



Tel: 02 8004 1050
solution1traffic.com.au
info@solution1traffic.com.au
ABN 13 143 437 432

GREEN TRAVEL PLAN

2-4 BURLEIGH ST & 20-24 RAILWAY PDE, BURWOOD

NSW 2134

PROPOSED MIXED-USE DEVELOPMENT

Prepared for:	NSW Housing Corporation Pty Ltd
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INTRODUCTION

Solution1 Traffic Engineers was engaged by NSW Housing Corporation Pty Ltd to prepare a Green Travel Plan report for the construction of a mixed-use development located at 2-4 Burleigh Street & 20-24 Railway Parade, Burwood NSW 2134.

This Green Travel Plan (GTP) aims to outline the sustainable transport strategies the developer is implementing in the design and management of the building. This report may be useful to residents, hotel patrons, staff or customers using the building.

The primary goal of the strategies outlined in this plan is to decrease the frequency of single-occupancy car trips while encouraging alternatives such as walking and cycling for shorter distances, and public transportation or carpooling for longer journeys. The advantages of these approaches include:

- Reduced greenhouse gas emissions;
- Improved resident health from reduced exposure to vehicle fumes;
- Reduced contribution to vehicle emissions;
- Relieving stress on local road networks (congestion, parking availability, etc.);
- Encouraging a sustainable mode of transport, thus reducing the reliance on combustible fossil fuel;
- Reduce noise pollution from vehicular traffic; and
- Promotion of a healthy city through healthy lifestyle choices.

The following items have been included in the subsequent sections of this report:

- Existing conditions surrounding the site;
- Existing Public Transport conditions;
- Existing road network and recommendations;
- Travel Mode Targets; and
- Conclusions of the above findings.

The following documents were referenced for the preparation of this report:

- Burwood Council Development Control Plan (2012);
- Australian Bureau of Statistics (ABS) 2021 Census Data; and
- State Environmental Planning Policy (Housing) 2021.

BACKGROUND AND EXISTING CONDITIONS

Subject Site Location

The proposed development is addressed as 2-4 Burleigh Street & 20-24 Railway Parade, Burwood, NSW. The site is located within Burwood, a suburb of the Burwood Local Government Area located approximately 10km west of the Sydney CBD.

The site is located on the southern side of Railway Parade and to the south of the Main Suburban railway line and sits at the corner of Burleigh Street and Railway Parade. This site comprises five (5) parcels of land identified as follows:

- 20 Railway Parade – Lot C in DP 438222;
- 22 Railway Parade – Lot B in DP 438222;
- 24 Railway Parade – Lot A in DP 438222.
- 2 Burleigh Street – Lot D in DP 438222; and
- 4 Burleigh Street – Lot E in DP 438222.

The site, which occupies an area of 1329 sqm and is regular in shape, is surrounded by commercial housing on the east and south, Railway Parade on the north, and Burleigh Street on the west.

The subject site is currently occupied by multiple businesses, including a medical centre, an educational coaching centre, a residential development centre, and a hearing clinic. All vehicular access to the site is available via the driveway located on the Burleigh Street frontage.

The location of the subject site and its surrounding suburbs are depicted in **Figure 1**.

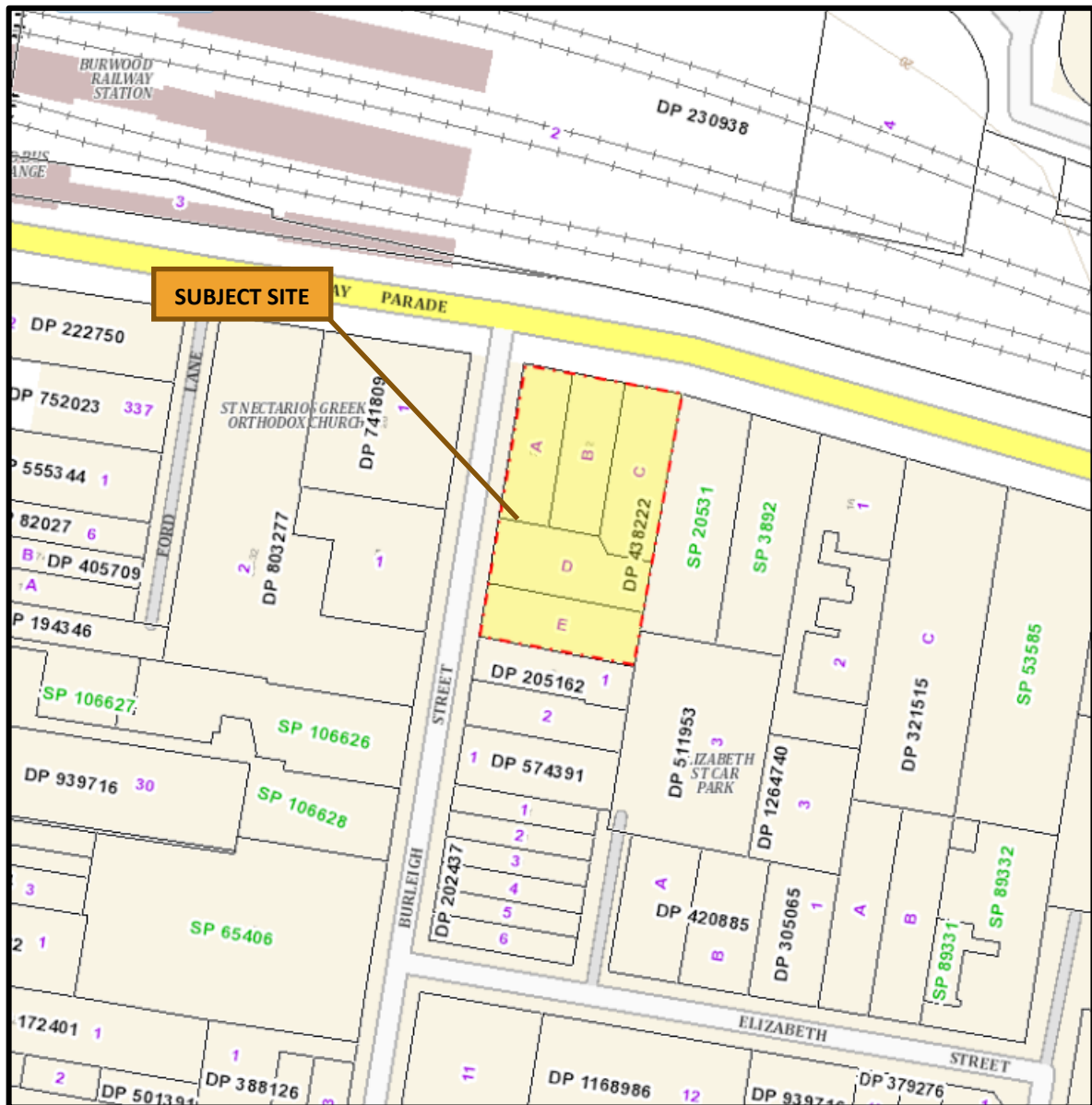


Figure 1: Surrounding Suburbs (Source: Whereis Maps – Map data@2024)

Figure 2 below portrays an aerial view of the site.



Figure 2: Aerial View of the Subject site (Source: Six Maps)

Existing Traffic Conditions

Public Transport

The site is easily accessible via both train and buses. Burwood Station is located 200m North of the subject site. “T1 North Shore & Western Line” (Emu Plains or Richmond to City), “T2 Inner West & Leppington Line” (Parramatta or Leppington to City) & “T9 Northern Line” (Hornsby to North Shore via City) are accessible via the Burwood Station. **Figure 3** below presents the Sydney Rail Network map.



Figure 3: Train Route Map (Source: <https://transportnsw.info/>)

The closest bus stop to the site, Burwood Road opposite the train station, is approximately 270m, which is a 4-minute walk. This bus stop provides several bus routes with services available throughout the day. **Figure 4** overleaf displays the public transport map around the site, and the following table will summarise the services available in the locality.

The following table presents the summary of the frequency of the buses servicing the subject site.

Table 1: Public transport service details

Service	Location	Distance from subject site [m]	Walking time [min]	Origin	Destination	Peak Time Frequency	Off-Peak Time Frequency
407	Burwood Road	270	4	Strathfield	Burwood	30 mins Interval	60 mins Interval
408	Burwood Road	270	4	Rookwood Cemetery	Burwood	60 mins interval	--
410	Burwood Road	270	4	Hurstville	Macquarie Park	10 mins Interval	15 mins Interval
415	Burwood Road	270	4	Chiswick	Campsie	15 mins Interval	30 mins Interval
418	Burwood Road	270	4	Burwood	Sydenham	15 mins Interval	30 mins interval
420	Burwood Road	270	4	Burwood	Mascot Station	15 mins Interval	60 mins Interval
458	Burwood Road	270	4	Burwood	Ryde	30 mins Interval	60 mins Interval
464	Burwood Road	270	4	Ashfield	Mortlake	10 mins Interval	15 mins Interval
466	Burwood Road	270	4	Cabarita	Burwood	20 mins Interval	30 mins Interval
490	Burwood Road	270	4	Drummoyne	Hurstville	30 mins Interval	--
492	Burwood Road	270	4	Rockdale	Drummoyne	20 mins Interval	30 mins Interval
526	Burwood Road	270	4	Rhodes Shopping Centre	Burwood	20 mins Interval	30 mins Interval
530	Burwood Road	270	4	Chatswood	Burwood	20 mins Interval	30 mins Interval
M90	Burwood Road	270	4	Burwood	Liverpool	10 mins Interval	15 mins Interval
461 X	Burwood Road	270	4	City Domain	Burwood	10 mins Interval	15 mins Interval

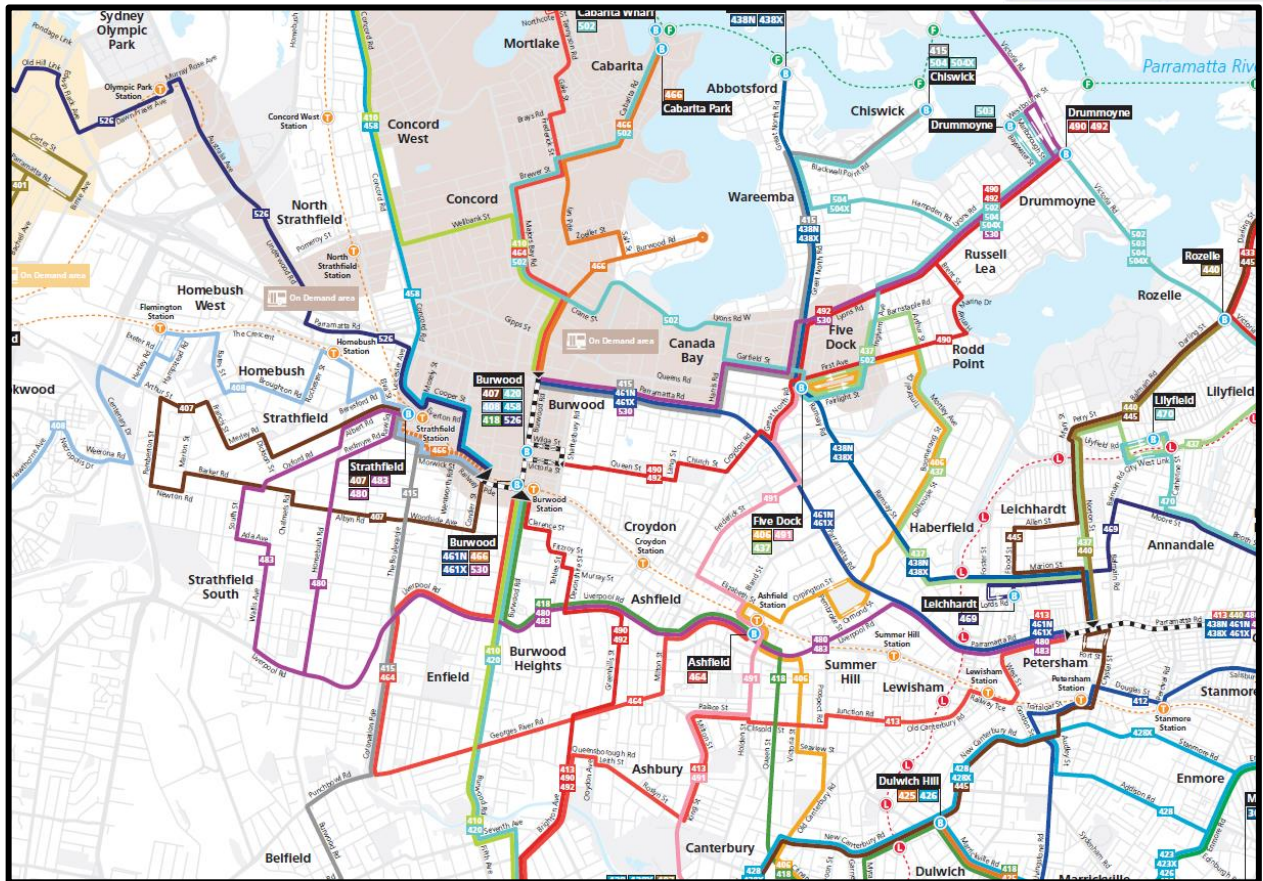


Figure 4: Route Map (Source - <https://transportnsw.info>)

Car Share/Ride Share

Ride shares are becoming a popular alternative to public transport. They are affordable, and door-to-door services are readily available to patrons. Following are some of the popular ride share services available in NSW:

- Taxi services;
- Uber services;
- Ola Services;
- Ingogo; and
- DiDi service.

All the above services can be pre-booked using the service provider's applications.

Car sharing is an affordable transportation option where members can rent vehicles for short periods. Users can easily reserve a vehicle near their home or workplace through a car share operator's app or website. Once booked, they can unlock the car with a smart card and return it to a designated spot after use. This service offers a sustainable alternative to traditional car ownership by reducing traffic congestion and providing greater flexibility for users.

GoGet is one of NSW's leading and fastest growing car sharing services providers. Each vehicle has a designated "home" location, referred to as a "pod", in a publicly accessible location. The following **Figure 5** indicates the GoGet "pods" available in the vicinity of the subject site.

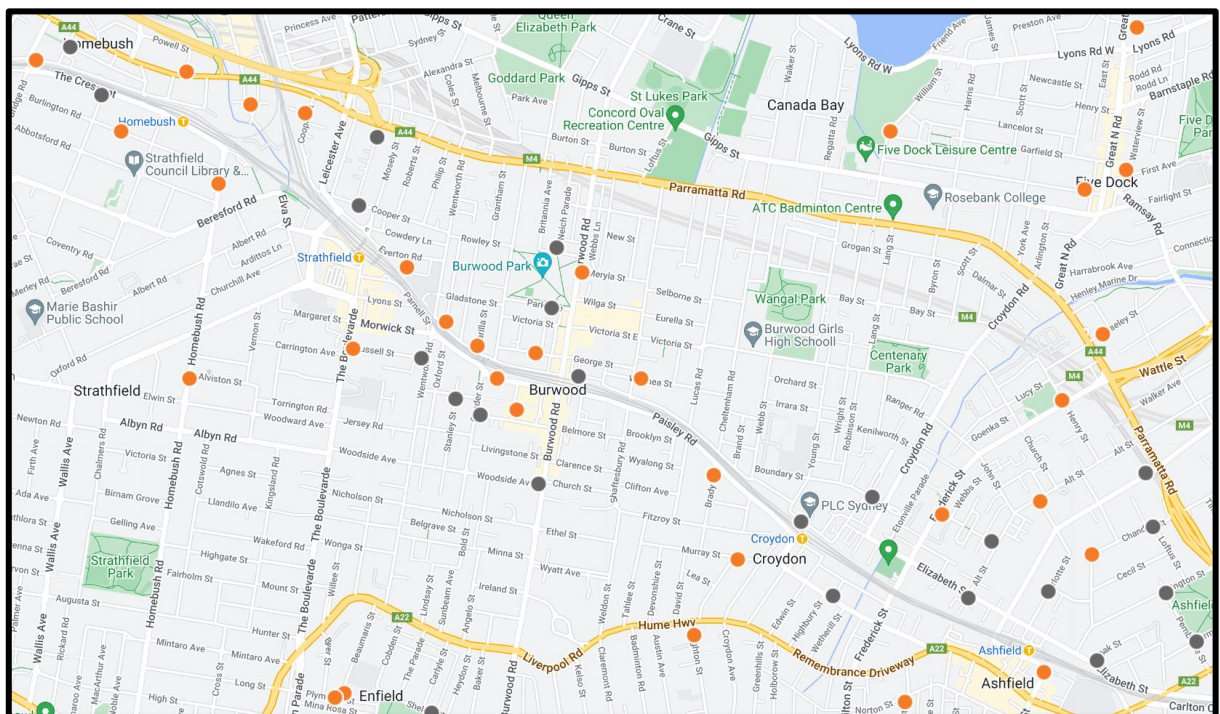


Figure 5: GoGet Car Share Pods Location Plan (Source GoGet website)

Existing Travel Pattern for Burwood LGA

The Australian Bureau of Statistics (ABS) periodically collects comprehensive socio-demographic profiles of Australia and its suburbs/localities. The 2021 ABS data is referenced to understand the existing method of travel to work for commuters travelling to the Statistical Area (SA2), Burwood, including those living within the Burwood LGA.

On the surveyed day, 14,600 trips, comprising 6,500 resident trips and 8,100 commuter trips to the Burwood LGA, were made.

Table 2 : Mode Share (source Australian Bureau of Statistics)

Mode of Transport	Burwood's Resident (Number of Trips)	Commuter's Travelling to Burwood (Number of Trips)
Car as Driver	1,567	2,686
Train	1,508	782
Walk Only	345	416
Bus	177	143
Car as Passenger	171	233
Bicycle	22	34
Others	63	53
Motorcycle/Scooter	56	31
Ride Share/Taxi	11	13
Worked at Home	2,550	3,694
TOTAL	6,470	8,085

The transport modal split for sites located within easy walking distance of the Railway Station and/or well-served by buses is generally expected to have a higher public transport patronage than for sites located away from the train station.

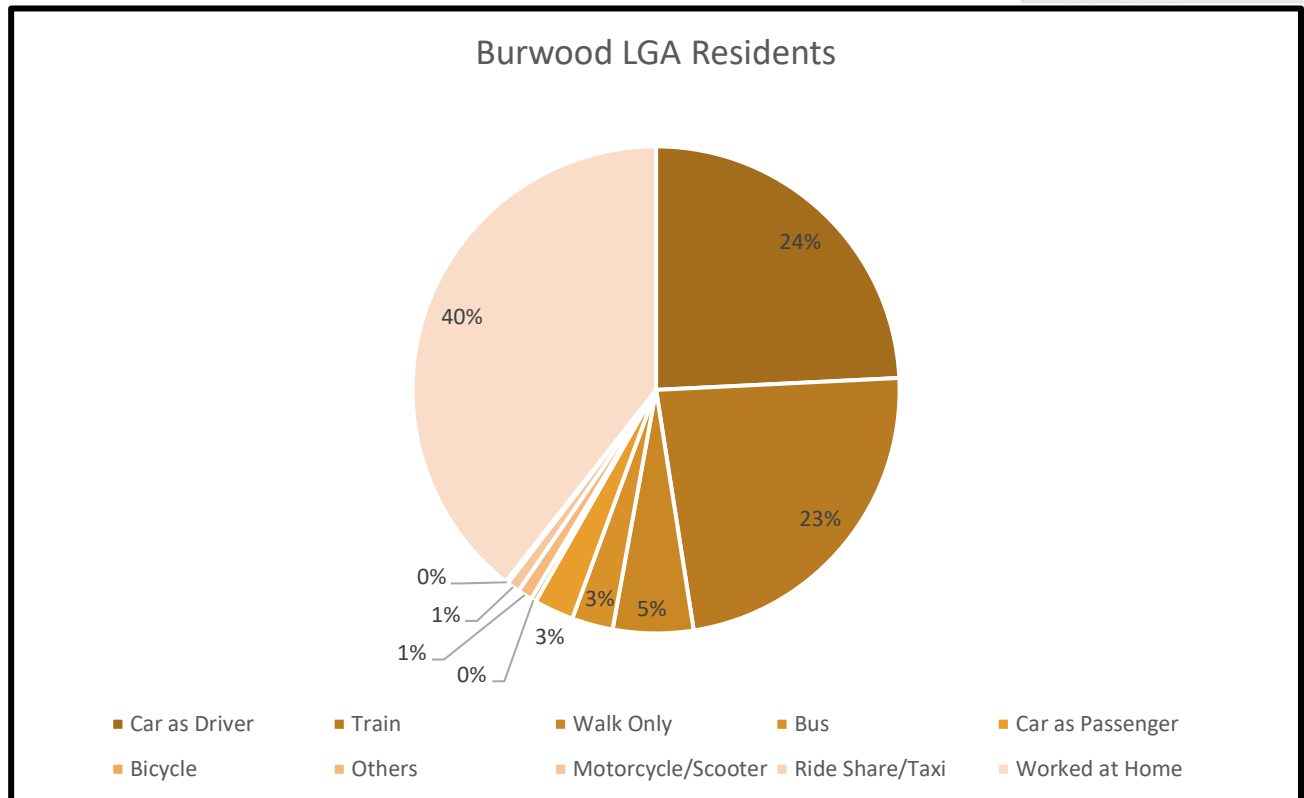


Figure 6: Mode of Transport for Burwood Residents (Source: Australian Bureau of Statistics)

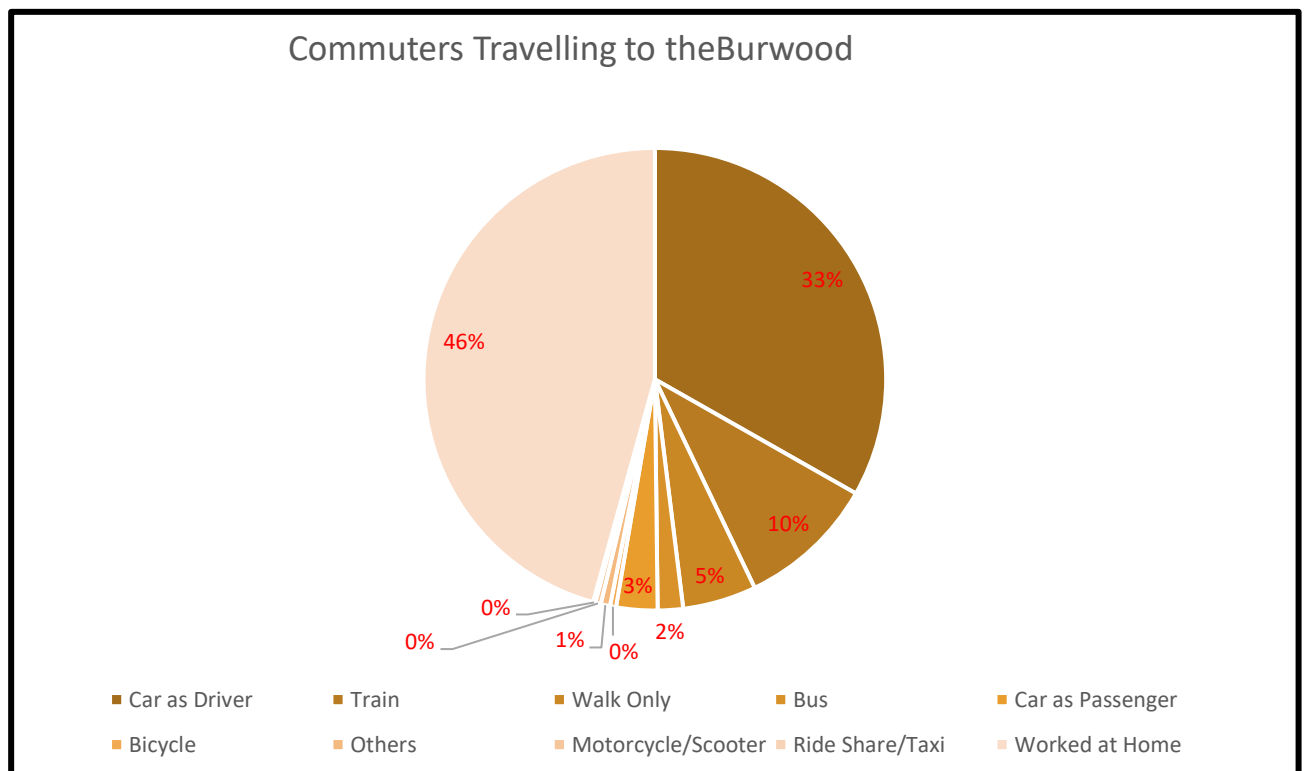


Figure 7: Mode of Transport for Commuters travelling to Burwood (Source: Australian Bureau of Statistics)

Road Network

The following section provides a detailed description of the surrounding roads. The road classification map is presented in **Figure 8** presented below.

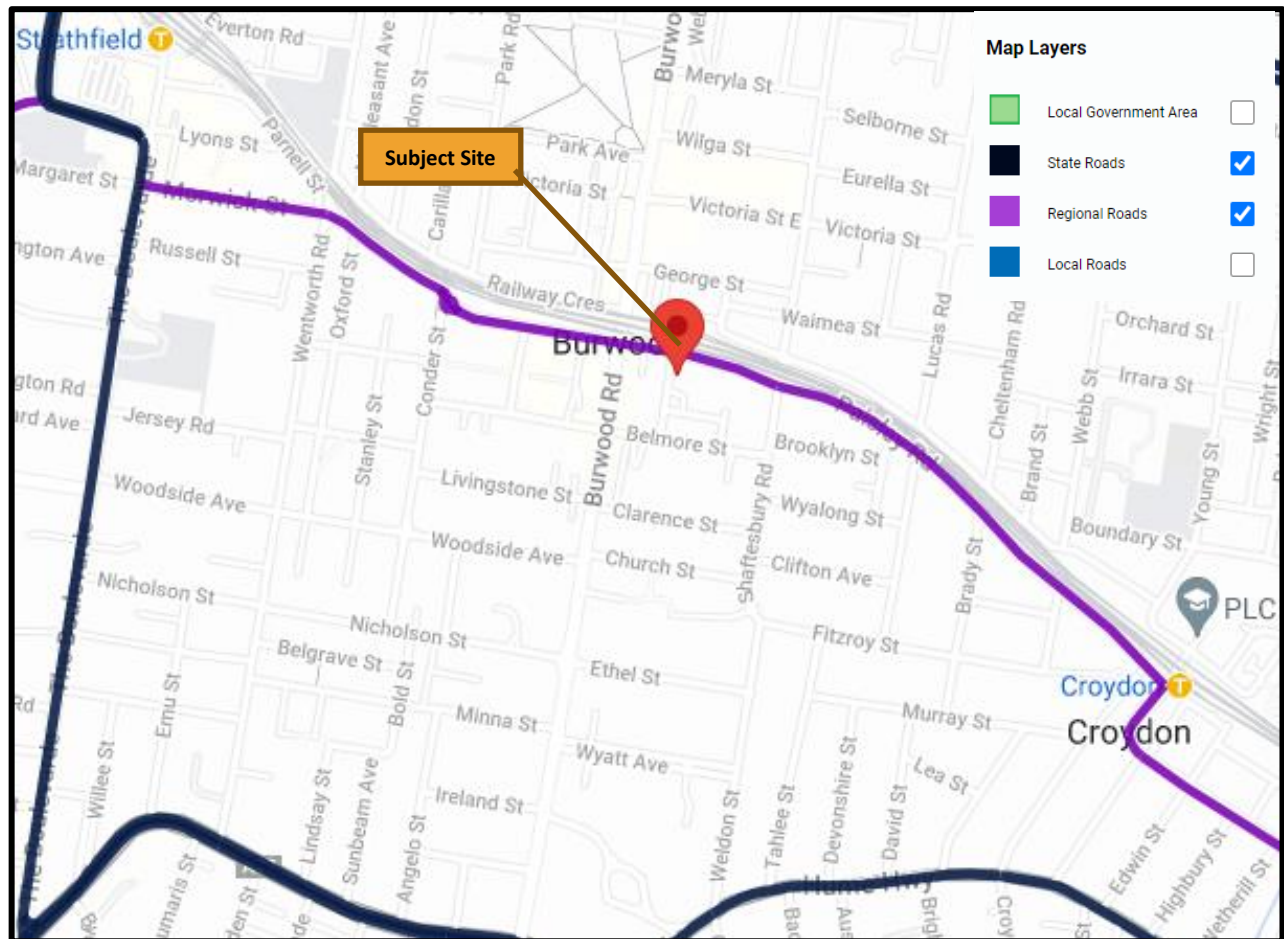


Figure 8: TfNSW Road Classification Map (Source <https://maps.transport.nsw.gov.au>)

Burleigh Street

Burleigh Street is classified as a local road and follows a north-south alignment. The carriageway consists of one traffic lane, and on-street parking is permitted. Burleigh Street accommodates one-way traffic flow(northbound) and connects Belmore Street on the south to the Railway Parade on the north.

A paved footpath is available on either side of the carriageway, and Burleigh Street has a posted speed limit of 40kmph. The street view image of Burleigh Street along the site frontage is presented in **Figure 9** below:



Figure 9: Street View of Burleigh Street Looking North (Source: <https://www.google.com/maps>)

Railway Parade

Railway Parade is classified as a Regional Road and follows an east-west alignment. It connects Shaftesbury Road to the east and Wentworth Road to the west. The carriageway along the Railway Parade is undivided and comprises one traffic lane in each direction, with on-street parking permitted.

A paved footpath is present on either side of the carriageway, and Railway Parade has a posted speed limit of 40 kmph. The street view image of the Railway Parade is presented in **Figure 10** below:



Figure 10: Street View of Railway Parade Looking West (Source: <https://www.google.com/maps>)

Hume Highway

Hume Highway is classified as a State Road and follows an east-west alignment. The carriageway is undivided and comprises two traffic lanes in each direction. Within the suburb of Burwood, Hume Highway has a posted speed limit of 60 kmph.

The carriageway has a paved footpath on either side of the road, and street parking is prohibited. The street view image of Hume Highway is presented in **Figure 11** below:



Figure 11: Street View of Hume Highway Looking West (Source: <https://www.google.com/maps>)

Burwood Road

Burwood Road is classified as a local road and follows the north-south direction. The carriageway consists of one traffic lane, and on-street parking is permitted. Burwood Road connects Fifth Avenue on the south to Bay View Park on the north.

A paved footpath is available on either side of the carriageway, and Burwood Road has a posted speed limit of 40 kmph. The street view image of Burwood Road is presented in **Figure 12** below:



Figure 12: Street View of Burwood Road Looking North (Source: <https://www.google.com/maps>)

Shaftesbury Road

Shaftesbury Road is classified as a local road and follows the north-south direction. The carriageway consists of one traffic lane, and on-street parking is permitted. Burwood Road connects Fitzroy Street on the south to the Great Western Highway on the north.

A paved footpath is available on either side of the carriageway, and Shaftesbury Road has a posted speed limit of 50 kmph. The street view image of Shaftesbury Road is presented in **Figure 13** below:



Figure13: Street View of Shaftesbury Road Looking South (Source: <https://www.google.com/maps>)

Walkability

The locality was assessed for nearby features that would encourage employees and visitors to walk/cycle. Reference is made to the 15-minute walking catchment area outlined in **Figure 14**.

The 'walkability' of a site is a measure of its proximity to other facilities by walking and can be ascertained from www.walkscore.com. The subject site is rated as "Very Walkable" (meaning that most errands can be accomplished on foot) and with a score of 88 out of 100 (obtained from the 'Walk Score' web tool), it provides a higher ranking compared to the average Sydney metropolitan score of 63 out of 100.



Figure 14: Illustrates a 15-minute walkable catchment area from the site

CYCLING

To alleviate traffic congestion and promote an alternative, sustainable mode of transport, Burwood Council has introduced dedicated cycling tracks, promoting smoother and safer travel. These tracks are carefully designed to ensure the safety and convenience of cyclists, enhancing the overall accessibility of the area. Below is the image of Burwood Area Cycling tracks shown in **Figure 15**:

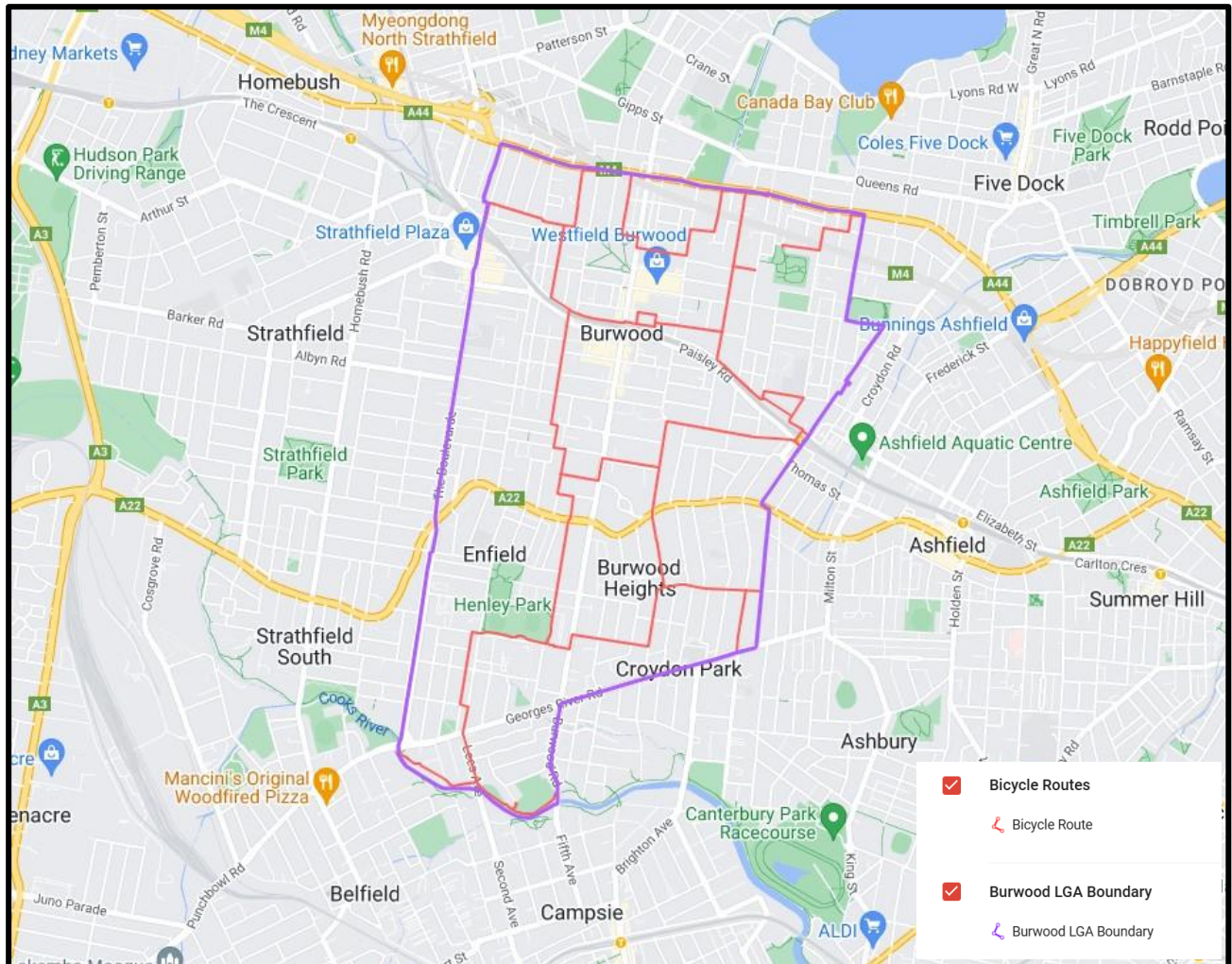


Figure 15: Cycling Tracks Map within Burwood Municipality (Source: <https://www.burwood.nsw.gov.au/For-Residents/Parks-and-Recreation/Cycling>)

PEDESTRIAN ROUTES

Pedestrian Walkways are provided throughout the Burwood Town Centre. Due care is taken to provide safe walkway tracks and signalised crossings for pedestrian safety.

Burwood Station is 160 m away from the subject site and 3 minutes' walk. Below is the image of the Walkway from the Subject site to the nearest railway station, Burwood Station, in **Figure 16**. There is a signalised pedestrian crossing at the intersection of Railway Parade with Burwood Road, thus providing safer pedestrian access from the site to the train station.



Figure 16: Pedestrian Route from Subject site to Burwood Station (Source: Google Maps)

Green Travel Plan

Objectives

The following objectives are set out to achieve the vision of this Green Travel Plan to encourage a shift towards sustainable modes of transport:

Reduction of Greenhouse Gas Emissions:

This can be achieved by reducing the reliance on private vehicles, which are a significant source of carbon emissions. Encouraging alternatives such as public transport, cycling, and walking directly lowers the environmental footprint of the community.

Clear Definition of Alternative Travel Options:

This involves planning and designing the residential development to prioritise and promote alternative modes of transportation. It could include dedicated bike lanes, pedestrian pathways, easy access to public transport hubs, and spaces for car-sharing services, making these options convenient and appealing.

Facilitation of Alternative Travel Mode Choices:

By providing residents with accessible and practical alternatives to private vehicle use, the development encourages sustainable habits. This could involve integrating features like cycling infrastructure, proximity to public transport, and car-sharing programs to make it easier for residents to choose low-emission options.

Creation of a Residential Guide:

A guide would inform residents, visitors, and staff about sustainable travel options within the development. This could include details on bus and train schedules, cycling routes, walking paths, and instructions for using commercial car-sharing programs. This ensures everyone is aware of the sustainable options available to them.

Dynamic Monitoring, Updating, and Advertising of Travel Opportunities:

Ongoing efforts to keep the community informed and engaged with sustainable travel options are critical. This could involve regularly updating the Residential Guide to include the latest information, promotional campaigns for public transport or cycling, and the introduction of new travel services or routes as the development evolves.

Mode Share Targets

The Green Travel Plan aims to reduce the number of private vehicle trips to the site and promote a transition toward more sustainable transportation options. To ensure the plan's effectiveness, it is important that it is consistently monitored and updated to align with current transportation conditions. Success will be measured by setting clear modal shift targets and identifying the actions that yield the most significant results.

The table overleaf summarises the goal as achieving a modal shift of 10% to 15% towards sustainable or active transport, leading to a corresponding decrease in private vehicle trips. This shift also considers the expected return of remote workers to in-office settings for residents and commuters travelling to the Burwood area.

Table 3 : Mode Share Targets

Mode of Transport	Burwood LGA Resident		Commuters Travelling to Burwood	
Car as Driver	24%	14% (-10%)	33%	33% (-10%)
Train	23%	30% (+7%)	10%	20% (+10%)
Walk Only	5%	7% (+2%)	5%	7% (+2%)
Bus	3%	8% (+5%)	2%	7% (+5%)
Car as Passenger	3%	5% (+2%)	3%	5% (+2%)
Bicycle	0%	2%(+1%)	0%	2%(+1%)
Others	1%	1%(0)	1%	1%(0)
Motorcycle/Scooter	1%	1%(0)	0%	1%(0)
Ride Share/Taxi	0%	0%(0)	0%	0%(0)
Worked at Home	39%	30%(-9%)	46%	35%(-11%)
TOTAL	6,470		8,085	

Strategies to Achieve Mode Share Targets

The mode share targets can be achieved by considering the following measures:

- As part of the Welcome Pack, include an Opal Card with a nominal amount;
- The transport Information Guide (TIG) presented in this report should be introduced as part of the Welcome Pack and displayed in the foyer area;
- Present information to the residents about TfNSW's transport planning app/website;
- Provide clear communication to residents, staff and visitors about the available public transport options to key workplace locations;
- Consider introducing EV charging facilities for residents, staff and visitors; Encourage residents, staff and visitors of the available public transport options;
- Encourage staff and visitors to utilise car-pooling/car-share services;
- Offer staff the flexibility to commute during off-peak hours and/or work in a hybrid model to decrease congestion and travel time- thus reducing CO₂ emissions and environmental effects caused by conventional fuels
- Provide bicycle parking areas, encouraging future employees and visitors to ride to the proposed development.
- Provide end-of-trip facilities for staff and visitors; and
- Provide clear communication to residents, staff, and visitors of the available cycle lanes (both on-street and off-street bike paths).

Ongoing Management and Update of the Green Travel Plan

The Green Travel Plan and Transport Access Guide are dynamic documents that require regular updates. The Green Travel Plan should be reviewed periodically (every six months or annually) to assess progress toward the targets set out in this document. The contact details and websites of alternative transport providers also need to be reviewed and updated periodically to ensure they are up to date. Any new transport providers or schemes that may have emerged also need to be added.

The Travel Plan Coordinator, usually the building manager, is responsible for the continuous monitoring and development of both the Green Travel Plan and the Transport Information Guide. Key responsibilities of the coordinator include:

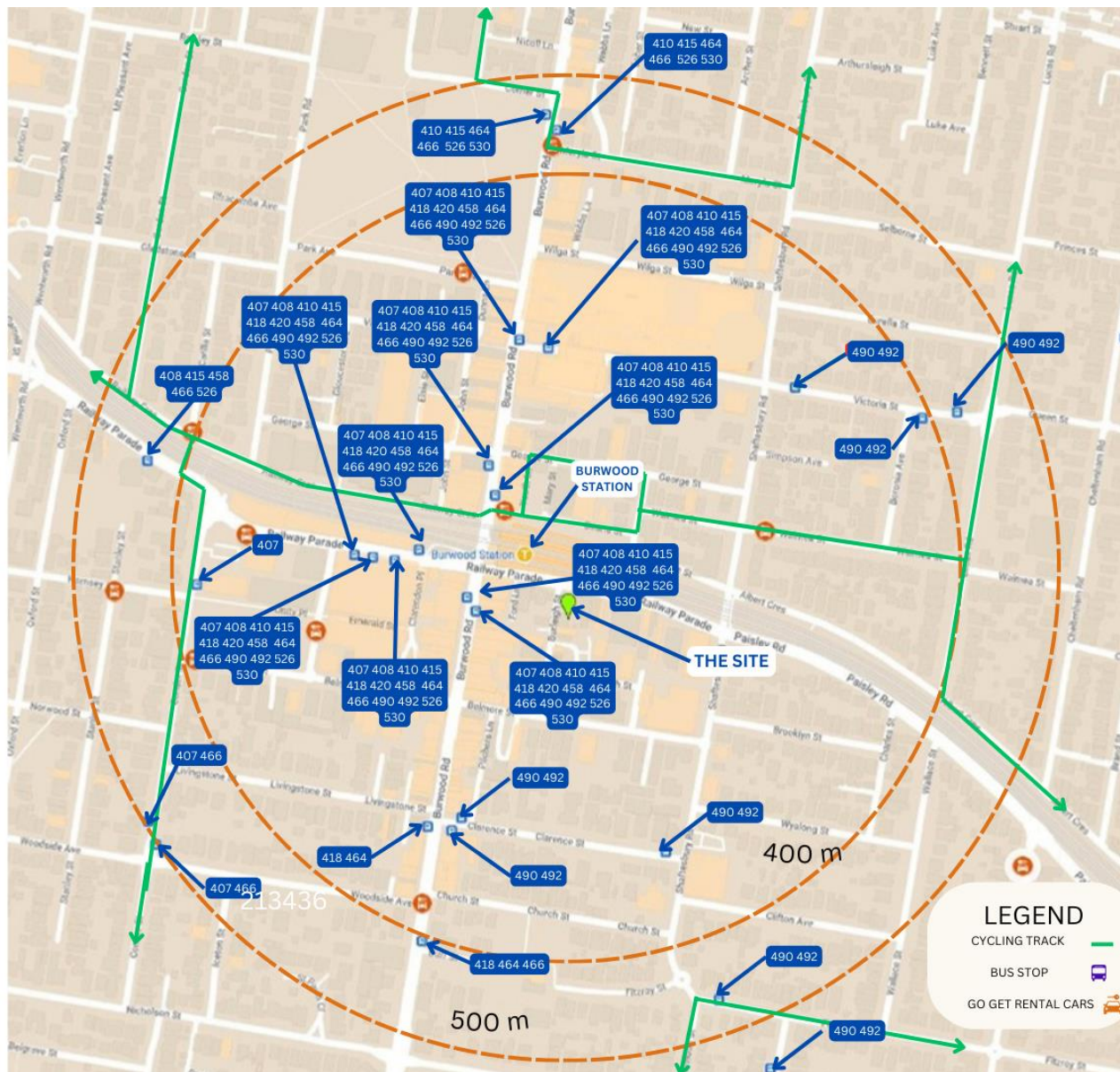
- Conducting regular surveys to assess the travel modes of building occupants.
- Updating the Transport Access Guide and promoting carpooling options.
- Setting and revising travel mode targets as needed.
- Responding to inquiries via the intranet.

Building management will establish a review and monitoring process to ensure the Green Travel Plan accurately reflects changes in transport options and building facilities. The coordinator will also track the modal split of staff commuting to the site and adjust the targets if necessary.

To incentivise staff to switch to more sustainable travel modes, measures like providing pre-loaded OPAL cards to new and existing staff could be implemented to encourage the use of public transport. This initiative would be managed by the future office tenant.

It is important to note that the travel mode targets are aspirational and will require continuous monitoring to ensure their effectiveness.

Transport Information Guide



For More Information

Bicycling

<https://www.burwood.nsw.gov.au/For-Residents/Parks-and-Recreation/Cycling>



Public Transport



<https://transportnsw.info/trip#/trip>