

# ADVERTISED PLAN

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# 23-47 Villiers Street, North Melbourne

Green Travel Plan



230570GTP001C-F 28 August 2024



# onemilegrid

ABN: 79 168 115 679

(03) 9939 8250 Wurundjeri Woiworung Country 56 Down Street COLLINGWOOD, VIC 3066 www.onemilegrid.com.au



#### **DOCUMENT INFORMATION**

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# 1 Introduction

**one**mile**grid** has been requested by Sentinel Corporation to prepare a Green Travel Plan for the proposed build-to-rent residential development at 23-47 Villiers Street, North Melbourne.

## 2 DEVELOPMENT PROPOSAL

#### 2.1 General

It is proposed to develop the subject site for the purposes of a multi-storey, high-density residential development associated with the build-to-rent (BTR) scheme.

The development will consist of two buildings, with the eastern building labelled as 'Building A (Villiers Street)' and western building labelled as 'Building B (Harcourt Street)'.

A breakdown of the proposed residential development schedule is shown in Table 1.

Table 1 Proposed Residential Development Schedule

Building	Component	No./Area
	Studio Apartment	10
D:Lalia a. A	1-Bedroom Apartment	107
Building A (Villiers Street)	2-Bedroom Apartment	46
(1111613 311661)	3-Bedroom Apartment	18
	Sub-Total	181
	Studio Apartment	11
D:Lalia a. D	1-Bedroom Apartment	103
Building B (Harcourt Street)	2-Bedroom Apartment	49
(Harcour sireer)	3-Bedroom Apartment	9
	Sub-Total	172
Total		353

In addition, an ancillary office with a floor area of 108 m<sup>2</sup> is proposed in Building A along the Villiers Street frontage.

The development is proposed with two dedicated loading areas and two waste rooms, one for each building respectively, to facilitate the various loading requirements and waste collection. Access to each loading area is provided via a consolidated central access point located along Little George Street on the lower ground 1 level, and will permit forward entry and exit.



# 2.2 Car Parking and Vehicular Access

A total of 264 parking spaces are proposed across four levels and are allocated as detailed in Table 2.

Table 2 Car Parking Allocation

	~
Туре	No. Spaces
Residential	260 spaces (4 x DDA, 8 x tandem, 13 x EV, 2 x car share)
Staff	4 spaces (1 x DDA)
Total	264 spaces

Three vehicle access points are provided to the site via Little George Street, with the eastern and western access points providing access to the residential parking spaces on the ground floor level and lower ground 2 to basement levels respectively. The central access point is to provide vehicle access to the loading area and staff parking spaces on the lower ground 1 level.

The three vehicle access points are spread out along Little George Street, with landscape buffers in between, to reduce the dominance of the vehicle access points while allowing for safe and efficient access to the site.

Due to the 5.6 m level difference across the site, the topography of Little George Street lends itself to provide convenient access directly to an upper and lower car parking level without the requirement for internal ramps.

Furthermore as a result of the frequency and size of the of vehicle accessing the loading bays (waste collection, deliveries and removalists for moving in/out) it is preferred to separate entries for car park and loading/unloading. Separating car parking and loading entries removes the risk of residents interacting with reversing loading vehicles on the site.

The project provides a 5 m setback to the northern boundary to facilitate the widening of Little George Street. This provides a two-way carriageway, on-street car parking for pick up/drop off, integrated landscape and a 1.8 m wide footpath on the south-western side of Little George Street. This enhances vehicle movement and access to both the proposed development and existing Flemington Road properties. Landscaping within Little George Street is designed in accordance with City of Melbourne Guidelines.

As a result of widening Little George Street and accommodating two way vehicle access as well as access to the proposed development, the existing crossovers to the site are able to removed on both Villiers Street and Harcourt Street.



# 2.3 Bicycle and Motorcycle Parking

A total of 445 bicycle parking spaces are proposed and are allocated as detailed in **Error! Reference source not found.**.

Table 3 Bicycle Parking Allocation

Туре	No. Spaces
Residential	353 spaces
Visitor	88 spaces
Staff	4 spaces
Total	445 spaces

All bicycle parking is to be provided through a combination of standard horizontal bicycle parking hoops (140 spaces) and vertically mounted bicycle racks (305 spaces).

The residential bicycle parking are to be provided within two secure compounds located on the lower ground 1 level and accessed via the Mary Street building frontage.

Visitor parking will be provided both internally within the abovementioned secure compound (76 spaces), and intermittently externally along the Mary Street and Little George Street road frontages (6 spaces per road frontage).

The staff bicycle parking is to be provided adjacent the four staff car parking spaces in the form of two horizontal hoops.

In addition, a total of 12 motorcycle spaces are provided onsite, with 6 spaces provided in the basement level and the remaining 6 located on the lower ground 2 level.



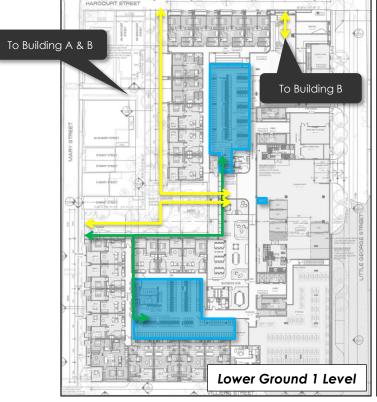
## 2.4 Pedestrian Access

Each building will be provided with a dedicated main building entrance at the northeast and northwest corner of the site via Villiers Street and Harcourt Street to Building A and B respectively.

The proposed building will be setback approximately 3 m from the southeastern corner of the site to increase the existing 1.5 m footpath along Mary Street whilst a landscaped laneway is proposed along the southwestern corner of the site, intersecting with Harcourt Street. The above will serve as a secondary pedestrian access to the building.

A view of the pedestrian and bicycle wayfinding routes to/from the site is shown in Figure 1.

Figure 1 Pedestrian Access and Bicycle Parking Wayfinding





Pedestrian Access

**Bicycle Access** 

Bicycle Parking



# 3 GREEN TRAVEL PLAN

A Green Travel Plan is a suite of initiatives and services employed to encourage travel mode behaviour change and to promote the use of sustainable transport options such as walking, cycling, public transport or car-pooling in preference to single occupant car trips where practicable.

A Green Travel Plan provides value to future residents, staff and visitors of the development, informing them of the alternative transport options when accessing the site and surrounds, and provides associated health and fitness benefits when increasing their activity levels through regular walking and cycling.

The implementation, coordination and funding of the Green Travel Plan is the responsibility of the Owners Corporation, and should be a dynamic document, reflecting changes in on-site and offsite conditions e.g., additional bicycle parking, or changing public transport timetables. As such, the Plan should be revisited and amended as required, to provide the most accurate and relevant information to achieve the desired objectives of reducing car usage.

Journey to work data (sourced from 2021 Census) from the City of Melbourne indicates that approximately 47% of work trips within the LGA are by car drivers. Consequently, the objective of this Green Travel Plan will be to increase the proportion of sustainable transport mode use by 15% from the municipality average.

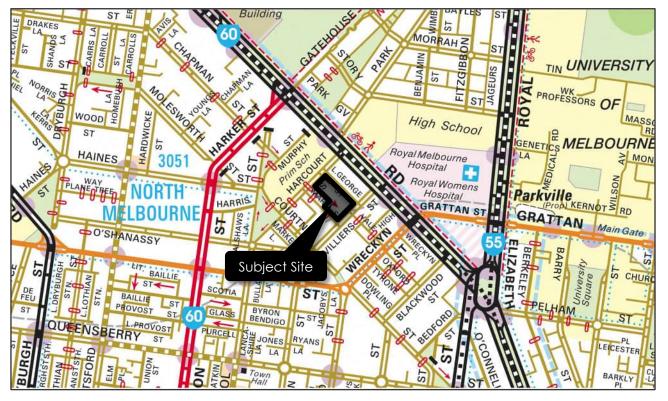


## 4 SITE LOCATION & SUSTAINABLE TRANSPORT

#### 4.1 Site Location

The <u>subject site</u> is addressed as 23-47 Villiers Street, North Melbourne and is located southwest of Flemington road, approximately 400 m northwest of the Haymarket roundabout, as shown in Figure 2.

Figure 2 Site Location



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The site is bound by Villiers Street, Mary Street, Harcourt Street and Little George Street for 74 m, 47 m, 56 m and 102 m respectively whilst encompassing a total site area of 6,528 m<sup>2</sup>.

The site is currently occupied and operated by the Australian Red Cross National Office and is provided with front and rear at-grade car parks comprising 7 and 53 spaces, which are accessed via Villiers Street and Harcourts Street along the southeast and northwest boundaries of the site respectively.

Land use in the immediate vicinity of the site comprises of various commercial, medical and educational facilities, and includes The Royal Melbourne Hospital and Melbourne University to the east of the site.

An aerial view of the subject site is provided in Figure 3.



Figure 3 Site Context (6 July 2023)



Copyright Nearmap

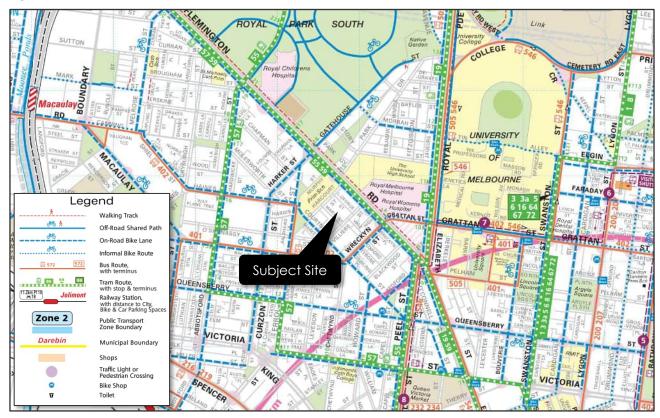


# 4.2 Sustainable Transport

#### 4.2.1 General

An extract of the TravelSmart Map for the City of Melbourne is shown in Figure 4, highlighting the public transport, bicycle and pedestrian facilities in the area.

Figure 4 TravelSmart Map





#### 4.2.2 Public Transport

The full public transport provision in the vicinity of the site is shown in Figure 5 and detailed in Table 4.

Figure 5 Public Transport Provision

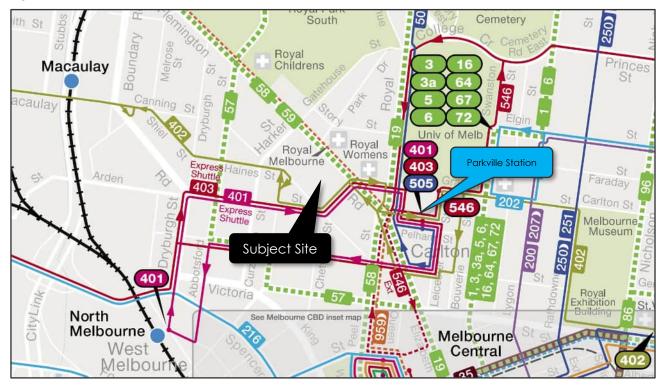


Table 4 Public Transport Provision

Mode	Route No.	Route Description	Nearest Stop/Station
Tram	58	West Coburg – Toorak	Murphy Street /
IIdiii	59	Airport West – Flinders Street Station & City	Flemington Street
Bus	401	North Melbourne Station – Melbourne University Loop via Royal Melbourne Hospital	Royal Melbourne Hospital / Grattan Street
	402	Footscray Station – East Melbourne via North Melbourne	Harcourt Street / Courtney Street
	403	Footscray Station – Melbourne University via Royal Melbourne Hospital	Melbourne University / Pelham Street

The site has very good public transport accessibility, with a variety of transport modes and services servicing the vicinity of the site. The site has a Transit Score rating of 100/100 and is considered to be a Rider's Paradise, with world-class public transportation.

In addition to the existing public transport facilities provided adjacent to the site, the Melbourne Metro Tunnel is currently being constructed to the north of the subject site. The tunnel is being constructed between Kensington and South Yarra, and will provide two underground stations within the Melbourne CBD and three underground stations surrounding the CBD. The Melbourne Metro Tunnel will provide a direct connection between the existing Sunbury line and the Cranbourne/Pakenham line which will reduce the amount of train services requiring the existing City Loop. It is anticipated that the construction works for the Melbourne Metro Tunnel will be complete by the end of 2025, with the resultant Metropolitan Melbourne rail map shown below in Figure 7.



Furthermore, Parkville Metro station is currently being constructed on the eastern side of Royal Parade along Grattan Street. Four train station entrances are proposed for the Parkville Metro Station including an entrance at the south-eastern corner of the Royal Melbourne Hospital. The provision of an entrance to the immediate north of the site will provide excellent access to the Sunbury line and the Cranbourne/Pakenham line, as well as the Melbourne CBD where additional Metropolitan Melbourne and V/Line rail services are provided. The proposed Parkville Metro Station is shown in Figure 6.

Figure 6 Proposed Parkville Metro Station

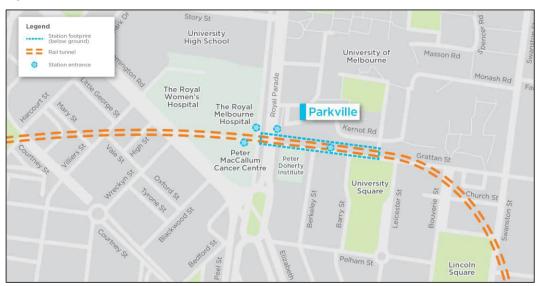
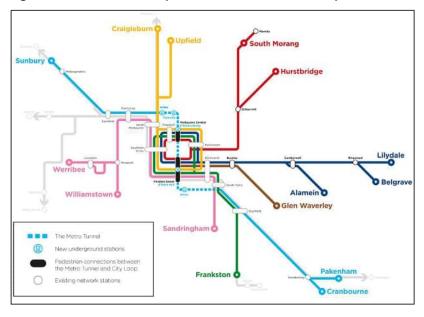


Figure 7 Future Metropolitan Melbourne Rail Map





## 4.2.3 Bicycle Facilities

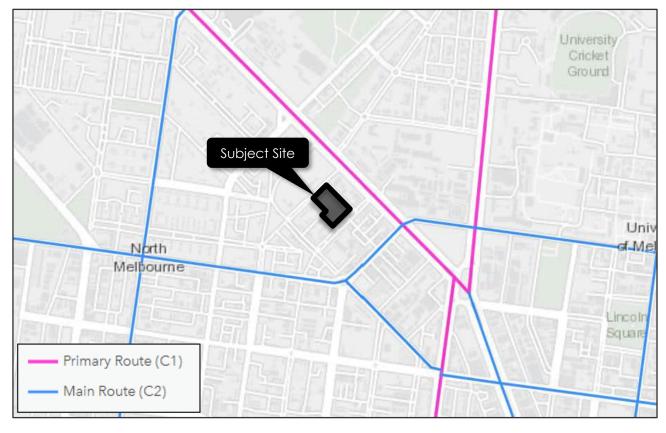
#### 4.2.3.1 Strategic Cycling Corridors

Strategic Cycling Corridors are important routes for cycling for transport and link up important destinations including the Central City, National Employment and Innovations Clusters, Metropolitan Activity Centres and other destinations of metropolitan and regional significance.

Strategic Cycling Corridors (SCC) are considered to be the arterials for bicycles, and have been designed to provide connected, low stress and safe routes, intended primarily for the use of cyclists for transport (rather than recreation).

The SCCs in the vicinity of the site are shown in Figure 8.

Figure 8 Strategic Cycling Corridors





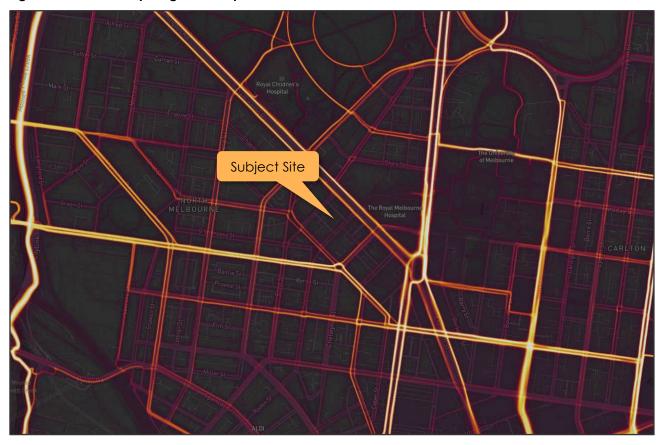
#### 4.2.3.2 Strava

Strava is a social network and training tool for cyclists, runners and swimmers. Users record their physical activity using a dedicated GPS device or utilise the mobile app, and upload the file to their profile.

Strava anonymised this information and makes it available through their "Global Heatmap" tool, showing aggregated all public activities over the last two years across the world.

A view of the cycling heatmap in proximity to the study area is provided below in Figure 9. Routes of higher usage are brighter in colour.

Figure 9 Strava Cycling Heatmap



As shown above, primary routes in and out of the study area comprise:

- Flemington Road;
- Royal Parade;
- > Arden Street; and
- Moonee ponds Creek Trail.

It is noted that this information includes all cycling activities recorded on the platform, inclusive of weekend trips, and all trips throughout the day. Additionally, the data is skewed towards sports cyclists, given that the bulk of commuter and recreational cyclists will not be tracking their rides.

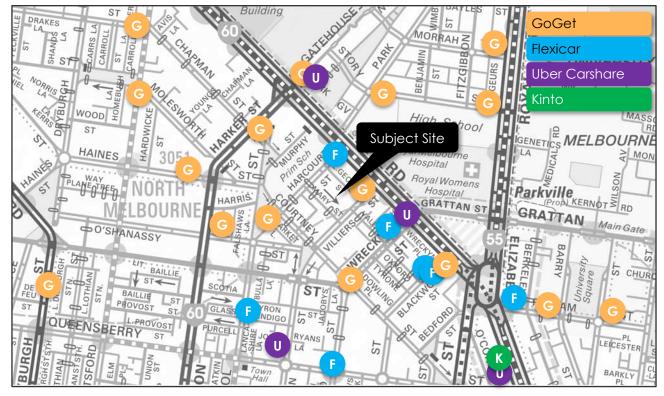


#### 4.2.4 Share Cars

Car sharing is becoming increasingly popular within highly populated areas for both employees and residents, where parking is restrictive and expensive. Car sharing operates similar to a car rental company, except users join as members and are charged on an hourly rate rather than a daily.

The location of the share cars within close proximity of the site are shown in Figure 10.

Figure 10 Share Car Locations



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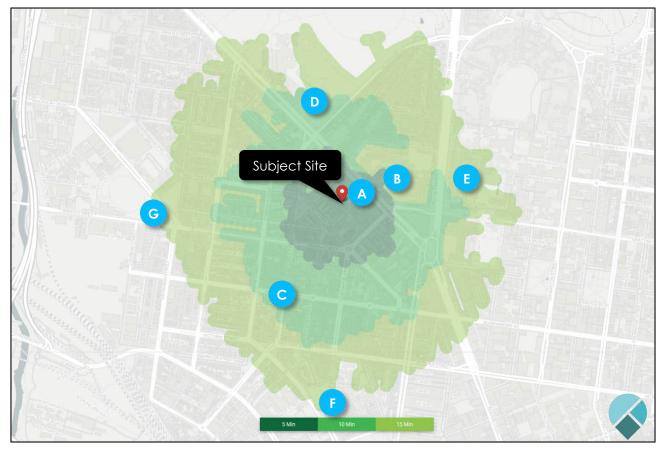


## 4.2.5 Pedestrian Accessibility

In addition to having good access to public transport modes, the site is well-located for pedestrian accessibility, with a number of recreation, education, shopping and employment uses located within 10 - 15 minutes' walk of the site.

Figure 11 shows a pedestrian walk time map for the site, with the major facilities in the vicinity of the site identified in Table 5.

Figure 11 Pedestrian Walk-Time Map



Courtesy of **Targomo** 

Table 5 Site Facilities

Ref	Facility	Approx. Distance
Α	IGA Xpress North Melbourne	100 m
В	The Royal Melbourne Hospital	300 m
С	Queensberry Street / Errol Street Junction	500 m
D	Royal Park	500 m
Е	Melbourne University	700 m
F	Queen Victoria Market	800 m
G	North Melbourne Recreation Reserve	



Walkability is a measure of how friendly an area is to walking. Walkability has many health, environmental, and economic benefits. Factors influencing walkability include the presence or absence and quality of footpaths or other pedestrian rights-of-way, traffic and road conditions, land use patterns, building accessibility, and safety.

The site has a Walk Score rating of 96/100 and considered to be a Walkers Paradise, where daily errands do not require a car.



# 5 GREEN TRAVEL INITIATIVES

#### 5.1 General

The applicant has committed to implement a number of Green Travel Initiatives to encourage the use of pedestrian, bicycle and public transport travel to and from the site. The initiatives included in the package are outlined as follows.

# 5.2 Green Travel Plan Champion

A Green Travel Plan "Champion" will be appointed by the Owners Corporation who will be responsible for the implementation and ongoing management of the Green Travel Plan.

# 5.3 Bicycle Facilities

The development proposes bicycle parking in excess of the minimum statutory requirements and in accordance with the Sustainable Design Assessment in the Planning Process (SDAPP), with secure facilities provided on the lower ground 1 level, of which will be accessed via Mary Street.

Furthermore, a considerable proportion of bicycle parking spaces are provided in horizontal racks, which provide opportunities for all users, including the elderly, and electric bicycle users.

Government policy currently aims to encourage the use of bicycles as a mode of transport in order to reduce the dependency on private vehicles. The provision of easily accessible bicycle facilities on-site is expected to increase the number of trips made by bicycle.

The ground level bicycle storage area also includes a maintenance area which will include typical bicycle maintenance tools and equipment, including:

- > A bicycle tyre pump;
- > Tyre levers; and
- > Standard hex keys and adjustable wrenches.

All bicycle tools and equipment will be wired to the maintenance area, to prevent theft.

# 5.4 Public Transport

The subject site is well located to take advantage of the existing excellent public transport accessibility in the area. As previously identified in Section 4.2.2, several bus and tram routes operate within close walking distance of the site, providing further connections to a number of train and tram lines. In addition, Parkville Metro Station is being constructed to the north of the site and is expected to be operational by the completion of the proposed development, which will further improve public transport accessibility for residents and staff.

Residents can plan their public transport journey or commute through the Public Transport Victoria (PTV) app on their phone. The PTV app allows real time updates on departure and arrival time and directions to public transport stops for any given public transport route within Melbourne and Victoria. Victoria has implemented the electronic ticketing system 'Myki' which can be used to pay for public transport fares. Residents will be able to purchase and register for a Myki from a number of convenience stores and selected train stops throughout Victoria and can be topped up at top-up machines at most train stations or automatically top-up which can be set up with a mobile phone.



To encourage public transport use, signage will be provided on the notice board in the mailroom advising of the nearby services and including a QR code linking to the PTV website which provides up to date service information, routes and schedules.

Public transport information, including service times and updates, can be found on the Public Transport Website:

#### www.ptv.vic.gov.au

Myki information, including how to register and topping up a Myki Pass, can be found on the Myki module on the Public Transport Website:

www.ptv.vic.gov.au/tickets/myki

# 5.5 Car Parking Facilities

The proposed development considers a significant reduction in car parking from the statutory car parking requirements. Through a reduced supply, residents, staff and visitors to the site are expected to contemplate alternative transportation means.

#### 5.6 Share Car

As detailed in Section 4.2.4 there is an abundance of existing share cars in the vicinity of the site. Residents and staff of the development are encouraged to utilise these existing facilities which offer an alternative to owning a private motor vehicle. The websites for each car share company includes information for signing up as a member and the relevant costs associated:

www.goget.com.au

www.flexicar.com.au

www.ubercarshare.com

www.kinto.com.au

# 5.7 Building Intranet Site

An intranet site for the building will be established and maintained by the Owners Corporation, which will include the following information for residents and employees:

- Information and contact details for the Owners Corporation and the Green Travel Plan "Champion";
- > Maps of surrounding bicycle facilities and routes;
- > Information on the Bicycle User Group (BUG) established for the development;
- > Public transport maps and timetables;
- > Information on how to use the public transport system, including how to purchase a Myki, Myki costs and top-up locations;
- Maps of surrounding services, including shopping locations, schools and services, with suitable non-car-based transport options (i.e., bike and walking routes, and public transport options);
- > Links to relevant Green Travel, public transport and local services websites including:
  - + www.walkscore.com
  - + www.ptv.vic.gov.au
  - + www.bicyclenetwork.com.au



#### 5.8 Resident and Staff Welcome Pack

All new residents and staff will be provided with a 'welcome pack', which will include the following:

- > General information about the development;
- > Information regarding the building intranet site and the information contained within;
- > Public transport maps and timetables;
- Maps of surrounding services, including shopping locations, schools and services, with suitable non-car-based transport options (i.e., bike and walking routes, and public transport options);
- > Links to relevant Green Travel, public transport and local services websites including:
  - + The PTV "Journey Planner" website and mobile app; and
  - + The GoGet, Flexicar, Kinto and Uber Carshare websites.

#### 5.9 Timescales and Costs

The Green Travel Plan proposes several initiatives to reduce the reliance on private vehicle trips which are outlined in the previous sections. The mechanisms required to implement each of these initiatives is outlined in the following table.

Table 6 Green Travel Initiatives Implementation

Initiative	Action	Responsibility	Timeframe	Cost*
	Elect a 'Green Travel Champion' who will be responsible for the ongoing monitoring of the GTP	Owners Corporation	At the time of occupation	\$
Green	Review the GTP, distribute surveys analyse the results	Green Travel Champion	Held over a week, once annually	\$
Travel Plan Champion	Facilitate a workshop following the surveys, to refine any new initiatives which are to be proposed	Green Travel Champion	A couple of hours, once annually	\$\$
	Send out information to tenants about the results of the annual survey, as well as details of the new initiatives	Green Travel Champion	Once annually	\$
Bicycle Facilities	Provide bicycle maintenance tools including a pump, tyre lever and standard hex key or adjustable wrench	Owners Corporation	Prior to occupation	\$
	Add additional bicycle parking spaces if demand increases	Owners Corporation	Post- occupation	\$\$\$
Share Bike / Scooter	Provide a shared bike with a helmet and lock for use by employees	Tenant Management	Ongoing	\$\$
Public Transport	Provide a display with real-time PTV departure times	Owners Corporation	Ongoing	\$\$
	Provide PTV leaflets and maps in the building lobby	Owners Corporation	Ongoing	\$
	Subsidise Myki costs for staff	Tenant Management	Ongoing	\$\$ - \$\$\$
Share Car Spaces	Provide 2 share car spaces	Owners Corporation	Prior to occupation	\$\$



Initiative	Action	Responsibility	Timeframe	Cost*
Building Intranet	Building intranet site to be established and updated as required	Owners Corporation	At the time of occupation	\$
Resident and Staff Welcome Pack	A 'Welcome Pack' is to be prepared which will be sent to tenants when they start work within the building	Green Travel Champion	At the time of occupation	\$

<sup>\*</sup>Costings are indicative only, and range between low to high.

It is noted that the Green Travel Champion will work under the Owners Corporation to deliver initiatives as they are required, to help meet the proposed sustainable transport targets. As such, all the above initiatives may not be required.

# 6 MAINTAINING THE GREEN TRAVEL PLAN

# 6.1 Monitoring and Assessment

In order to monitor the success of the aforementioned initiatives, it is proposed that a four-stage monitoring system be implemented, and the Green Travel Plan "Champion" be responsible for the ongoing monitoring and assessment of the Green Travel Plan.

It is proposed that monitoring take place in the following stages:

- Stage One will involve a questionnaire survey of staff and residents on occupation of the proposed development. The survey will be useful to collect information on the travel characteristics of staff and residents, to gauge interest in the various initiatives and to seek ideas for other initiatives and set baseline travel mode percentages such that they can attempt to meet the proposed targets;
- Stage Two will involve a questionnaire and feedback form to be filled out by staff and residents 12 months after occupation, in order to determine which initiatives are working and which are not;
- > Stage Three will be the monitoring component of the plan, which will be undertaken 2 years after occupation. This questionnaire will test the success rate of the various initiatives and help rework programs to suit the needs of the new staff and residents. At this stage, the targets identified in the previous stages will be reviewed; and
- > Stage Four will involve a final questionnaire to be taken 3 years after occupation. This questionnaire will be used to test whether the targets have finally been met and which initiatives are contributing to this success. At this stage, the Green Travel Champion will reassess whether to continue each initiative or review the need for additional action.

A questionnaire has been prepared for each of the three stages and have been provided attached to this document.

Following the first 12 months of assessment, the questionnaire and targets will be reviewed under the guidance of the building manager / Green Travel Plan "Champion" before redistribution. The annual review will include observational bicycle parking and car parking occupancy counts to assess the uptake of each. In the case that car parking occupancy is very low and bicycle parking occupancy is very high, the operator may propose to convert some of the car parking into additional bicycle, motorcycle, electric scooter or other form of parking, subject to town planning requirements.



# 6.2 Updates to the Green Travel Plan

The Owners Corporation, in particular the Green Travel Plan "Champion", shall be responsible for the maintenance of the Green Travel Plan, which shall be updated every 5 years to ensure it is still relevant, and achieving the required results.

All costs associated with the management, maintenance and updating of the Green Travel Plan shall be borne by the Owners Corporation.

#### 7 GREENSTAR ASSESSMENT

The Green Star rating system for Movement and Place provides minimum expectation which achieve no additional credit points and the credit achievement where a total of three points are available for the Green Star assessment.

The minimum expectations for achieving a Green Star credit are provided below:

Table 7 Green Star Credit Minimum Expectation

Criterion	Requirement	Commentary	Requirement Met
Changing	N/A	Shower provided within each apartment	
Facilities	N/A	Storage provided for each apartment	
Accessible, Inclusive, and Located in a Safe and Protected Place	Access needs to be protected from elements and other vehicles. Access needs to be accessible (avoid steep grades, avoid tight corners and provide appropriate lighting) with appropriate signage.	Access to bicycle parking is along a covered shared zone with minimal vehicle movements throughout the day and appropriate signage and desirable gradients provided along the shared zone.	<b>⊘</b>
Total			<b>Ø</b>

In addition to the above minimum requirements, the following is required to meet the additional credit achievement.

Table 8 Green Star Credit Achievement

Criterion Requirement		Commentary	Requirement Met
Bicycle Parking	Access must be well lit, weather protected, and separated from vehicles.	Access to bicycle parking is along a covered shared zone with minimal vehicle movements throughout the day and appropriately lit.	<b>⊘</b>
Facilities	Demonstrate that bicycle parking facilities have signposted access to the changing room amenities.	Wayfinding signage is provided within the bike storage area.	<b>⊘</b>



	The bicycle parking facilities must ensure the cycling equipment is safely secured	Access to the bicycle parking facilities will be by a key fob or similar.	
Sustainable	A Sustainable Transport Plan must be prepared	A Sustainable Transport Plan has been prepared and is this report.	
Transport	Electric Vehicle Charging must be provided within the development.	EV charging is provided	
Reducing Private Vehicle Usage	Complete the Movement and Place calculator to achieve the required reductions in emissions, increase in active modes of travel and reduction in vehicle kilometres travelled	The Movement and Place has been completed with details provided below.	<b>⊘</b>
	Roads should be designed to be low speed (10km/hr) with pedestrians having right of way.	The internal accessway is a shared zone with signage ensuring there are low speeds.	<b>Ø</b>
Encourage Walkability	Occupants should have access to a diversity of amenities across the below ten categories. There must be at least 10 amenities across five categories within 400m of the building, as determined by the Movement and Place calculator	The Movement and Place calculator shows there are 181 amenities across 9 categories within 400 m of the site.	<b>⊘</b>
Total			<b>Ø</b>

In determining the ultimate travel mode proportions of the building population, the following information and expectations have been considered.

- > The development will provide 445 bicycle parking spaces for residents and staff. Assuming that 2 spaces are used by staff and the remaining by residents (and associated visitors) equates to 100% of residents utilising a bicycle parking space (based on 353 apartments). The site is well located with respect to on-road bicycle lanes which provide fast and convenient access to education, retail and employment, therefore it will be assumed that approximately 20% of bicycles accommodated on-site are regularly used;
- > The car driver ratio has been reduced from the reference figure, given that reduced car parking will be provided on-site for residents, it is expected that approximately 30% of daily trips are undertaken by cars (as a driver);
- > Due to the site's use and location with respect to amenities within walking distance, a significant increase in walking is expected (from 1.13% to 20%);
- A minor increase in the percentage of trips undertaken by bus has been adopted due to the modal shift required as a result of reduced car parking provided on-site (from 1.91 to 2%);
- An increase in the percentage of trips undertaken by tram has been adopted due to the modal shift required as a result of reduced car parking provided on-site, the close proximity of several tram routes and the Free Tram Zone (from 25.71% to 34%);
- > Whilst is it acknowledged that the proposed Parkville Metro train station will increase the percentage of train trips, it is expected that percentage is already relatively high for the



- reference case considering the location, and therefore the default values will only slightly increase from 8.56 to 14%;
- > It is expected that there will be a minor increase in car passenger trips (from 4.89 to 8%) due to the provision of reduced car parking on-site and the relatively low cost to take an Uber/Taxi to the majority of the CBD;
- A minor increase in the percentage of trips undertaken by motorbike has been adopted noting that motorbikes are legally allowed to be parked on footpaths in Melbourne, hence 2% of occupants using a motorbike has been adopted;
- > No changes are claimed for changes to the proportions of ferry. As a result, the default values remain unchanged;
- > The percentage of avoided trips has not been reduced; and
- > The average trip length has been reduced from 18.77km to 10km, noting the proximity of the retail precincts to the site.

In consideration of the above, the results in Table 9 and Table 10 can be obtained from the Sustainable Transport Calculator.

Table 9 Performance Parameters

Criteria	Reference	Proposed
Trips per annum (trips / annum)	470.4	470.4
Emissions per trip (g CO2-e / trip)	3,098.2	826.3
Total emissions (tonnes / person / annum)	1.46	0.39
Total vkt (vkt / person / annum)	4,111.9	94.1
Active Mode Share	11.2%	38%

Table 10 Calculator Summary

Criterion	Requirement	Site % Improvement	Requirement Met
Reduction in Carbon Emissions	40%	73%	
Increase in Active Mode Use	90%	241%	
Reduction in Vehicle km Travelled	20%	98%	<b>Ø</b>
Total			<b>Ø</b>

As shown above, the development is eligible for all three points for Movement and Place under Greenstar.

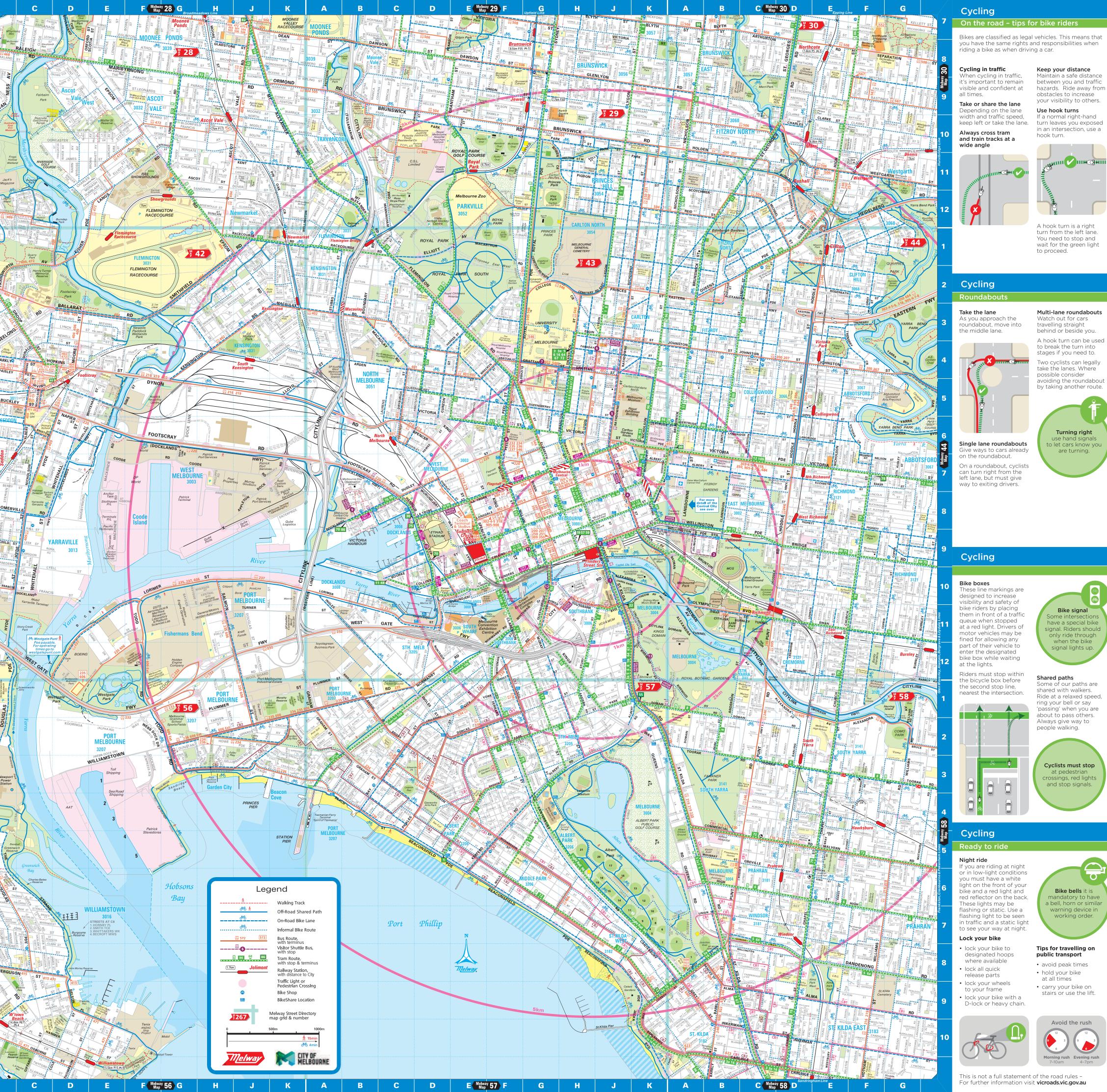


# Appendix A TravelSmart Map





CITY OF MELBOURNE TRAVELSMART MAP



Bikes are classified as legal vehicles. This means that you have the same rights and responsibilities when

> Maintain a safe distance between you and traffic hazards. Ride away from obstacles to increase

your visibility to others. Use hook turns If a normal right-hand

> A hook turn is a right turn from the left lane. You need to stop and wait for the green light

#### Don't hug the gutter Hugging the gutter will get you squeezed out. Never weave in and out

the gutter - keep in a

straight line and avoid

the car door zone.

Be aware of drivers' blind spots particularly when cycling alongside of empty car parking the rear of the car. spaces to stay close to



Trucks have larger blind spots than cars, so leave extra room. Don't assume truck drivers can see you and do not

pass on the inside of a truck that is turning left.

Not all bike lanes are green. Green pai is used to highlight problem areas and to encourage riders and drivers to take extra care.

To avoid doors,

look out for heads

in car windows or

mirrors, vehicles that

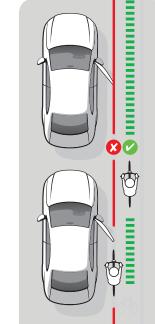
have just parked and

vehicle tail lights.

# Multi-lane roundabouts

It's illegal to open doors into traffic A person must not cause a hazard to any person or vehicle by opening or leaving open the door of a vehicle, or when getting off, or out of a vehicle.

Car doors



move out of the door zone. Be aware of what's behind you in case you have to move across. Take the lane if you are being forced into the door zone. If the door opens use

Watch the door zone If you can't see into vehicles, ride slower and

your brakes and slow down. Move out of the door zone but don't swing into the traffic. If you get hit by a door

and injury or damage results, it's a traffic accident and details must be exchanged.

signal lights up. Shared paths Some of our paths are shared with walkers.

Cyclists must stop at pedestrian crossings, red lights and stop signals.

# Ready to ride Tips for turns

a turn or changing

shoulder for cars and signal before making

lanes. Double check! Use hand signals to tell divers where you are going. Don't change lanes

abruptly. Signal your intended route well in advance of your turn. If you feel uncomfortable merging or turning, pull over to the side and wait

until cars have passed. Bikes are allowed to pass other vehicles on the left except when those vehicles are indicating a left turn.

> Whether on path or road, you must wear a **bicycle helmet** that is fastened properly and meets Australian safety standards.



Watch out for slippery tram tracks, grates and metal covers especially when turning. Squeeze your brakes gently before stopping to clear water off the rims. You and others have a longer stopping distance in the wet.

It's not a legal requirement but it is advisable to make yourself more visible

on the road. Wear reflective gear on moving parts of your body, such as your ankles.

# Melbourne Bike Share

MELBOURNE Share

Melbourne Bike Share

offers a quick, healthy

alternative for travel

To use Melbourne Bike

Share, simply rent and

conveniently located bike

subscribe annually online,

share docking stations.

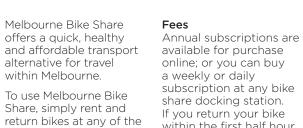
You can choose to

within Melbourne.

at all times carry your bike on stairs or use the lift.

or simply hire a bike as needed at any bike share docking station. Helmets

Riding without a helmet is illegal in Australia. You can either bring your own or use the helmet provided with the bike.



If you return your bike within the first half hour then usage is free. After the first half hour, fees will be charged according to how long you ride. For detailed information

melbournebikeshare.



Avoid the rush

and to subscribe visit com.au

This is not a full statement of the road rules -For further information visit vicroads.vic.gov.au



# Appendix B Questionnaire Survey Forms





# **STAGE ONE QUESTIONNAIRE**

Dwelling/Tenancy:				
How do you travel to and from the site?				
	□ Walk			
☐ Tram	□ Motorbike			
□ B∪s	☐ Electric scooter/skateboard			
☐ Car, as driver	□ Bicycle			
☐ Car, as passenger	□ Other:			
2. Approximately how far did you travel to reach the site?				
	you generally travel by car, either as a driver or passenger, what could be done to encourage you to use other more sustainable modes of transport?			
<ol> <li>Would you use any of the followin   ☐ Cycling</li> </ol>	Would you use any of the following services (if not already noted above)?  □ Cycling □ Electric scooter/skateboard			
, ∪ Walking	☐ Car-pooling			
□ Public Transport	☐'Share car' or similar services			
n not, why?				
Thank you for participating in the surv	/ey.			



# **STAGE TWO QUESTIONNAIRE**

Dv	Dwelling/Tenancy:			
1.	How do you travel to and from the	e site?		
	□ Train	□ Walk		
	□ Tram	☐ Motorbike		
	☐ B∪s	☐ Electric scooter/skateboard		
	☐ Car, as driver	□ Bicycle		
	□ Car, as passenger	□ Other:		
2.	If you generally travel by car, either encourage you to use other more	er as a driver or passenger, what could be done to sustainable modes of transport?		
_				
3.	Would you use any of the following	a services (if not already noted above)?		
3.		g services (if not already noted above)?   □ Electric scooter/skateboard		
3.	Would you use any of the following  ☐ Cycling ☐ Walking			
3.	☐ Cycling	☐ Electric scooter/skateboard		
	<ul><li>□ Cycling</li><li>□ Walking</li></ul>	<ul><li>□ Electric scooter/skateboard</li><li>□ Car-pooling</li><li>□ 'Share car' or similar services</li></ul>		
ln	<ul><li>☐ Cycling</li><li>☐ Walking</li><li>☐ Public Transport</li><li>not, why?</li><li></li><li>Has the alternative transport mode</li></ul>	☐ Electric scooter/skateboard ☐ Car-pooling ☐ 'Share car' or similar services e information and initiatives encouraged you to cha		
ln	<ul><li>☐ Cycling</li><li>☐ Walking</li><li>☐ Public Transport</li><li>not, why?</li><li></li><li>Has the alternative transport mode</li></ul>	<ul><li>□ Electric scooter/skateboard</li><li>□ Car-pooling</li><li>□ 'Share car' or similar services</li></ul>		
ln	<ul><li>☐ Cycling</li><li>☐ Walking</li><li>☐ Public Transport</li><li>not, why?</li><li></li><li>Has the alternative transport mode</li></ul>	☐ Electric scooter/skateboard ☐ Car-pooling ☐ 'Share car' or similar services e information and initiatives encouraged you to cha		
ln	<ul><li>☐ Cycling</li><li>☐ Walking</li><li>☐ Public Transport</li><li>not, why?</li><li></li><li>Has the alternative transport mode</li></ul>	☐ Electric scooter/skateboard ☐ Car-pooling ☐ 'Share car' or similar services e information and initiatives encouraged you to cha		



# 

3. Do you have any feedback for the sustainable transport initiatives implemented within the site?

Thank you for participating in the survey.



# **STAGE FOUR QUESTIONNAIRE**

Dv	velling/Tenancy:	·	
1.	How do you travel to and from the site?		
	□ Train	□ Walk	
	□ Tram	☐ Motorbike	
	□ Bus	☐ Electric scooter/skateboard	
	☐ Car, as driver	□ Bicycle	
	☐ Car, as passenger	□ Other:	
2.	Has the above travel mode choice changed sir and if so, what specifically drove that change?	nce the green travel initiatives were expand	ded.
3.	Do you have any feedback for the sustainable site?	ransport initiatives implemented within the	the

Thank you for participating in the survey.