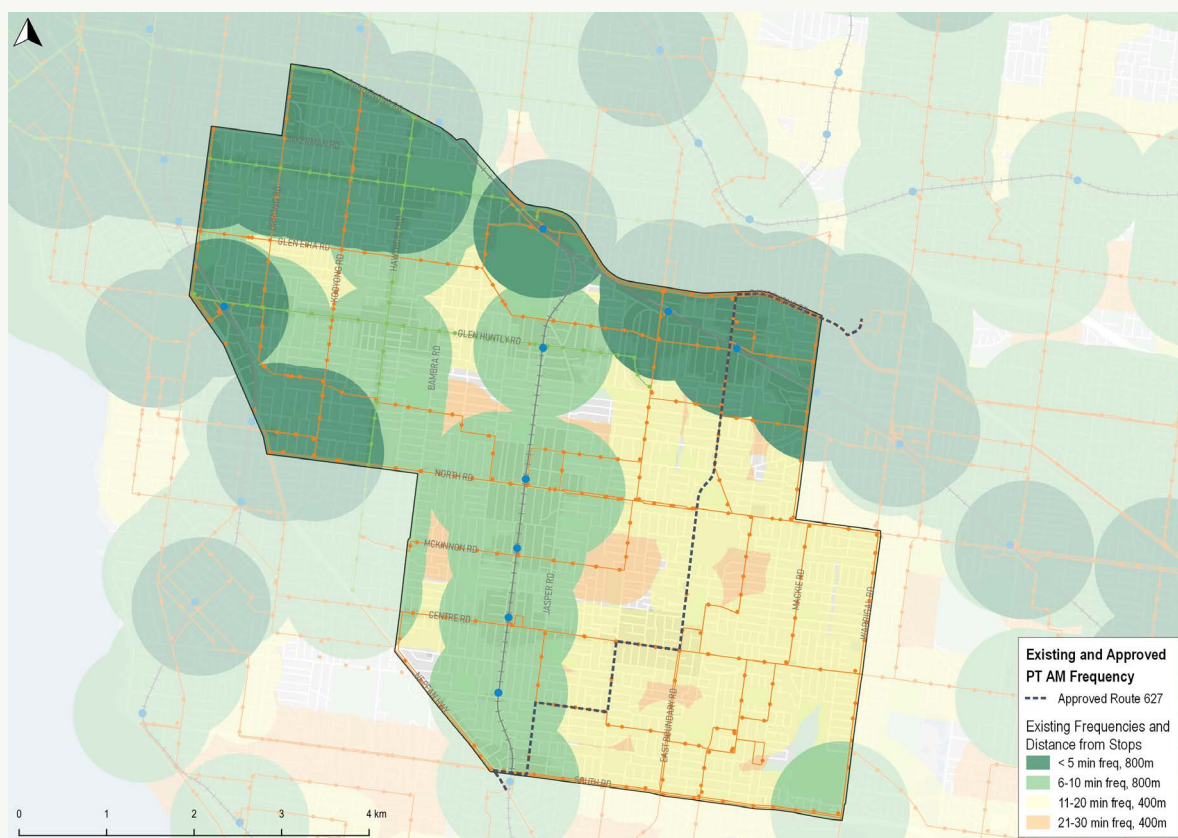

Figure 5: Current Frequency and Catchment Map for Glen Eira public transport stops, including the new approved bus routes 627

TRAVEL AND THE ROAD AHEAD

TRAVEL

WORKPLACE LOCATIONS OF GLEN EIRA RESIDENTS

Data from the ABS Census 2016, shows that while many residents of Glen Eira work in Glen Eira (22 per cent*), the majority work outside the municipality, including to the following key work travel destinations:

> the CBD of Melbourne – 14 per cent;
> along St Kilda Road – seven per cent;
> east along the North Road corridor – five per cent;
> Docklands – four per cent; and
> the Moorabbin/Cheltenham industrial and commercial businesses – three per cent.

This provides the evidence base to some of the short term advocacy initiatives listed in this report.

PUBLIC TRANSPORT USAGE IN GLEN EIRA

Public transport usage data provided by the Department of Transport shows strong demand at railway stations, for both the stations themselves and the on-road public transport connecting to them. These are represented by the larger circles in Figure 7.

The stops on the tram network (shown in green) have relatively higher usage than bus stops (shown in orange). Given that currently, train stations and tram stops have some of the high frequency services, this further demonstrates that high frequency service provision is linked to high usage (and this is backed up by international research[1]).

(* 22% of Glen Eira's working population)

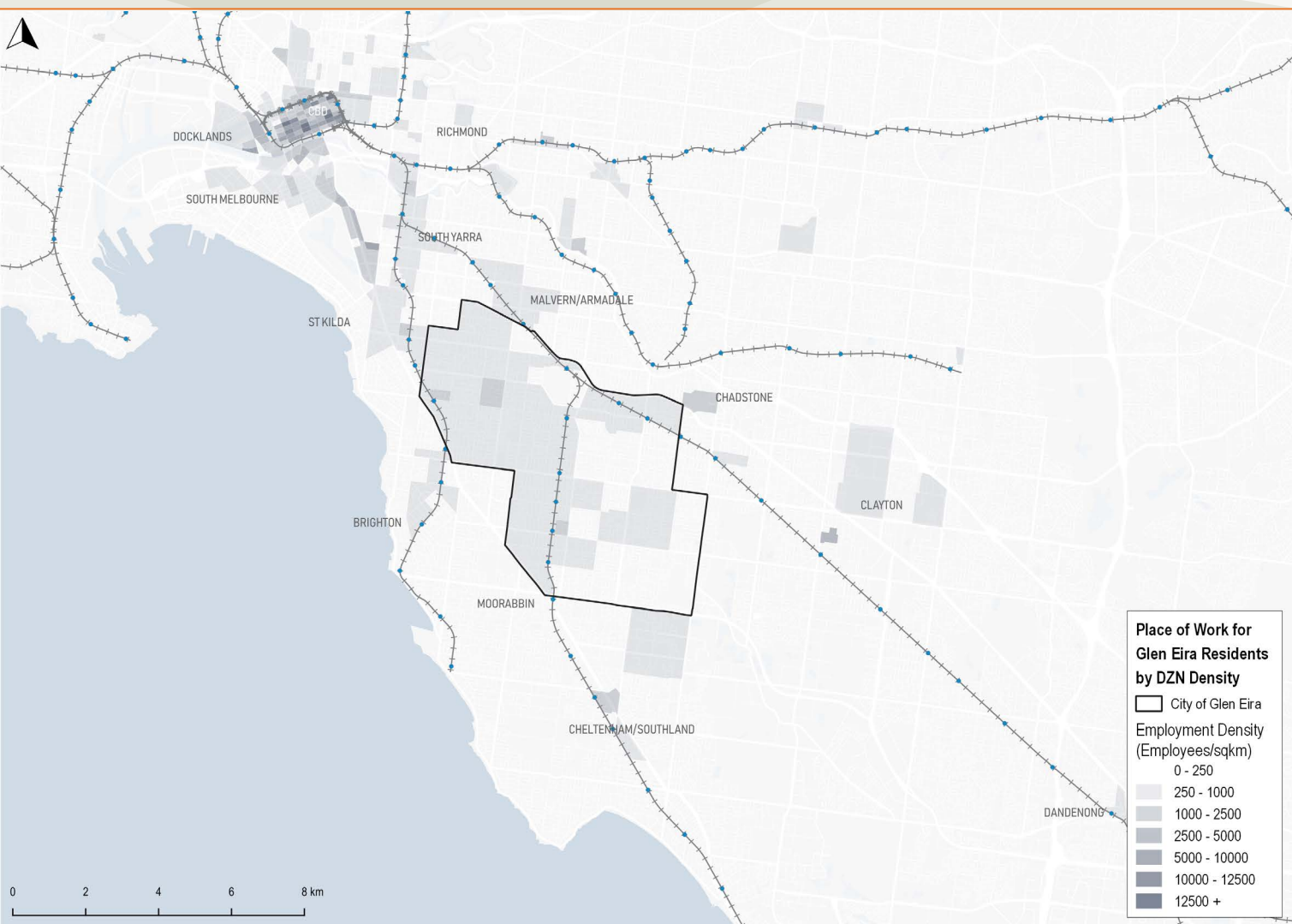Figure 6: Place of Work for Glen Eira Residents by Density (2016)

Place of Work for Glen Eira Residents by DZN Density

City of Glen Eira

Employment Density
(Employees/sqkm)
- 0 - 250
- 250 - 1000
- 1000 - 2500
- 2500 - 5000
- 5000 - 10000
- 10000 - 12500
- 12500 +

TRAVEL

PUBLIC TRANSPORT STOPS AND THEIR CATCHMENTS

For people to use public transport, they must be near, or have access to, a stop. One major part of an inclusive and reliable public transport network is one that has frequent services serving those stops, often called turn-up-and-go, so people only have a short wait to board or interchange between services. Turn-up-and-go services also mean people don't have to pre-plan when they arrive at stops or keep a timetable with them.

Figure 8 shows the current frequency by stop map for Glen Eira, incorporating the walking catchment for each stop. Higher frequency catchments are in green and lower frequency catchments are in yellow and orange. As people are more willing to walk further for a high frequency service, these catchments are larger than for the low frequency stops.

The map shows that the northern parts of the municipality have relatively good access to the public transport network. The central north-south spine along the Frankston line also provides good public transport access. However, the south eastern parts of the municipality are not nearly as well served. This same area in the south east also has lower level of usage at the stops (as shown in the maps on Figure 7).
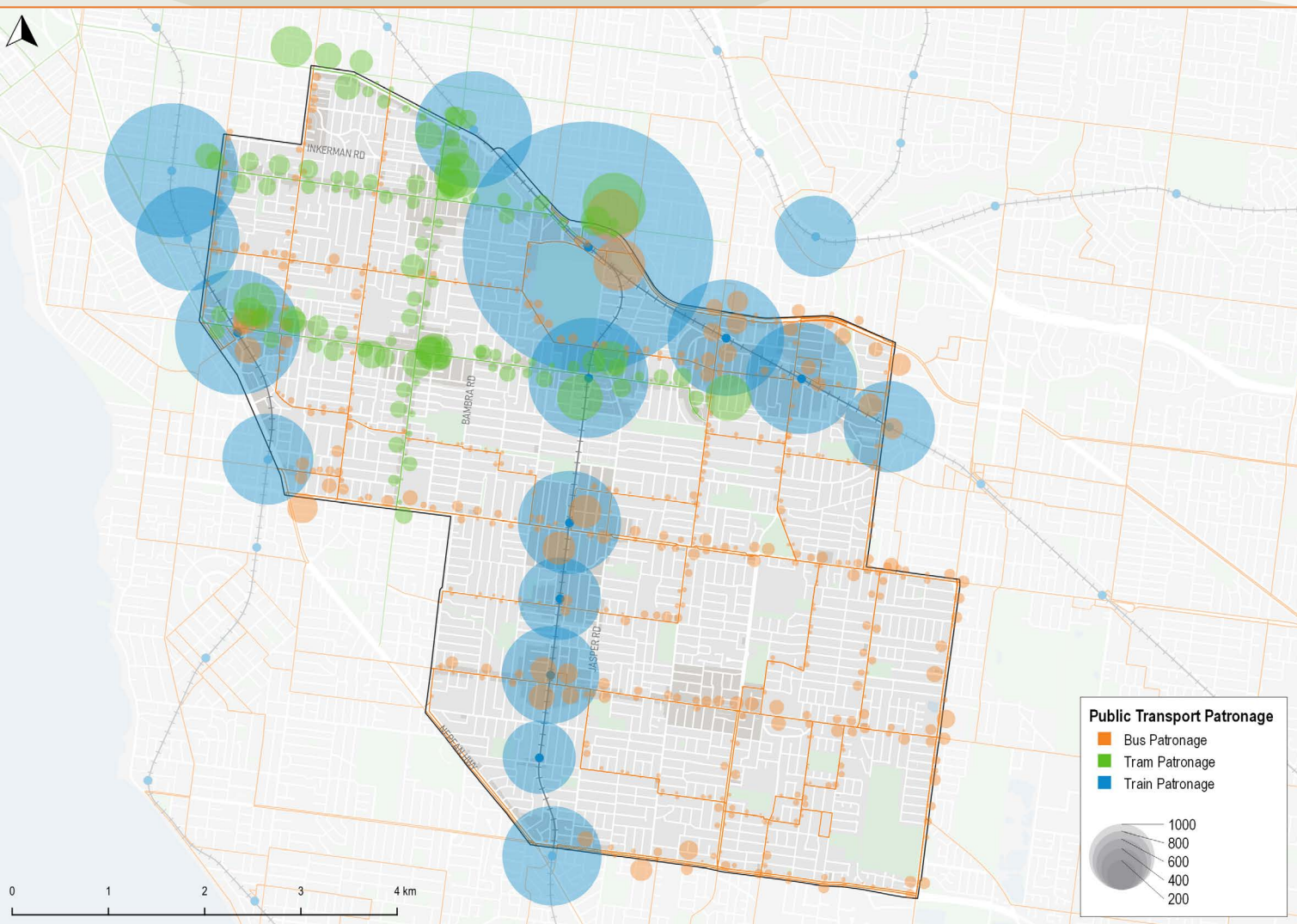
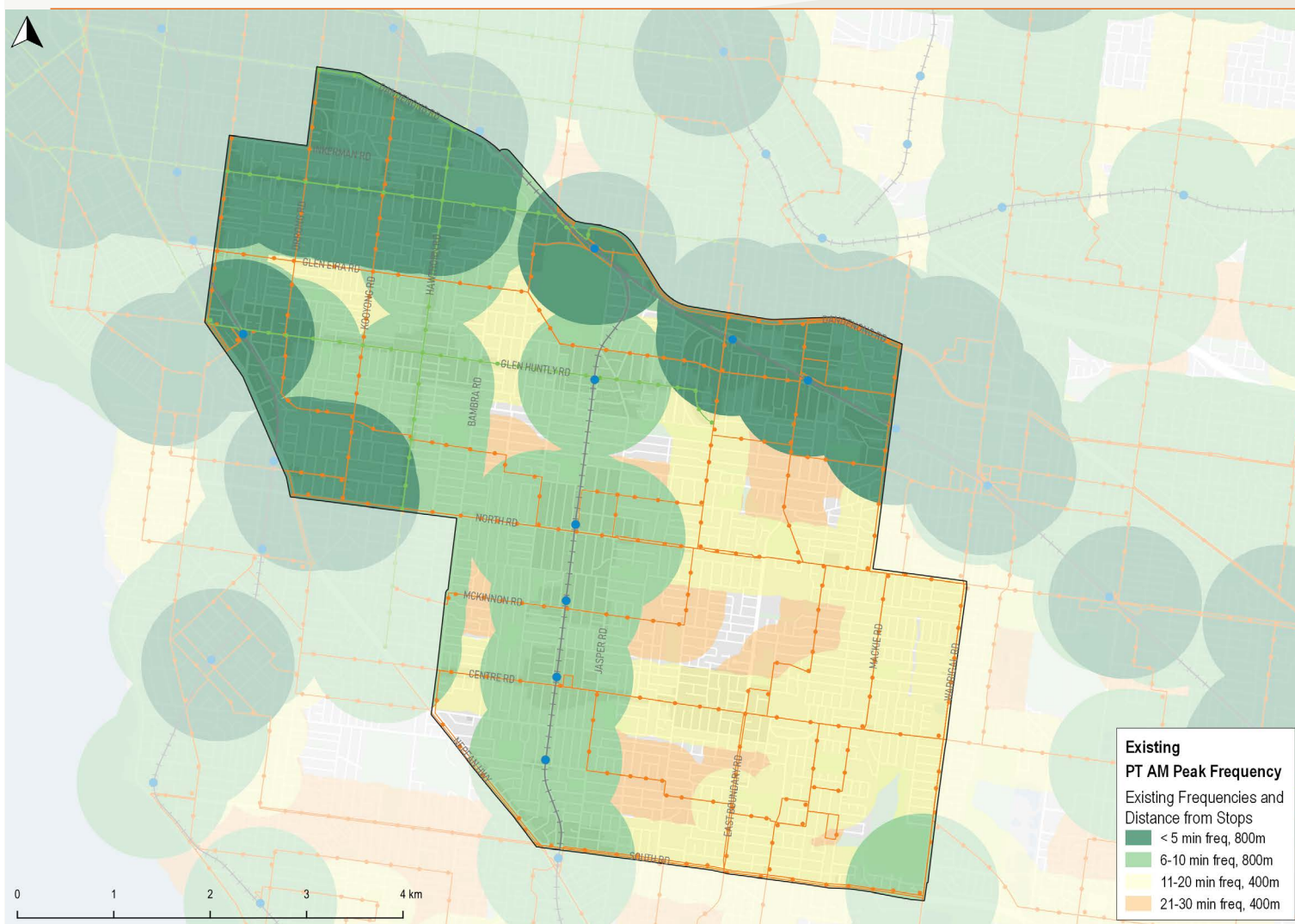Figure 7: Current Average Weekday Public Transport Patronage by stop

TRAVEL

Figure 8: Current frequency and catchment map for Glen Eira public transport stops

SERVICE DATA

While there are very few opportunities to significantly increase road capacity for private vehicles, there are opportunities on the train and tram networks. Current projects such as the Melbourne Metro rail tunnel and associated works provide additional capacity on all train lines that service Glen Eira[10]. This is required because evidence of crowding and congestion on trains and trams services in Glen Eira is evident. The Dandenong and Frankston lines have more than 10 per cent of their services overcrowded in the AM peak. Trams on the

St Kilda Road corridor that serve Glen Eira also have been observed to be congested during peak periods[11]. This discourages use by Glen Eira residents and workers and limits the opportunities for growth.

Figure 8 above uses a 400m or 800m buffer from the stop, to illustrate the catchment. The reality is that the road network, footpaths and road crossing points can all influence how much time and distance is required to access a stop, or how far passengers are willing to walk. However, this catchment approach is a common assessment, and reflects a reasonable distance and travel time that most people can walk to a stop.
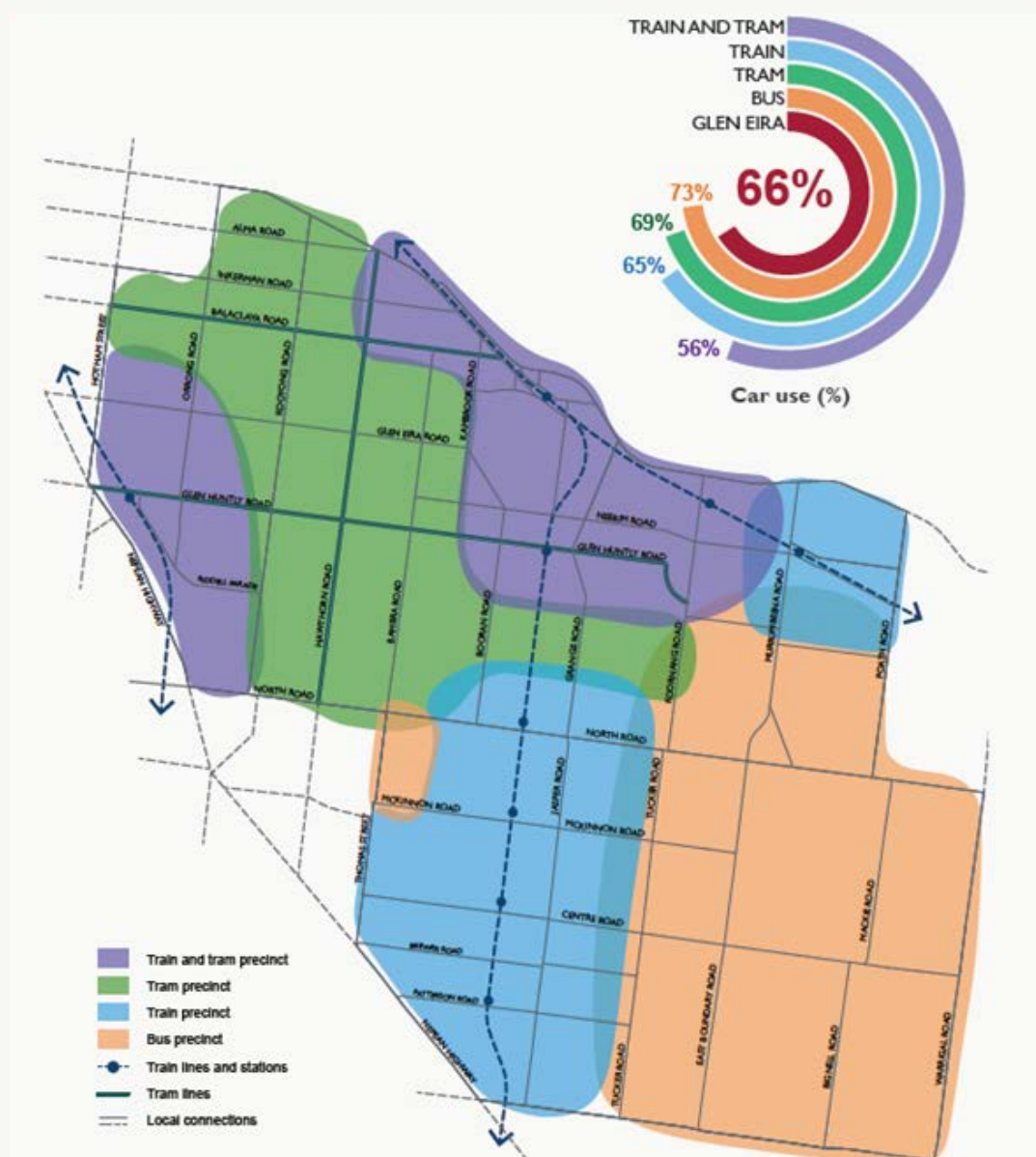
Figure 9: Glen Eira transport precincts and their respective car usage

The *Integrated Transport Strategy* identified four transport precincts to show the different modes of travel easily accessible to the residents in those areas. This is shown in Figure 9.

Precincts with multiple options (and higher frequency) of public transport services were shown to have a lower car use for journey to work trips.

Part of the difference in car usage is explained by the parts of Melbourne people can access within an hour's travel time by public transport. A series of four maps on Pages 20 and 21 look at the reach each of these transport precincts, by picking a point within the precinct and the service provision in the AM peak.

TRANSPORT PRECINCTS AND THEIR REACH

Figure 10: Travel time reach from the Train & Tram Precinct

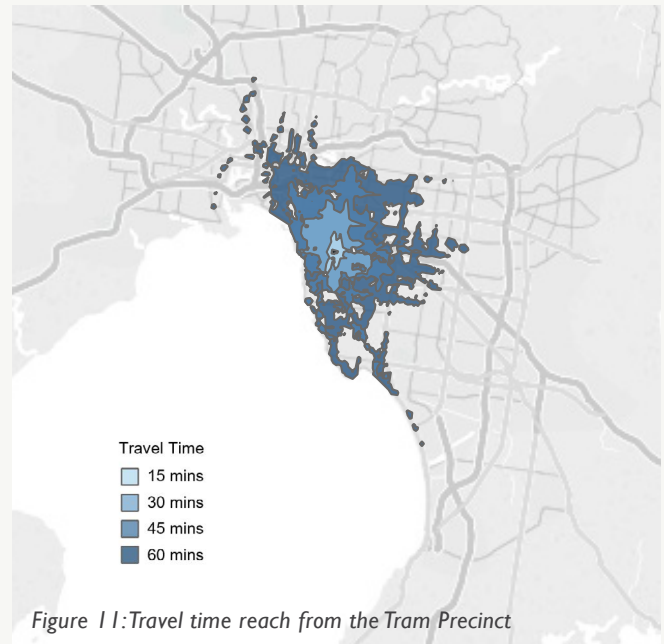*Figure 11: Travel time reach from the Tram Precinct*
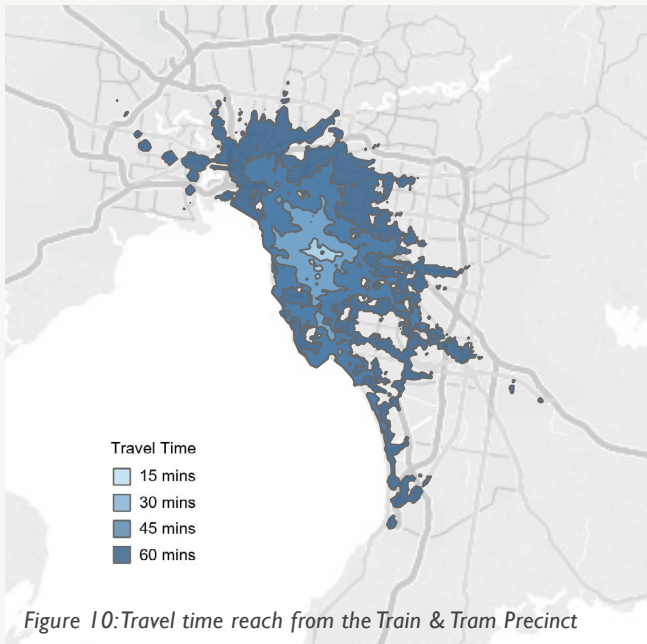
PUBLIC TRANSPORT REACH: TRAIN AND TRAM PRECINCT

Figure 10 shows the reach from the Train and Tram Precinct, using a selected point near Glen Huntly Station and the route 67 tram.

This precinct provides easy access to all of Glen Eira, and reasonable travel times to the CBD, inner eastern suburbs and along various train lines.

This is reflected in the ABS journey to work data where more than 25 per cent of residents take the train to work. This precinct has the lowest cars per household at 1.3.

PUBLIC TRANSPORT REACH: TRAM PRECINCT

Figure 11 shows the reach from the Tram Precinct, using a selected point near Caulfield Hospital. This precinct provides easy access to most of Glen Eira, but does reach as far as the train and tram precinct.

This may reflect why in the journey to work location map of residents (Figure 6), this area was relatively high compared to other areas of Glen Eira. ABS journey to work data shows this precinct has the highest tram usages of all four precincts at 3.7 per cent with around a further 15 per cent using the train as the main method of travel. This precinct has 1.5 cars per household.
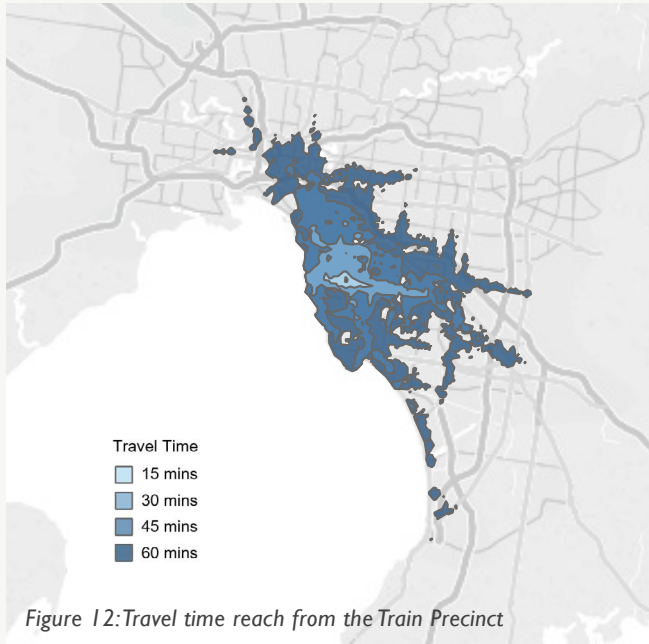
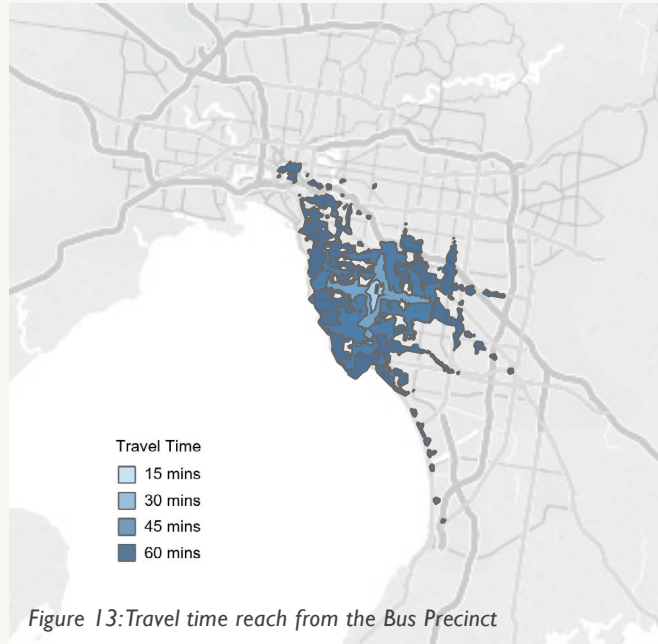*Figure 12: Travel time reach from the Train Precinct*

Figure 13: Travel time reach from the Bus Precinct

PUBLIC TRANSPORT REACH: TRAIN PRECINCT

Figure 12 shows the reach from the Train Precinct using a selected point west of Bentleigh railway station and within 800 metres of the station.

This precinct has very good access across Glen Eira, however has a slightly smaller reach than the train and tram precinct. This is reflected in the ABS journey to work data where more than 20% of residents take the train to work. This precinct has 1.6 cars per household.

PUBLIC TRANSPORT REACH: BUS PRECINCT

Figure 13 shows the reach from the Bus Precinct, using a selected point near GESAC and the SmartBus route 703 and bus route 822.

The reach of this precinct is the smallest, with some gaps in Glen Eira and only basic coverage in the CBD. This reduces the accessibility for residents to access jobs and leisure facilities and for non-residents to access employment opportunities in this part of Glen Eira by public transport. Therefore, it is no surprise that it has the highest journey to work car use of all the precincts, and around half the public transport journey to work usage compared to the train and tram precinct. This precinct has the highest cars per household at 1.7.

FUTURE LAND USE CHANGES

Glen Eira's population is forecast to increase by around 30,260 between 2016-2031. Most neighbouring councils are forecast to grow by similar numbers over the same period. This will place increased pressure on the transport networks, especially at peak time.

Plan Melbourne is set to establish National Employment and Innovation Clusters (NEICs) at Monash and Dandenong. These clusters would be a hub for employment, and support the *Plan Melbourne* objective of a 20-minute city. This may reduce the percentage of people from the south eastern growth corridor of Melbourne travelling through Glen Eira to access employment opportunities in central and inner Melbourne.

The Monash and Dandenong NEIC already form part of the main employment locations for residents of Glen Eira and may increase. The public transport network connecting to them from Glen Eira will need to increase in response to the growth in employment.

Figure 14: Photo outside Elsternwick railway station

Figure 15: Photo outside Caulfield railway station including a pedestrian crossing

All public transport modes need to be close together to allow for the easy interchange between services. Figure 16 shows an example of the wayfinding in Glen Eira, and also highlights that some of the stops are further apart than ideal.
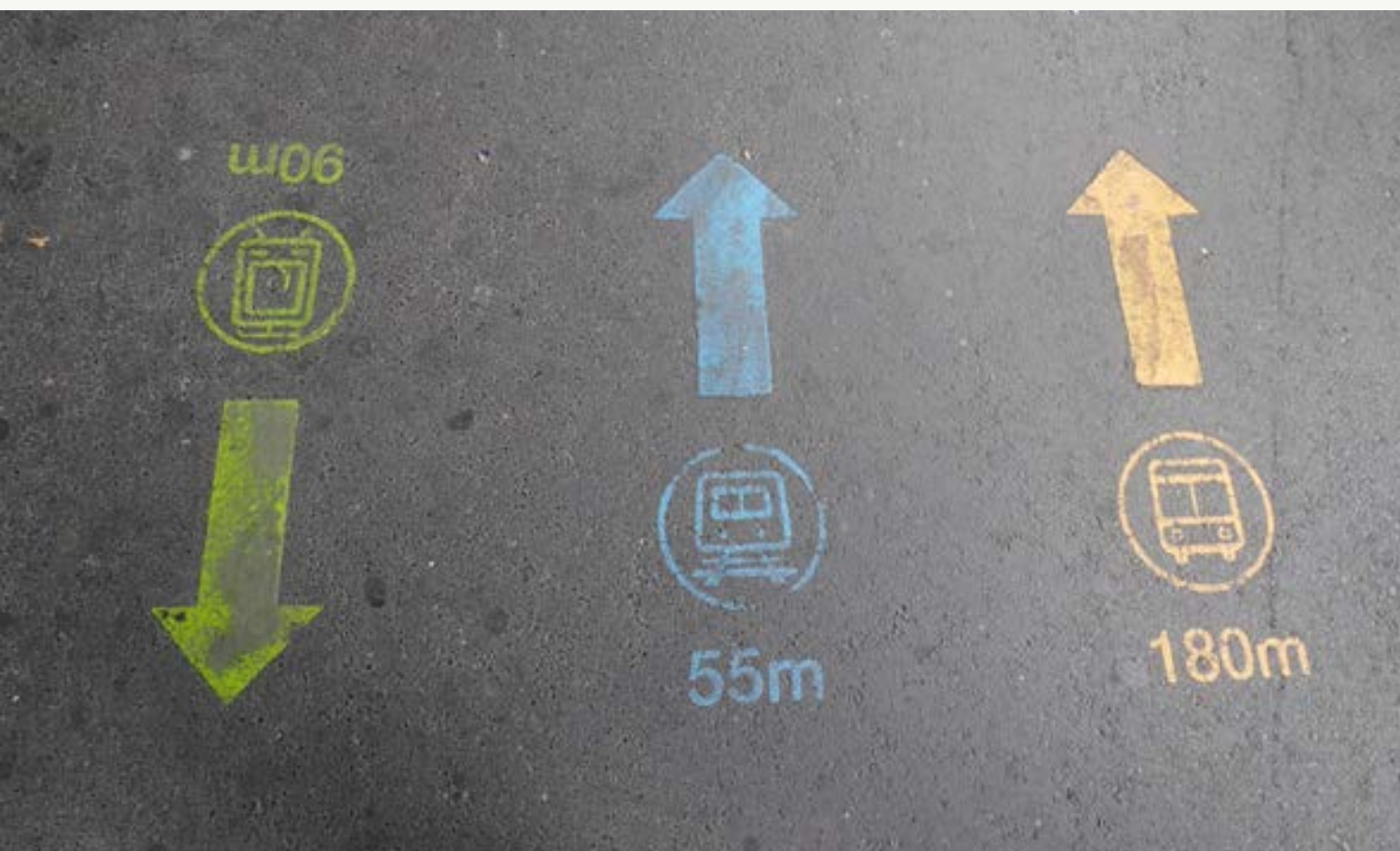
Figure 16: Photo of directional signage on the footpath outside Caulfield railway station

ADVOCACY INITIATIVES

INTRODUCTION

This section of the report covers what initiatives we are proposing and why they should be advocated for. We have grouped these initiatives into four categories of Safety, Connectivity, Stations and Infrastructure and Network Efficiency and Behaviour Change.

A total of 16 initiatives are listed. Some of the initiatives could fit in multiple categories.

Figure 17: Photo of level crossing outside Glen Huntly railway station

SAFETY

LEVEL CROSSING REMOVALS

Level crossing removals have proven to be very successful in reducing the conflict between transport modes, cars, freight, pedestrians, bikes, buses and trains. Because they remove these conflicts, they have been grouped into a safety project, however they could sit in any of the categories. The removal of level crossings also brings together local shopping precincts and makes them more inviting places for the community by reducing local congestion. The community consultation for the *Integrated Transport Strategy* raised level crossings as a priority for residents.

The State Government has committed to removing the final two level crossings in Glen Eira, at Glen Huntly and Neerim Roads, Glen Huntly by 2025. This project would also involve building a new Glen Huntly railway station.

Council should advocate for the project, and to ensure that the new station is supporting other initiatives of the walking, cycling and public transport strategies including a seamless connection between the tram stop and the station, bike parking facilities, lighting, and the cycle corridor parallel to the railway line.

ON-BOARD PUBLIC TRANSPORT VEHICLE SAFETY

To increase the community's willingness to use public transport, they must feel safe – if their perception is of an unsafe system, they may be more reluctant to use it. Feedback indicates some sections of the community feel unsafe on-board public transport vehicles – attendees at recent community forums have raised that they are reluctant to take the bus. Some initiatives could include increased staff and security patrols, CCTV on-board vehicles, emergency intercom points. These can be incorporated into existing public transport fleet as part of a refresh or incorporated into new fleet, particularly new trams. The benefits of these initiatives are an improved experience for existing users and encouragement to make more of their trips on public transports, at any time of day.

Council should advocate on behalf of the community for these improvements to the public transport fleet.

SAFETY

BETTER LIGHTING AROUND PUBLIC TRANSPORT STOPS AND STATIONS

The community consultation identified safety, including personal safety, as one of the key themes.

Comments included:

> "Well lit station at night. Safety of passengers is paramount."

> "The gap between street lights is inconsistent, sometimes there are dark stretches of footpath."

While lighting doesn't always deter crime, bright places can attract people – which in turn can reduce crime through 'eyes on the street'. Therefore, the argument that it only improves the perception of safety is countered by – when people feel safe, they are more likely to use the space.

Those people are more likely to use the area all day, as at the moment they might be deterred by walking to, and using, public transport to return home at night, and this means they might drive for the 'from home' journey that occurs in daylight.

This initiative requires advocacy of the State Government via its agencies and their franchisees (Metro Trains) for railway stations, and a review of 'dark spots' by Council with a view for additional lighting around and on the way to all public transport stops – using the stop catchment maps as a distance from the stop as a guide, and the Crime Prevention through Environmental Design principles[2], particular those on the high frequency routes.

Figure 18: Photo of stairs and bridge over the Sandringham railway line near Elsternwick railway station

PUBLIC TRANSPORT JOURNEY TESTING WITH PEOPLE WITH A DISABILITY

The public transport network should be able to cater for people with varying levels of abilities to travel, including providing the options for travel of people with a disability. These options would allow people to take public transport to various destinations for work, shopping, educational and other trip purposes. Issues, for example footpath pavement, or non-existing crossing points from one side to the other of major roads may prevent people making an otherwise accessible trip (see figures 19 and 20).

Council should work with disability groups to identify issues impacting public transport journeys, with a view to prioritise improvements and advocacy for enhancements from the State Government.

CROSSING SAFELY TO AND FROM STOPS

When public transport stops are placed along major roads, this makes the bus route easier to understand, more direct to key destinations and faster, however there must be consideration for how people access stops on both sides of the road. This is an issue for all users, including people with a disability. Without a safe crossing point, the catchment and likely usage will be diminished as people may only be able to safely access a stop further away from their destination to safely cross the road.

Council should advocate with VicRoads for safe crossing points at all stops along the premium and high frequency public transport routes on arterial roads in the jurisdiction.

Figure 19 and 20: Photos of poor footpaths near Elsternwick railway station

CONNECTIVITY

PREMIUM BUS SERVICE FOR EAST BENTLEIGH

Alignment: A premium bus service for East Bentleigh is a key advocacy project in the Integrated Transport Strategy.

A new route between Chadstone and Murrumbeena has begun servicing the Bentleigh East community in June 2019.

Frequency and span: Given the aims of the *Integrated Transport Strategy*, we are advocating for the new route to run every 10 minutes at peak times, and every 15 to 20 minutes outside peak times. Its operating hours would be similar to other routes serving key employment centres in Melbourne: 5am to midnight Monday to Saturday, and 7am to 9pm on Sunday with consideration to shift workers start and finish times.

Priority measures: To improve the competitiveness in travel time with cars, priority measures could be considered to be incorporated into the route. These could include 'B' lights (bus jump/ priority), other traffic light priority measures, bus lanes, clearways, DDA compliant bus stops and crossing points. These measures have been found to improve the reliability of service to passengers.

The high service frequency means people are more willing to walk further to a stop[3], and allows bus stop spacing to be further apart than is traditional in Melbourne.

This route complements other network improvement initiatives listed on page 31 to allow connections along South Road to Holmesglen TAFE and Moorabbin railway station.

Council should advocate on behalf of the community for these improvements as one of the biggest changes proposed and directly supports the 50:50 mode share target by 2031.

HIGHER FREQUENCY FOR PUBLIC TRANSPORT

Bus: A high frequency of trains, trams and buses reduce passengers wait time at stops or stations and shorten the overall journey time, which means people can better spend that time. A frequency of 10 minutes or better means long-term behavioural change that comes from people not having to plan their journeys, and is more resilient to disruptions in any part of the multi-modal journey.

As part of the implementation of the *Integrated Transport Strategy*, a municipal-wide Bus Service Review will be undertaken to identify how the network could be improved.

In the short-term, we are proposing that Council advocate for the following three bus routes to have frequency increases, all existing routes on the Express Public Transport Network (we are advocating the frequency upgrades occur before priority measures are implemented to these routes):

> Route 824 from Moorabbin to Clayton increase from a 20 minute frequency to a 10 minute frequency serving Holmesglen TAFE to high frequency public transport like other tertiary educational institutions in Melbourne. Access from the Frankston line at Moorabbin railway station and the Dandenong line at Clayton railway station.

> Route 630 from Elwood to Monash University Clayton increase from a 12 to 20 minute frequency to a 10 minute day time frequency, providing connections for residents to Ormond and Gardenvale stations and access to the employment and educational opportunities around Monash University Clayton. A higher frequency is likely to increase the patronage required to support the *Integrated Transport Strategy* identified light rail linking Elsternwick to Clayton along North Road. This is shown as route 2 in Figure 22.

> Route 903 from Mentone railway station to Chadstone Shopping Centre along Warrigal Road increase to a 10 minute peak frequency. This may only require the extension south of some existing 'short' services within the existing orbit route.

Train: Most of the train frequencies are very good, with day-time services every 10 minutes on the Frankston line, however, Council should advocate for frequency increases of 20 minutes or better on Sunday morning services which are 30 minutes on the Frankston and Dandenong line and 40 minutes on the Sandringham line. Council should further advocate for increases to Saturday and Sunday evening frequencies on the Frankston and Dandenong line to be 20 minutes or better. This initiative is linked to people feeling safe using public transport at night and reducing peoples wait time at stops could reduce their anxiety.
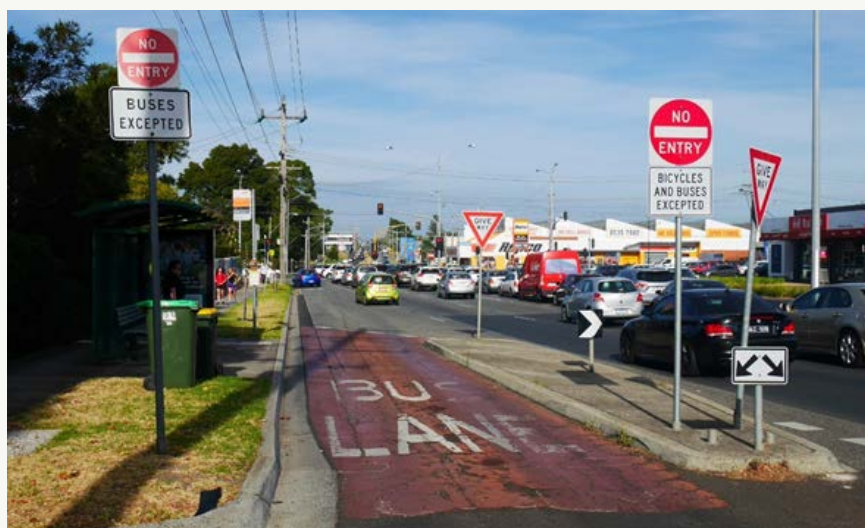

Figure 21: Photo of bus stop and lane on the North Road Service Road, Carnegie

CONNECTIVITY

INCREASED SPAN OF HOURS FOR BUS SERVICES

Many jurisdictions around Australia[4] state their premium services should operate to midnight Monday to Saturday. Melbourne's premium bus routes, SmartBus, mostly operate on the same basis, except for route 703. These premium routes serve key suburban centre and support (often casual) shiftworkers journeys and social trips that extend beyond the traditional work hours of 9am to 5pm.

Council should advocate for route 703 to operate to 12am midnight 6 days a week, as well as frequency improvements that bring it into line with the other SmartBuses in Melbourne[5].

CAULFIELD TO ROWVILLE LIGHT RAIL

The State Government is planning a light rail between Caulfield railway station and Monash University Clayton[6] to serve key destinations for workers, shoppers and students. The alignment is currently served by the bus route 900, which does suffer from overcrowding at peak times on weekdays and weekends, demonstrating it is inadequate for the areas current and future travel needs. This section would be phase one, with an extension to Rowville as phase two. The *Integrated Transport Strategy* identifies Dandenong Road as one of the Express Public Transport Routes.

Council should advocate that the new light rail:

> has a peak and daytime frequency of 10 minutes or better;

> has a direct alignment along Dandenong and Wellington Roads; and

> is in a segregated environment with priority at intersections.

Figure 22: Glen Eira light rail advocacy map

STATIONS AND INFRASTRUCTURE

REBUILD CAULFIELD RAILWAY STATION AND IMPROVE THE CONNECTIVITY

Caulfield railway station is the busiest in Glen Eira and the eighth busiest on the metropolitan rail network. It is currently experiencing overcrowding on its platforms, ramps and the subway. This will increase with the Monash University Caulfield Campus expansion, redevelopments around the station and the opening of the Melbourne Metro tunnel connecting Sunbury to Pakenham via the CBD, making it more attractive to travel by train to and from Caulfield.

Council should advocate for:

> additional entrance/exit points;

> better and closer connections to the trams and buses to the station;

> additional pedestrian subways or bridges through the station;

> additional shelter on the platforms; and

> better and additional Passenger Information Displays (PIDS) on the platforms.

MORE PARKING FOR BIKES AT RAILWAY STATIONS

Numerous participants in the community consultation from 2017 raised the need for more bike parking at railway station, to support public transport use. The comments reflected that it was part of a number of initiatives required to encourage cycling, which will be included in a Cycling Action Plan.

Residents who switch from driving to cycling to railway stations reduce vehicle congestion on the roads. We acknowledge that not everyone can or will ride to railway stations, however encouraging people to do so reduces congestion on the roads and buses connecting to stations. Bike parking including secure and easy access parking options allows both

occasional users and frequent cyclists to do so with confidence. People's willingness to access a railway station is mostly in the order of 10 minutes, so having bike parking extends the distance people are able to travel within those 10 minutes.

With many stations rebuilt with the level crossing removals incorporating additional bike facilities, Council should advocate for additional bike parking at all other stations within the municipal boundary and those that are on east west or north south corridors that are just outside the boundary that residents of Glen Eira access, such as Malvern. Council should also advocate for regular counts of bike parking at all these stations to ensure bike parking facilities are meeting growing demand.

Council to advocate with DoT with regard to station access improvements for cycling. Current provision at stations is limited and dependent on State funding, and land for delivery. VicTrack generally own the land around stations and prioritise development or car parking for land use. Council should work with State Government to remove blockages to Council providing both additional cycle parking at stations and other associated improvements that make use of State land.

Figure 23: Bikes parked outside Glen Huntly railway station

STATIONS AND INFRASTRUCTURE

REAL TIME INFORMATION DISPLAYS AT ALL STATIONS AND KEY TRAM/BUS STOPS

In general, public transport users tend to perceive the time spent waiting for a train, tram or bus as longer than it actually is, and that characteristics of the station or stop and its amenities can alter those perceptions. Real time information (via Passenger Information Displays, PIDS) at stops has been found to significantly reduce perceived waiting times, even when no other improvement to a route are made. This can reduce the stress for existing public transport users and if there is a long wait time for the next service, they may be able to undertake another activity (eg. have time to buy a coffee). PIDS also effectively advertise the service and frequency to potential users who pass the stop.

Council should advocate for PIDS (in the style of the SmartBus as shown in Figure 24) to be installed at key stops including all railway stations, key employment/education site and interchange stops on the premium and high frequency public transport network.
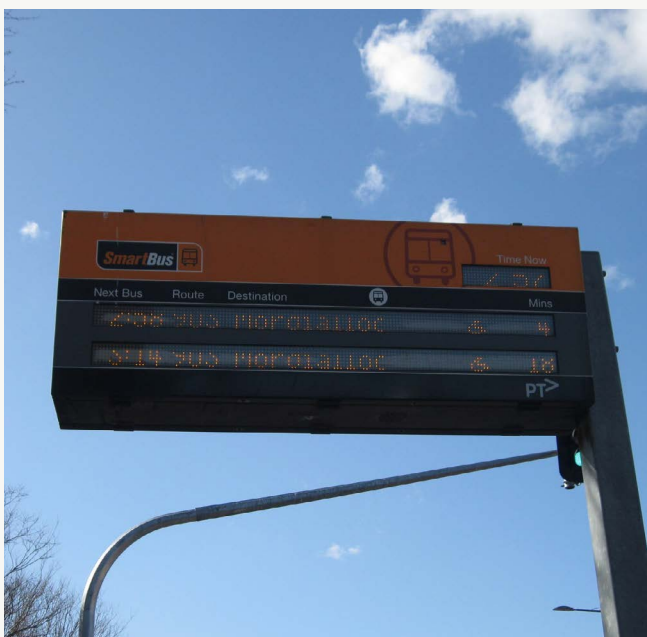
LOW FLOOR TRAMS AND LEVEL ACCESS TRAM STOPS

The *Commonwealth Government's Disability Discrimination Act 1992* and the Disability Standards for Accessible Public Transport 2002[7] set out the requirement to make the public transport system accessible for those people with limited mobility. These include tram stops and the tram fleet. Progress on making both of these across Melbourne has been slow. These low floor tram need to be larger than the current capacity of the tram on Glen Eira routes to cater for the modal shift and the population growth in Glen Eira.

We recommend Council advocate more low-floor trams be procured by the State Government to replace the existing tram fleet with stairs, and these should be prioritised on routes that serve Glen Eira's express public transport routes along Hawthorn Road and Balaclava Road (routes 3, 16 and 64). Council should assist in planning the location of new level access trams stops on these same two roads and advocate for funding for their delivery.

Figure 24: Bus Stop Passenger Information Display

NETWORK EFFICIENCY AND BEHAVIOUR CHANGE

ENCOURAGE WORKPLACES TO BUILD/ LOCATE NEAR RAILWAY STATIONS

As can be seen from the current frequency and catchment map (Figure 1), railway stations in Glen Eira have some of the best public transport frequency. Therefore, encouraging workplaces to build or locate in the catchments of these stations is likely to increase public transport usage and decrease car usage (by more than 10 per cent[8]).

Council should set its own land use planning policies that encourage workplaces to be built or located within the walking catchment of railway stations (also noting the tram precinct reach map, Figure 11).

ENSURE PARKING AT STATIONS IS USED BY PUBLIC TRANSPORT PATRONS ONLY

Many people who regularly drive a car and park at railway stations have complained that some of the car parks at stations are used by non public transport users, which is against regulations[9]. Trials of enforcement of the parking regulations at Box Hill and other station has uncovered numerous people flouting the regulations. Enforcing the parking regulations at stations will allow for more residents to use public transport, particular those who are currently outside of the high frequency public transport network in Glen Eira. This reduces the need to build more car parks, which can be quite expensive when they need to be multi-storey.

Council should advocate the State Government and Metro to regularly enforce the car parking regulations at all railway stations in Glen Eira, initially this could be a trial to test their effectiveness.

Figure 25: photo of Monash University outside Caulfield railway station is an example of a workplace near stations

NETWORK EFFICIENCY AND BEHAVIOUR CHANGE

ENCOURAGE WALKING AND CYCLING TO STATIONS

In the safety section, we recommended Council implement or advocate (as required) improved lighting on the paths around stations. This initiative is building off that by producing marketing material to encourage those that are accessing railway stations by car, to walk or cycle. The *Integrated Transport Strategy* highlights the benefits of this, with improved health and wellbeing of residents by switching to active travel modes.

Some modes of access to stations are easier to provide capacity for than others. Provision of significant additional car parking spaces at stations is likely to be limited, based on cost, available land and the scale of growth in Glen Eira. Current Federal commitments will result in only an additional 143 spaces at Bentleigh. However, this won't be enough to cater the growth in travel the *Integrated Transport Strategy* is anticipating.

This means there are one of two options: one — these new passengers will need to travel to stations by non-car modes eg. walking, cycling, bus or tram. Two — existing passengers change modes to free up car parking spaces for new users. A mixture of these two approaches will be necessary. The alternative will be increased on-street parking around residential and other streets around stations, or a failure to achieve the targets. Neither is likely acceptable.

Council will need to promote and support both walking and cycling to train stations. This means prioritising infrastructure and other associated improvements on routes to and from stations. Great walking streets and safe cycling streets will be needed to be developed to support station access. In particular this means that walking and cycling in the south-east parts of the Council should be focused on supporting train station access as a primary driver as opposed to long distance commuter trips to say the CBD.

Figure 26: Photo of pedestrians, cyclists and car drivers crossing the Frankston railway line on Glenhuntly Road
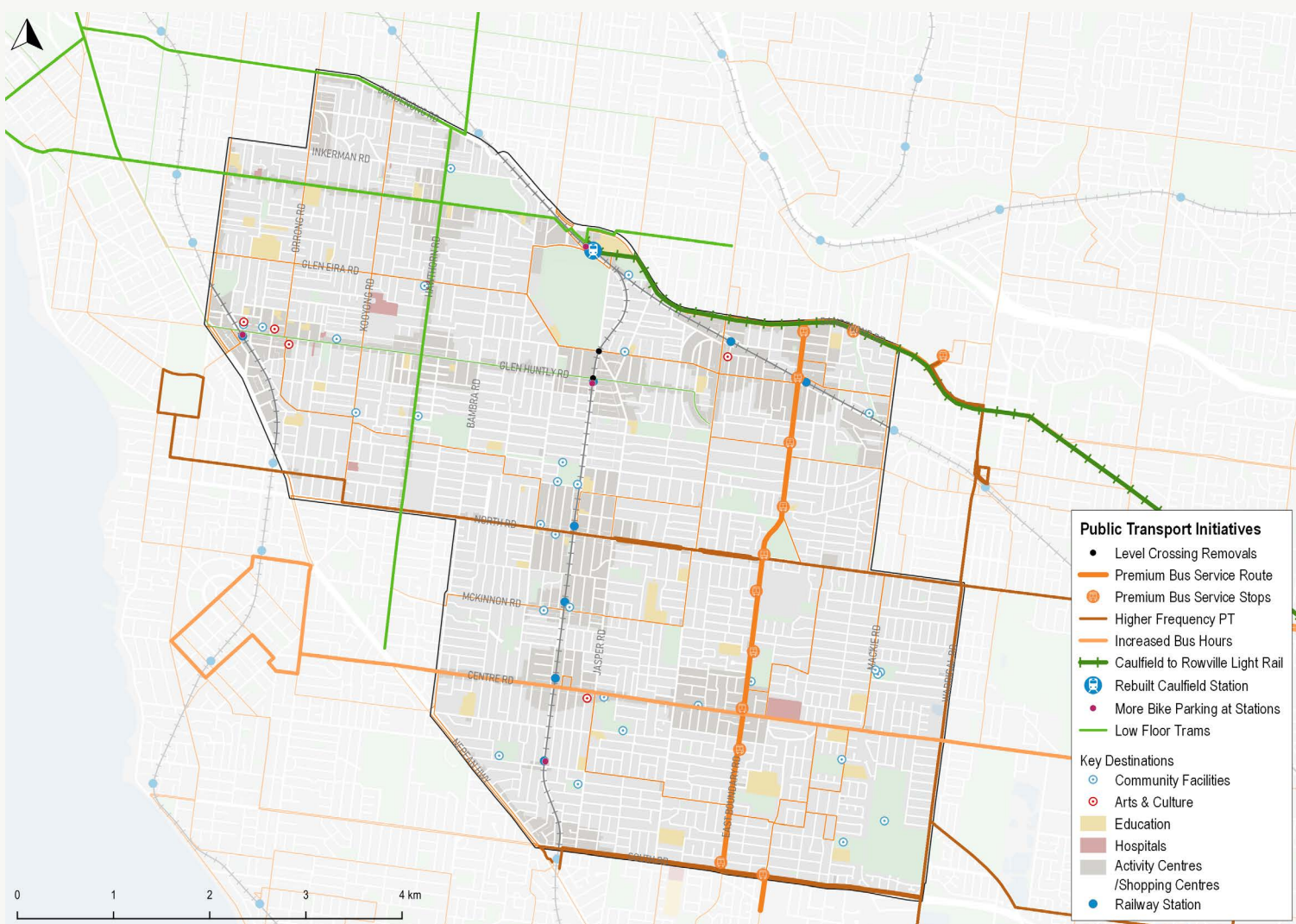
SUMMARY OF LOCATION SPECIFIC INITIATIVES

Figure 27: Map showing the location of the advocacy initiatives

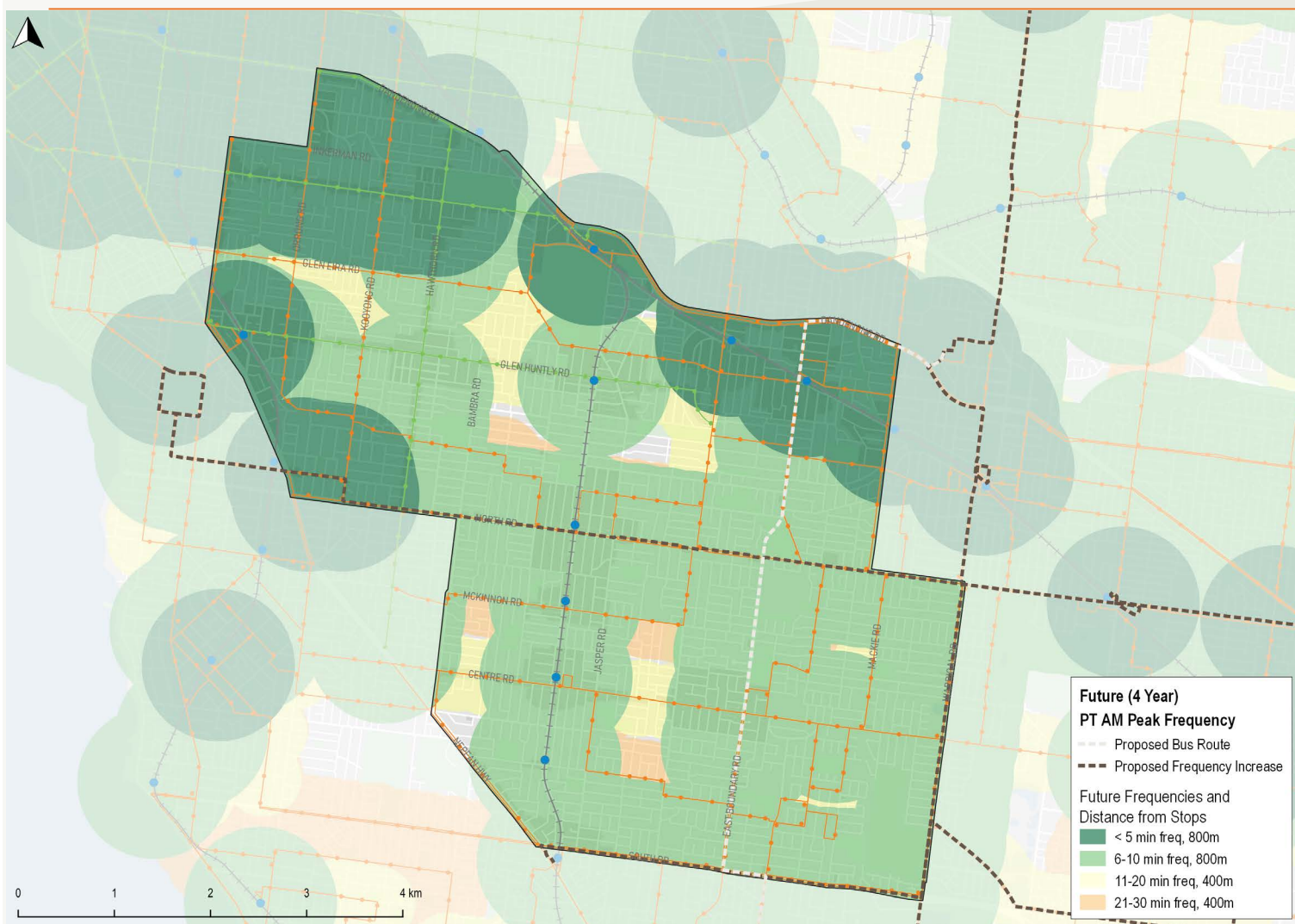# IMPACT OF THE CHANGE ON NETWORK ACCESSIBILITY

Figure 28: Future Frequency and Catchment Map for Glen Eira public transport stops based on Proposed Improvements.

The current network accessibility is shown in Figure 1.

Post the implementation of the initiatives outlined earlier, the premium and high frequency network (one new bus route, and frequency upgrades on three routes) we would see an increase in higher frequency services, increasing accessibility.

These changes have been added to the existing network and mapped. Figure 28 is the future four-year outlook frequency by stop map for Glen Eira, incorporating the walking catchment for each stop.

Figure 28 shows a more frequent public transport network in the south east of Glen Eira than today, which will enable residents, workers and students improved access to their journey destinations. This advocacy plan promotes almost all parts of Glen Eira to be within a 10 minute peak public transport service (as shown by the two shades of green) within the next four years.

Endnotes

1   Evaluating intercity passenger rail. Lalive, Luechinger and Schmutzler (2012)

2   https://www.police.vic.gov.au/content.asp?document_id=10444

3   Department of Infrastructure and Transport, Australia (2013), Walking, Riding and Access to Public Transport (Ministerial Statement) pg 20 https://infrastructure.gov.au/infrastructure/pab/active_transport/files/infra1874_mcu_active_travel_report_final.pdf

4   Transport for NSW (2013), Integrated Public Transport Service Planning Guidelines – Sydney Metropolitan Area pg 20 and Metro Tasmania's Urban Bus Service Guidelines pg 5

5   https://transport.vic.gov.au/getting-around/public-transport/new-tram-to-connect-citys-south-east

6   https://www.busvic.asn.au/images/uploads/public/BusSolutions2-Mar2010.pdf

7   https://www.legislation.gov.au/Details/F2011C00213

8   Transit Oriented Development, Impacts On Mode Split in Portland, Oregon, Ohland and Poticha 2006 via https://www.planetizen.com/node/39133

9   Insert the act of parliament or regulations. Note this article: https://www.heraldsun.com.au/leader/east/tradies-have-been-accused-of-taking-up-comuter-parking-at-box-hill-station/news-story/c4e0026f2bf1d269b237a86b6423770f

10   Melbourne Metro Business case https://metrotunnel.vic.gov.au/__data/assets/pdf_file/0006/40677/MM-Business-Case-Feb-2016-WEB.pdf pg 145

11   Metropolitan Train Load Standards Survey Report May 2018 accessed: https://transport.vic.gov.au/about/data-and-research/passenger-load-surveys

APPENDIX - PUBLIC TRANSPORT ADVOCACY IMPLEMENTATION PLAN

SAFETY

Initiative	Who raised the issue?	Alignment to the *ITS*	Alignment to ot organisations pl
Onboard public transport vehicle safety	Community consultation	3	
Level Crossing Removals	*Integrated Transport Strategy*/ State Government	5	*Plan Melbourne*
Better lighting around public transport stops and stations	Community consultation	3	
Public transport journey testing with people with a disability	Based on community consultation	2	

CONNECTIVITY

Initiative	Who raised the issue?	Alignment to *ITS*	Alignment to ot organisations pl
Premium bus service	*Integrated Transport Strategy*	5	Rail Futures Inst for medium cap
Higher frequency for public transport	*Integrated Transport Strategy*/ Community Consultation/ Advocacy groups	5	Bus Association Moving People V
Increased span of hours for bus services	Community Consultation / Advocacy Groups	2	Bus Association Moving People V
Caulfield to Rowville light rail	*Integrated Transport Strategy*	5	Rail Futures Inst Melbourne Rail

...hers transport ...ans/targets	Who to influence?	What could be done to address the issue?	What evidence is there to support the supposition?
	Operators/State Government	Staff and technology	
	State Government/LXRA	Various engineering solutions	
	State Government/Metro Trains /Council	Install lighting, trim trees/ bushes, create clear lines of sight	UK research has seen a link between increased street lighting and crime reduction
	N/A	Talk to community groups	

...hers transport ...ans/targets	Who to influence?	What could be done to address the issue?	What evidence is there to support the supposition?
...titute advocates ...acity transit	State Government/DOT/PTV	Bus lanes, and other priority measures, frequent services	US research shows express bus service can provide reliable travel times when buses travel dedicated lanes.
Victoria – Victoria 2018	State Government/DOT/PTV	Add more services to the timetable	Canadian research has found increasing frequency reduces car use
Victoria – Victoria 2018	State Government /DOT/PTV	Add more services to the timetable	Many Australian State Governments have long span of hours for their major public transport routes
...titute – Plan 2019-2050	State Government/DOT	Various engineering and technical solutions	

APPENDIX - PUBLIC TRANSPORT ADVOCACY IMPLEMENTATION PLAN

STATIONS AND INFRASTRUCTURE

Initiative	Who raised the issue?	Alignment to *ITS*	Alignment to ot... organisations pl...
Rebuilt Caulfield railway station and improve the connectivity	*Integrated Transport Strategy*	5	
More parking for bikes at railway stations	*Integrated Transport Strategy*/ Community consultation/ Advocacy groups	5	Rail Futures Inst... Melbourne Rail ...
Real time information displays at all stations and key tram/bus stops including bus route maps in bus shelters	Supports the outcomes desired by the *Integrated Transport Strategy*	3	Bus Association... Moving People V...

NETWORK EFFICIENCY AND BEHAVIOR CHANGE

Initiative	Who raised the issue?	Alignment to *ITS*	Alignment to ot... organisations pl...
Encourage workplaces to build/ locate near railway stations	Community consultation	5	*Plan Melbourne ...*
Ensure parking at stations is for PT users	Community consultation	3	*Box Hill Transit Ir... Ministerial Advisa...*
Encourage walking and cycling to stations	*Integrated Transport Strategy*	5	*Plan Melbourne ...*
Low floor trams and level access tram stops	DDA	4	*Plan Melbourne ...*

...thers transport ...ans/targets	Who to influence?	What could be done to address the issue?	What evidence is there to support the supposition?
	State Government/DOT/RPV	Various engineering solutions	
...titute – ...Plan 2019-2050	State Government/DOT/RPV/ Metro Trains	Various types of bike parking options, depending on scale and site constraints	Existing passengers parking bikes where they can at stations without dedicated bike parking
...Victoria – ...Victoria 2018	State Government/DOT/PTV/ Yarra Trams	Install Passenger Information Displays	New York saw an increase in public transport use associated with a trial of real time information

...thers transport ...ans/targets	Who to influence?	What could be done to address the issue?	What evidence is there to support the supposition?
...– Policy 1.3.2	Council / DEWLP	Change the planning scheme	US research indicates the good public transport services and mixed use land use reduce car travel compared to good public transport alone
...nterchange ...ory Group Report	State Government/DOT/PTV/ Metro Trains	Enforcement, potential engineering controls	Impact of trial enforcement at stations in Melbourne
...– Policy 5.2.1	State Government/DOT/PTV/ Metro Trains/Council	Marketing, (pop-up stands at stations, flyers, etc.)	
...– Policy 3.1.2	State Government/DOT	Various engineering and technical solutions	

Bentleigh	Caulfield	McKinnon
Bentleigh East	Elsternwick	Murrumbeena
Brighton East	Gardenvale	Ormond
Carnegie	Glen Huntly	St Kilda East