

# Green Travel Plan

71-89 Chandos St, North Sydney



**VARGA TRAFFIC PLANNING** Pty Ltd  
**Transport, Traffic and Parking Consultants**



Suite 6, 20 Young Street, Neutral Bay NSW 2089  
PO Box 1868, Neutral Bay NSW 2089  
Ph: 9904 3224

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# **1. Background**

## **1.1 Introduction**

Varga Traffic Planning (VTP) has been commissioned by A+ Design Group to prepare a Green Travel Plan to accompany a planning proposal to North Sydney Council for a mixed-use development to be located at 71-89 Chandos Street, St Leonards.

## **1.2 Green Travel Plan Objectives**

The purpose of the Green Travel Plan is to set site-specific actions and incentives to manage travel demands and embrace the principles of sustainable transport to encourage the greater use of transport modes that have a lower environmental impact such as walking, cycling, public transport and car share schemes.

The use of sustainable modes of transport will provide a range of public benefits including:

- improved health
- improved community connectivity
- reduced competition for road space and congestion
- reduced competition for car parking
- reduced noise and air pollution
- potential cost savings.

This Green Travel Plan therefore aims to provide a package of coordinated strategies and actions to facilitate a shift towards sustainable modes of transport and reduce private vehicle trips.

## **2 Transport Policy Context**

### **2.1 Regional Policy Context**

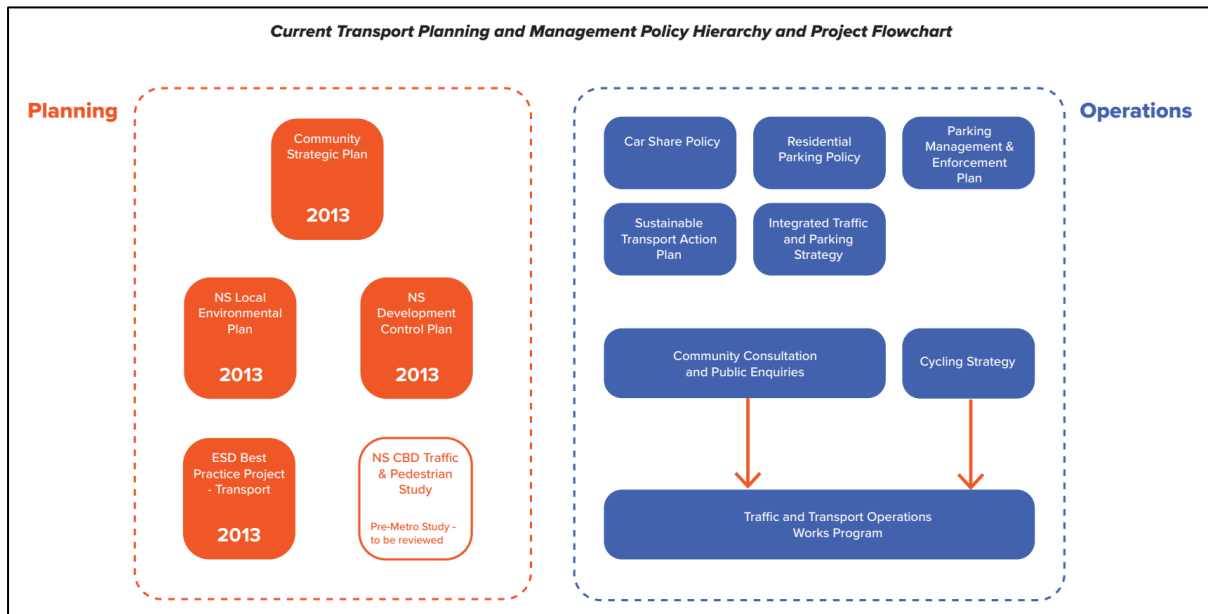
The NSW Government's A Plan for Growing Sydney and the Long Term Transport Masterplan identify the following objectives for transport across Sydney:

- Sydney will become more compact, multi-centred connected city, with a transport network that provides quick and convenient public transport connections across the city and frequent links to other cities.
- Development within the walking and cycling catchments of local centres will improve access to local services and public transport that links to major centres, with seamless interchange opportunities.
- The city will become more liveable by improving the design of buildings and public areas, development of mixed-use spaces where people work and live, and creating more opportunities for people to walk and cycle to work and major service centres.
- Central to these outcomes will be an integrated and efficient transport system that is closely aligned with land use planning.
- Improved public transport networks will increase productivity and global competitiveness.
- Better transport hubs and improved connections will support revitalisation of neighbourhoods and the success of urban centres.
- Public transport services will link people to the jobs available in the Global Economic Corridor.
- With an integrated and more effective transport system, a future Sydney will be more sustainable, more liveable and will be a strong global city.

## 2.2 Local Policy Context

North Sydney Council's current transport policy is diagrammatically shown in the flowchart below.

**Figure 2.1: North Sydney Council's Existing Transport Planning Context**



*Source: North Sydney Transport Strategy, North Sydney Council*

## 2.3 Existing Mode Choice

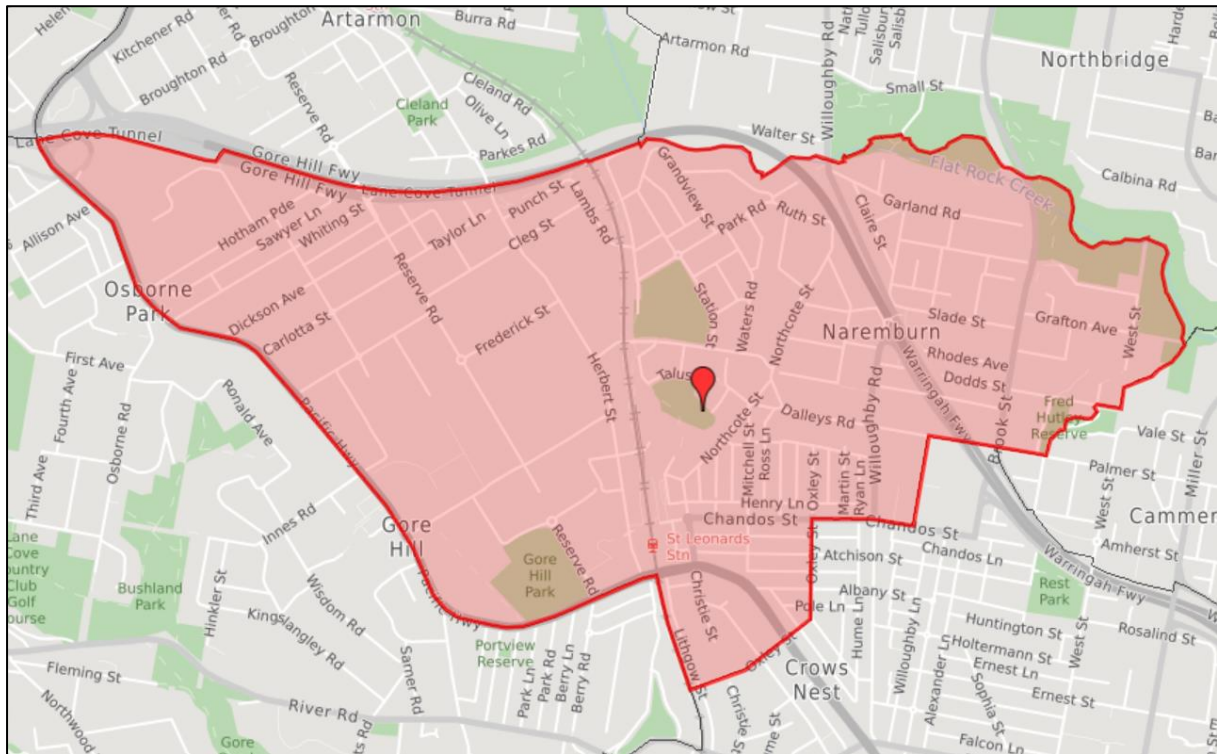
Existing transport modal split of commuters working in St Leonards – Naremburn (**Figure 2.2**) and Crows Nest – Waverton (**Figure 2.3**) as well as Sydney CBD are obtained from the 2016 Census – Employment, Income and Education data from the Australian Bureau of Statistics, summarised in **Table 2.1**.

The 2016 Census data indicates that 32.1% of people working in St Leonards and Crows Nest utilises public transport, compared to 60.1% public transport usage in Sydney CBD.

Furthermore, 50.4% of people working in St Leonards and Crows Nest used a private vehicle for their work trip, compared to 21.8% recorded for Sydney CBD.

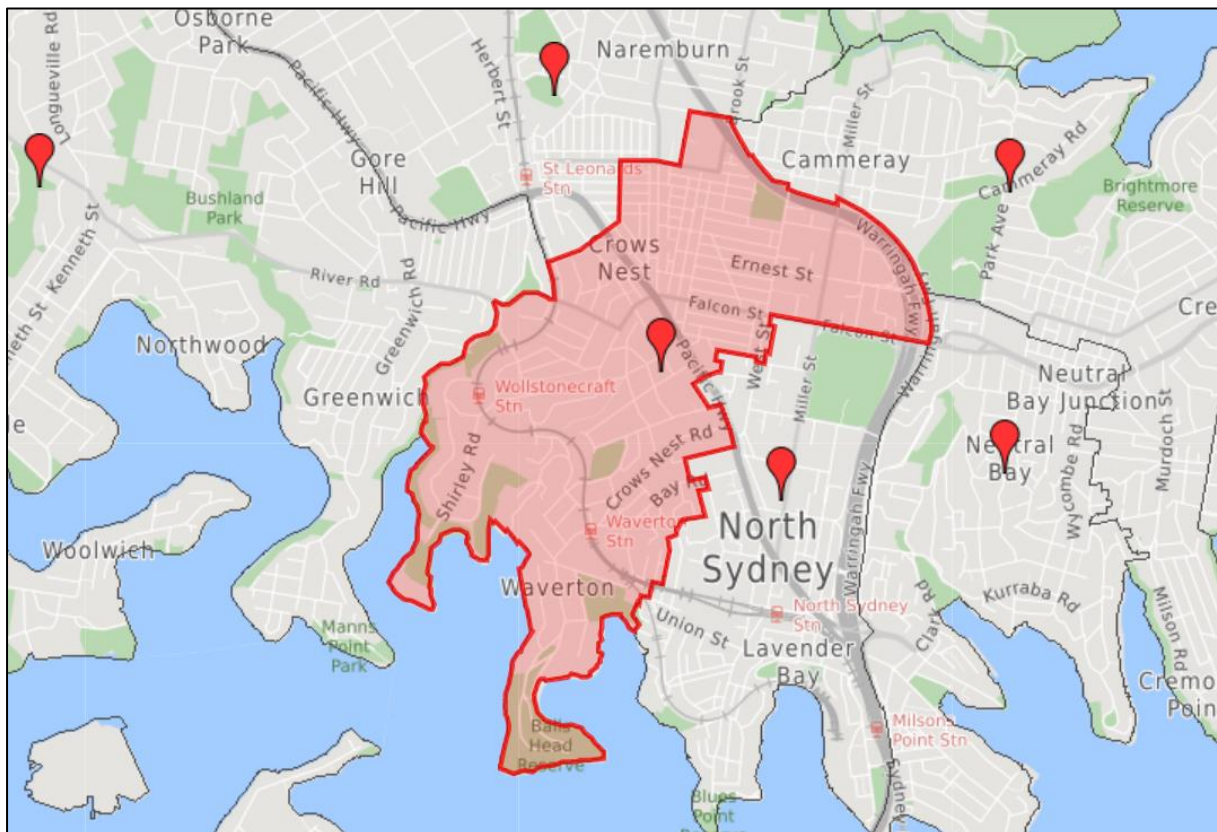
Accordingly, having considered St Leonards and Crows Nest is extremely well served by public transport services, this leaves plenty of room for improvement to encourage a greater shift towards sustainable modes of transport.

**Figure 2.2: St Leonards – Naremburn Statistical Area 2**



*Source: Google Maps*

**Figure 2.3: Crows Nest – Waverton Statistical Area 2**



*Source: Google Maps*

**Table 2.1: Existing Transport Modal Split (2016 Census Data)**

	St Leonards & Crows Nest	Sydney CBD
Public Transport	32.1%	60.1%
Private Vehicle	50.4%	21.8%
Active Transport	5.4%	8.1%
Other Modes	0.4%	0.6%
Worked at Home or Not Stated	11.7%	9.4%

## 2.4 Sydney Metro

Sydney Metro Norwest was recently completed and is now operational between Chatswood and Tallawong, with services operating at 5-minute intervals during commuter peak periods and 10-minute intervals at all other times.

The Sydney Metro Southwest between Chatswood and Bankstown is currently under construction and is due for completion in 2024. It will allow commuters to have direct access to Crows Nest and Victoria Cross in the lower north shore (North Sydney), Barangaroo, Martin Place, Pitt Street and Central in Sydney CBD, and all stations to Bankstown.

The Crows Nest Metro Station will be situated within a short 450 metres walking distance from the site, and will have the following features:

- two station entrances with one located on Pacific Highway between Oxley Street and Hume Street and one located on Clarke Street near the corner of Hume Street
- retail space next to the station entry and retail opportunities in the Pacific Highway side of the station
- public domain works including footpaths, street tree planting, lighting and street furniture
- new pedestrian lights to cross the Pacific Highway on the northern side of Oxley Street intersection
- new pedestrian crossings on Clarke and Hume Streets



- new bike parking on Hume Street, Pacific Highway, Clarke Street and Oxley Street
- new kiss and ride and taxi bays in close proximity to the station
- installation of wayfinding signage and Sydney Metro information
- Hume Street bi-directional separated cycle link from Clarke Street to Nicholson Street
- upgraded Hume Street intersection with cycle crossing and increased pedestrian capacity
- improved pedestrian crossings at intersections of Oxley Street, Pacific Highway, Hume Street and Clarke Street.

Furthermore, Sydney Metro is envisaged to accommodate 20,000 to 30,000 trips in the peak hour with potential to accommodate approximately 40% of the road based trips that currently utilise the Metro corridor. This has the potential to deliver a paradigm shift in the way Sydney's residents and workers travel to, from and through St Leonards, Crows Nest as well as surrounding suburbs.

## **2.5 Emerging Trends**

The transport sector is currently undergoing its most rapid transformation in decades. Changing lifestyle choices and emerging transport technologies could significantly change land use and transport planning within the next 10-20 years.

The following emerging trends have the potential to significantly change the number and distance of journeys and / or the way that individuals travel:

- E-business.
- Remote working / working from home especially post success of its implementation during COVID-19.
- Small business start-ups and co-working spaces.
- Hot desking / activity based working / team neighbourhoods.

- Multi-modal journey planning.
- Dynamic road user charging (e.g. tolls, parking, etc.)
- Car sharing.
- Ride sharing (e.g. Uber).
- Car parking market places.
- Electric vehicle technology (both bike and car).
- Autonomous vehicle technology.

The potential impacts of these emerging trends include:

- Significant reductions in per capita travel demands (trip frequency and distance).
- Reductions in per capita non-residential floor space requirements.
- Improved access to information and increased travel / modal flexibility.
- Reduced private vehicle ownership and associated parking demand.
- Increased demand for electric vehicle charging facilities.
- Improved road safety.

These emerging trends are set to have a profoundly transformative effect on cities, transport behaviour and urban life, and will assist in the delivery of the North Sydney Council's strategic objectives.

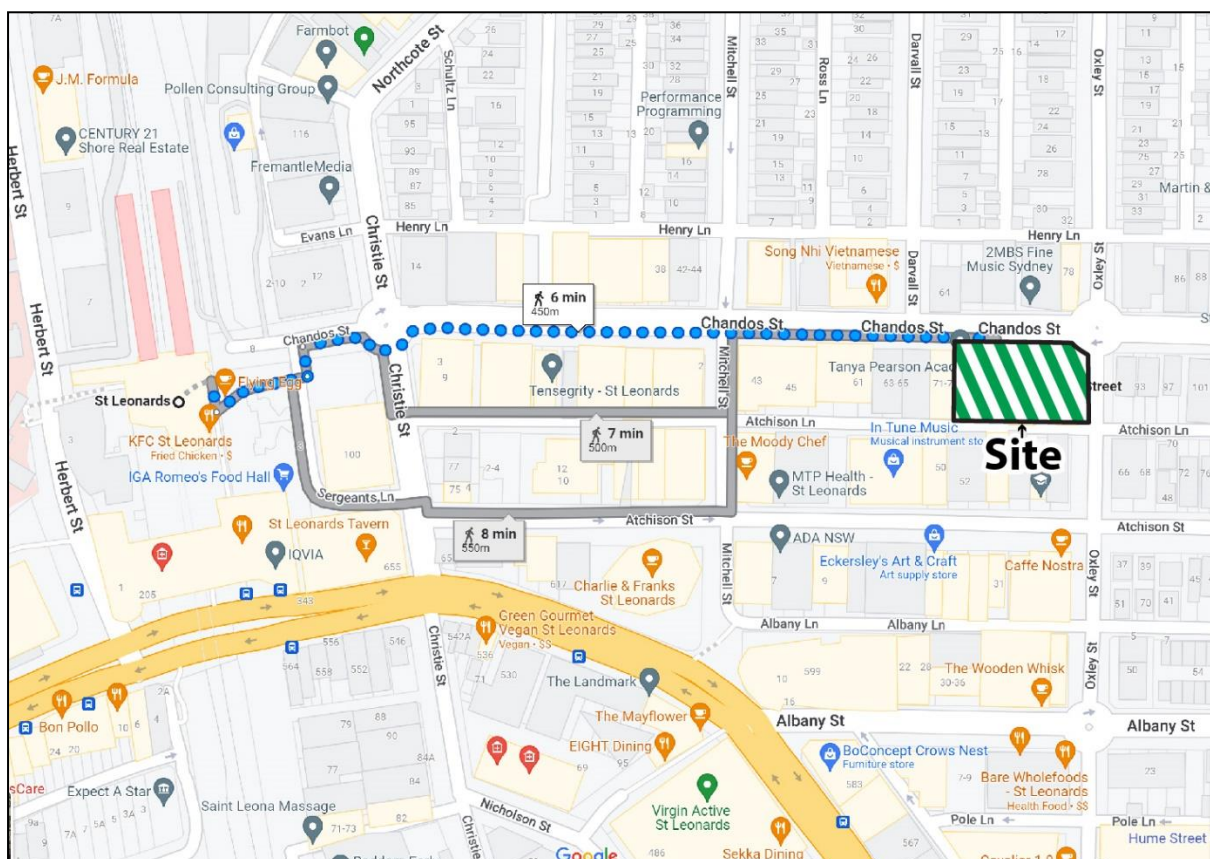
### 3. Existing Sustainable Transport

#### 3.1 Train Services

St Leonards Railway Station is located within approximately 500 metres walking distance from the site as illustrated in **Fig. 3.1**, serving the T1 North Shore Line operating between Berowra or Hornsby to Richmond or Emu Plains via Sydney CBD, and T9 Northern Line operating between Hornsby and Gordon via Epping, Strathfield and Sydney CBD.

Train services operate out of St Leonards Railway Station every 5-10 minutes during peak periods and every 10-15 minutes during off-peak periods.

**Figure 3.1: Walking Distance to St Leonards Station**

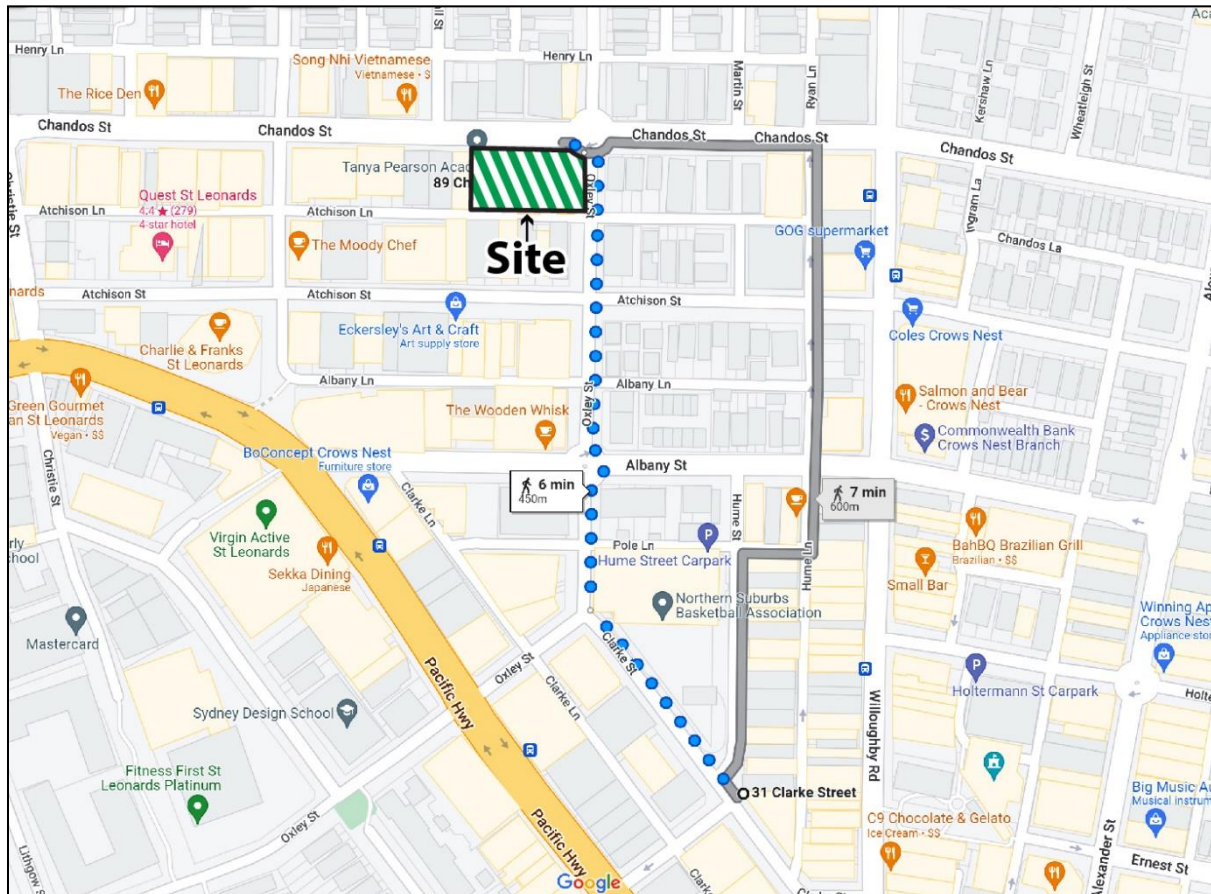


Source: Google Maps

The Crows Nest Metro Station due for completion in 2024 is located within approximately 450 metres walking distance from the site as illustrated in **Fig. 3.2**, and will serve the Sydney Metro Southwest Line connecting to Sydney CBD and beyond to the southwest.

Metro services is expected to operate at 5-minute intervals during commuter peak periods and 10-minute intervals at all other times.

**Figure 3.2: Walking Distance to Sydney Metro Crows Nest Station**



Source: Google Maps

### 3.2 Bus Services

The site is located within a strategic bus corridor with direct access to high frequency and high capacity buses that link key employment and growth centres with North Sydney and Sydney CBDs. The *Integrated Public Transport Service Planning Guidelines* also state that bus services influence travel mode choices when the site is accessible within 400 metres (approximately 5 minutes) of a bus stop.

There are a significant number of bus routes travelling within a short walking distance of the site in Pacific Highway, and Willoughby Road as illustrated in the **Transport Access Guide** provided in **Appendix A**.

### 3.3 Car Share

Car sharing offers a convenient, affordable and sustainable alternate transport option to owning / using private cars. Car sharing encourages more sustainable travel habits, and makes more efficient use of available parking by allowing a single vehicle to be used by a large number of people throughout the day. This reduces car ownership levels and the competition for parking spaces, which ultimately benefits all road users.

Car share involves signing up to a membership plan offered by car share operators. Plan fees vary depending on how frequent the user intends to use the service and affects hiring costs. Car share users are charged by time and distance, at a rate set by each operator. The available car share pods in the vicinity of the site are shown in the **Transport Access Guide** provided in **Appendix A**.

### 3.4 Cycling Infrastructure

Cycling has health benefits, is sustainable and can help reduce transportation costs when compared to driving.

The existing cycleways in the vicinity of the site are shown in the **Transport Access Guide** provided in **Appendix A**, and the **North Sydney Cycling Guide Map** developed by North Sydney Council is provided in **Appendix B**.

Google Maps also now has a cycling mode to help cyclists navigating the best route to their destination on their bicycle. Another prominent cycling smart phone app called “Bike Citizens - Bicycle GPS” is also available to assist cyclists in urban areas and provides the following features:

- **Routing Profile** - The route navigation feature can adapt to suit personal needs and cyclists are able to choose between leisurely, fast or convenient route.
- **Bicycle Type** - The route navigation feature takes the cyclists type of bicycle into account. For example, if a person is riding a road bike, roads with tram tracks or cobblestones are avoided.

- **Gradient Profile** - Bike Citizens always highlights the route with the most suitable gradient. More or less tolerance will be allowed depending on the routing profile.
- **Surfaces** - The cycling app searches for the most suitable route in accordance with the type of bicycle that is selected and avoids surface features such as cobblestones or unsurfaced routes.
- **Offline Map Material** – Once the map material has been downloaded, cyclists do not need an internet connection to use the navigation tool. This means that the phone battery will last longer and avoiding potential high roaming charges.

### 3.5 Pedestrian Infrastructure

Walking in daily transport routing helps maintain health and improve fitness. Footpaths are generally provided on both sides of all roads in St Leonards to encourage walking and keep local residents and businesses connected.

All roads within the vicinity of the site are generally provided with footpaths on both sides of the road with safe crossing opportunities at regular intervals including signalised crossings at regular intervals along Pacific Highway.

## 4. Travel Mode Targets

### 4.1 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:

- **Accessibility** – Improve access, safety, amenity and convenience of sustainable transport modes for travel to and from the site.
- **Incentives** – Provide incentives for staff when they travel to work via public transport, car pool or cycle and establish a culture of active and public transport use.
- **Restrict** – Continue to limit the convenience of car access to the site to encourage other, sustainable modes of transport.

### 4.2 Mode Share Targets

The purpose of the Green Travel Plan is to reduce potential private vehicle trips to the site and facilitate a shift towards sustainable modes of transport. It is pertinent that the Green Travel Plan is regularly monitored and updated to reflect the most current transport conditions to achieve its desired effect. The success of the Green Travel Plan can be measured by setting modal targets and identifying the measures or actions that have the greatest impact.

A summary of the targeted transport modal split is provided in **Table 4.1** which envisages to achieve a 20% modal shift towards sustainable transport, that is, 20% less private vehicle trips.

**Table 4.1: Target Transport Modal Split**

	St Leonards & Crows Nest	Target
Public Transport	32.1%	47.1% (+15%)
Private Vehicle	50.4%	30.4% (-20%)
Active Transport	5.4%	10.4% (+5%)
Other Modes	0.4%	0.4%
Worked at Home or Not Stated	11.7%	11.7%

### 4.3 Actions

A series of actions are recommended in this Green Travel Plan which forms the strategies and initiatives that can be implemented to achieve the desired transport modal split targets. It is pertinent to note that these actions should be regularly monitored and updated as required to reflect current transport conditions.

**Table 4.2: Green Travel Plan Actions**

Strategy	Objectives	Actions	Resources
<b>1. Managing Car Use</b>			
1.1 Car Sharing	Car share is a great alternative for staff requiring a vehicle to travel to / from meetings or other work related purposes during their shift, and prevents the need for staff to bring their own vehicle in those occasions.	Consider providing car share spaces on site and provide car share memberships to staff.	Building management, commercial tenant responsibility.
1.2 Car Pooling	Carpooling offers a genuine alternative to those who may not have convenience access to public transport from their place of residence and increasing the efficiency of each car use (i.e. transport more passengers) and thereby reducing the number of vehicles on the road.	Prioritise on-site car space allocation for carpool vehicles.	Commercial tenant responsibility.
<b>2. Promoting Public Transport</b>			
2.1 Travel Pass	Encourage greater public transport usage.	Consider subsidy for staff travelling via public transport, provide Opal Travel Cards to staff for	Commercial tenant responsibility.



		any work related travels during their shift (i.e. travel to meetings).	
<b>3. Promoting Cycling and Walking</b>			
3.1 End of Trip Facilities	Encourage cycling and walking.	Consider providing end-of-trip facilities in the building such as change rooms, showers, secured bicycle parking.	Building management.
<b>4. Other Incentives</b>			
4.1 Travel Access Guide	Provide up-to-date and easy to access information on existing transport options.	Provide Travel Access Guide to staff as part of induction package and regularly review / update to ensure information are up to date.	Building management, commercial tenant.
4.2 Flexible Working Hours	Allow staff to travel outside of peak periods.	Consider flexible office hours, work-from-home and time-in-lieu policies where possible.	Commercial tenant.

## 5. Monitoring and Maintenance

A monitoring and review process for the Green Travel Plan will be set out by building management to ensure that the information contained within reflects any changes to the transport conditions and building facilities.

A Travel Plan Coordinator (usually building manager) will be designated with the responsibility of maintaining the Green Travel Plan. This Coordinator will also monitor and assess the modal-split for staff working on the site and revisit the proposed targets if necessary.

Regular review of the actions outlined in this plan should be undertaken intermittently to determine whether alternative or supplementary actions are necessary. It is recommended that a survey will be conducted every 6 months to monitor the progress of targets as documented in **Table 4.1**, which will be undertaken by the Travel Plan Coordinator.

It is pertinent to note that the travel mode targets are aspirational and requires continual monitoring.

## **Appendix A: Transport Access Guide**



## Bus Routes

- 114 Balmoral to Royal North Shore Hospital
- 115 Chatswood to City Bridge Street via North Sydney
- 144 Manly to Chatswood via St Leonards
- 200 Bondi Junction to Gore Hill
- 252 Gladesville to City King Street Wharf via North Sydney
- 254 Riverview to McMahon's Point
- 265 Lane Cove to North Sydney via Greenwich
- 286 Denistone East to Milsons Point via St Leonards and North Sydney
- 287 Ryde to Milsons Point via St Leonards and North Sydney
- 290 Epping to City Erskine Street via Macquarie University and North Sydney
- 291 Epping to McMahon's Point
- 320 Mascot to Gore Hill
- 602X Bella Vista Station to North Sydney (Express Service)
- 612X Castle Hill to North Sydney (Express Service)
- 622 Dural to Milsons Point via Cherrybrook

## Cycle Routes

--- Marked On-Road Bike Route

M Future Metro Station Entry Points (Due 2024)

T Train Station

● Car Share

# TRANSPORT ACCESS GUIDE

58-64 Atchison St, St Leonards

## **Appendix B: North Sydney Bike Map**



