269 Lane Cove Road, Macquarie Park
Green Travel Plan

Prepared for:

NEXTDC Limited

18 April 2024

The Transport Planning Partnership

269 Lane Cove Road, Macquarie Park

Green Travel Plan

Client: NEXTDC Limited

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Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	21/02/24	Tim Zhang Ashwini Uthishtran	Jessica Ng	Ken Hollyoak	Ken Hollyoak
V02	05/04/24	Tim Zhang Ashwini Uthishtran	Jessica Ng	Ken Hollyoak	Ken Hollyoak
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V04	18/04/24	Tim Zhang Ashwini Uthishtran	Jessica Ng	Ken Hollyoak	

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1 Executive Summary

This Green Travel Plan (GTP) has been prepared by The Transport Planning Partnership (TTPP) on behalf of NEXTDC Limited to accompany a detailed State Significant Development Application (SSDA) for the S5 data centre development at 269 Lane Cove Road, Macquarie Park. The legal description of the site is Lot 3 in Deposited Plan (DP) 1129811.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-63168959) to promote public transport and active transport use and assist in the management of the future travel demand following occupation of the development.

The site is well serviced by public transport with several bus routes operating along Lane Cove Road and Waterloo Road. The entrance to Macquarie Park Metro Station is immediately to the north of the site. The site includes a lengthy frontage to Lane Cove Road which provides access to the M2 Hills Motorway and Epping Road.

The application seeks consent for construction and operation of a data centre development with 105 car parking spaces, including 4 DDA spaces and 10 EV spaces. The application also includes the delivery of two internal roads and an urban plaza adjacent to the Macquarie Park Metro Station entrance in accordance with Council requirements. Vehicle access to the site would be provided off Waterloo Road via the internal road herein referred to as Road 13.

The GTP will be implemented to encourage staff and visitors to make use of sustainable transport methods to/from the development and reduce the reliance on car usage, specifically, single occupant car usage, minimising impacts to the surrounding area.

The mode share targets for the site have been established with achievable goals in mind and are aligned with Council's targets for the precinct – that is, a 45 per cent public transport mode share. The targets will be updated when the GTP is reviewed to align with any changes to the site and/or City of Ryde Council strategies or plans.

The targets have a 5-year timeframe and are shown in Table 5.1.

Furthermore, Table 6.1 provides a summary of the key strategy and framework action table for the proposed development to achieve the mode share targets.

Table 1.1: Mode Share Targets

Method of Travel	Target
Drive Alone	**35%**
Train / Metro	**31%**
Bus	**14%**
Carpool	**7%**
Walked Only	**6%**
Bicycle	**4%**
Motorbike / Scooter	**3%**
Total	**100%**

Table 1.2: Framework Action Table

Action	Objective	Responsibility	Timeline
1. Reduce on-site car parking and provide designated EV spaces	1	Proponent	SSDA Design
2. Provide 12 bicycle parking spaces within a secure room in the basement car park.	1	Proponent	At Practical Completion of the Base Building
3. Provide public transport noticeboard at key locations within the site in the form of a Transport Access Guide (TAG). This will also be posted on the website, displayed in the lobby and included as part of the welcome pack distributed to all employees upon occupation.	1	Travel Plan Coordinator	Prior to Tenant Occupation
4. Provide food and beverage opportunities on-site.	3	Proponent	At Practical Completion of the Base Building
5. Provide tenants with a TAG on day one of occupation and post the TAG on noticeboards, front entrances, website, social media etc. Walking and cycling maps and the surrounding facilities will be available on site.	1	Travel Plan Coordinator	Upon Occupation
6. Provide discounted GoGet memberships for staff and provide information of existing car share facilities in the area as part of the welcome pack.	1,2	Proponent	In Accordance with Car Share Provider Agreement
7. Discuss providing public transport travel allowance for staff members (for each tenant to decide on)	1	Travel Plan Coordinator	Ongoing
8. Encourage Walking Groups and Bicycle User Groups for staff to encourage the active transport use	1	Travel Plan Coordinator	Ongoing
9. Ongoing review of the GTP to introduce additional measures as required.	1, 2, 3	Travel Plan Coordinator	Annually

2 Introduction

This report has been prepared to accompany a detailed SSDA for the proposed S5 data centre development at 269 Lane Cove Road, Macquarie Park (SSD-63168959).

2.1 Author Credentials

Table 2.1 provides a summary of the Author Credentials.

Table 2.1: Summary of Author Credentials

Name	Qualifications	Professional Overview
Ken Hollyoak, Director	FIEAust CPEng NER APEC Engineer IntPE (Aus) RPEQ FAITPM MICE FICHT Eur Ing BSc (Hons) MSc (Dist)	Ken is a chartered professional engineer and has over 40 years of experience in the road design/ transportation & traffic planning field. He primarily works as traffic advisor preparing transport impact assessments for development applications / planning proposals as part of multidisciplinary development teams.
Jessica Ng, Associate	BE Civil (Hons)	Jessica has 10 years of experience in traffic and transportation engineering in both public and private sectors. Jessica is experienced in assessing traffic, transport and parking impacts through her involvement in various small to large scale developments.
Ashwini Uthishtran, Traffic Engineer	BE Civil (Hons) / B Com	Ashwini has five years of experience with working on various projects. She also has experience with working on traffic impact assessments (TIA), construction traffic management planning (CTMP) and SIDRA Intersection modelling.

2.2 Project Description

The application seeks consent for construction and operation of a data centre development and includes site preparation works, bulk earthworks and infrastructure, and construction of the buildings, ancillary facilities, and associated site works. The application also includes the delivery of two internal roads and an urban plaza adjacent to the Macquarie Park Metro Station entrance.

Specifically, the Project comprises the redevelopment of the site as summarised below:

The application seeks consent for construction and operation of a data centre development and includes site preparation works, bulk earthworks and infrastructure, and construction of the buildings, ancillary facilities, and associated site works. The application also includes the delivery of two internal roads and an urban plaza adjacent to the Macquarie Park Metro Station entrance.

Specifically, the Project comprises the redevelopment of the site as summarised below:

- Site preparation works including demolition and removal of existing structures, tree removal and bulk earthworks.

- Staged construction and operation of two data centre buildings (Building A and Building B), each with a maximum height of 65 metres and a combined total gross floor area (GFA) of 46,935m^2 comprising 33,643m^2 of technical data hall floor space and 13,292m^2 of office, retail and innovation hub floor space.
- Building A will be delivered in Stage 1, comprising:
  - Basement parking for 105 cars including four accessible spaces and 10 EV spaces.
  - Two retail tenancies at ground level: 335m^2.
  - Lobby and innovation hub including auditorium and training rooms: 3,192m^2.
  - NEXTDC and mission critical (MCX) office floor space: 9,765m^2.
  - Seven storeys of technical data floor space accommodating seven data houses: 17,258m^2
  - Utilities including diesel generators (2MWe), above-ground water tanks for industrial water (460kL each), above-ground diesel storage tanks (110kL each) and an above-ground water tank for fire water (350kL each).
  - Business identification signage facing Waterloo Road and Lane Cove Road.
- Building B will be delivered in Stage 2, comprising:
  - Seven storeys of technical data floor space accommodating seven data halls: 16,385m^2.
  - Construction of a sky bridge which will connect with Building A, providing direct access between the data halls.
  - Utilities including diesel generators (2MWe), above-ground water tanks for industrial water (460kL each), above-ground diesel storage tanks (110kL each) and an above-ground water tank for fire water (350kL each).
  - Business identification signage on the western and southern building facades.
- Landscaping across the site in accordance with the project staging, delivering a mix of native and endemic plant species, shrubs and grasses, including 93 additional trees within a total area of 4,835m^2 deep soil and a resultant tree canopy cover of 6,211m^2.
- Staged delivery of public domain works, including:
  - Stage 1: construction of the northern extent of Road 13 from Waterloo Road and urban plaza between Building A and Waterloo Road.
  - Stage 2: construction of the remaining southern extent of Road 13 and the full extent of Road 5.
- Delivery of 90 megawatts of power (via a separate application with Ausgrid) with a 33kV switching station to be accommodated on site, as well as other site services, including stormwater infrastructure.

2.3 Secretary's Environmental Assessment Requirements

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 8 November 2023 issued for the SSDA (SSD-63168959). Specifically, this report has been prepared to respond to Transport for NSW's letter dated 20 October 2023, as follows:

- *Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site.*

This GTP has been prepared to propose initiatives and measures that can be implemented to encourage green travel modes. This GTP is envisaged to primarily target staff.

2.4 Purpose of GTP

The purpose of a GTP is to detail a strategy for managing travel demand that embraces the principles of sustainable transport. In its simplest form, this GTP encourages use of transport modes that have low environmental impacts, such as active transport modes including walking, cycling, public transport, and better management of car use.

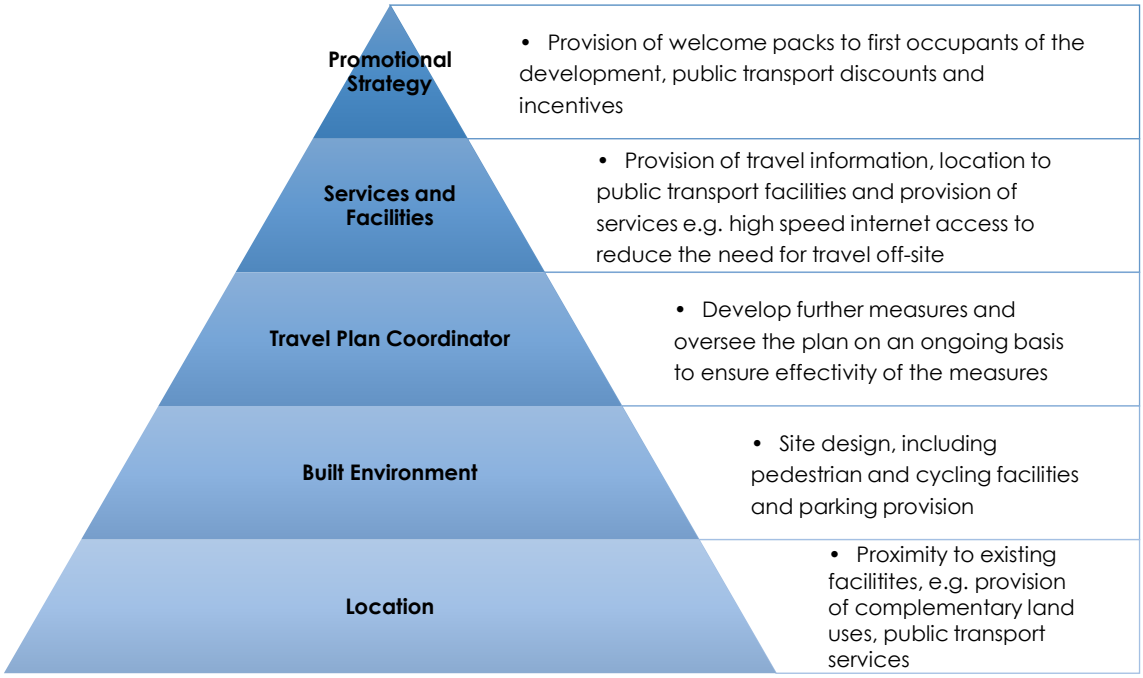
Active transport presents a number of interrelated benefits including:

- Improved personal health benefits,
- Reduced traffic congestion, noise and air pollution caused by motor vehicles,
- Greater social connections within communities, and
- Cost savings to the economy and individual.

To ensure that the GTP meets its intended objectives, a review of 'best practice' guidelines such as City of Ryde Council's Travel Plan Guidelines has been undertaken.

2.5 Travel Plan Pyramid

Figure 2.1: Travel Plan Pyramid



All elements in the Travel Plan Pyramid are critical to the success of the GTP, but Figure 2.1 illustrates that the key foundations to ensure the success of an GTP are:

- **Location** – proximity to existing public transport services and proximity to mixed land uses, e.g., shops and services, such that walking or cycling becomes the natural choices, and
- **Built Environment** – provision of high-quality pedestrian and cycling facilities, end-of-trip facilities and reduced car parking provision to encourage sustainable transport choices.

2.6 Drivers of the Plan

There are a number of social, environmental and economic drivers for developing and implementing a GTP for developments as detailed below.

2.6.1 Car Parking

Car parks utilise valuable land resources and impact amenity. If the area continues to grow and there is no modal shift towards non-car transport modes, the car parking demand could increase significantly. As such, the provision of car parking must reflect the site's proximity to public transport to influence a modal shift to more sustainable transport modes.

The site is located adjacent to the Metro Station and high frequency bus services and therefore, the provision of less car parking could be a viable option to manage car travel. In

this case, it is proposed to provide 105 car parking spaces, which is less than the maximum allowable car parking provision of 126 car spaces for the site. This level of car parking is considered sufficient given the site's proximity to high frequency public transport services. Furthermore, no car parking would be provided for the ancillary retail use/shop.

2.6.2 Environmental Impacts

The transport sector (road, rail, air and ship) is Australia's third largest source of greenhouse gas emissions (GHG), accounting for 18 per cent of emissions in Australia in 2015 (Climate Council of Australia, 2016). Mitigating this impact is a key driver of the GTP. Within Australia, the transport sector has the highest rate of growth of GHG emissions per year having risen by 51 per cent since 1990 with private vehicles responsible for almost half of transport emissions. In comparison, travel modes such as walking and cycling have the lowest emissions while public transportation has significantly lower impact than the private vehicles.

2.6.3 Health Benefits

The use of sustainable transport modes can have wide-ranging health benefits due to a corresponding reduction in greenhouse gas emissions and increase in physical activity from walking and cycling. The shift from private cars to sustainable transport "can yield much greater immediate health "co-benefits" than improving fuel and vehicle efficiencies" (World Health Organisation, 2011). The potential benefits can include reduced respiratory diseases from better air quality, prevention of heart disease, some cancers, Type 2 diabetes and some obesity-related risks.

2.6.4 Social Equity

Transport has a fundamental role in supporting social equity, which is the equitable distribution of services, amenities and opportunities. The provision of sustainable transport modes can provide a more affordable alternative to car use. As such, it offers better mobility for women, children, young people, the aged, persons with disabilities and the poor, who have less access to private vehicles, thereby enhancing social equity.

2.6.5 Site Attraction

Provision of high-quality transport facilities (public transport, cycling and walking infrastructure) has a significant impact on the accessibility and enhance the attractiveness of a site. Negative experiences and costs associated with travel can reduce the competitiveness of a site. High quality and efficient transport systems are key to attracting and retaining commercial tenancies and workers. Support for active transport modes is also highly desired by staff members, as it improves health and productivity.

The proposed design shall integrate with existing and future facilities to provide a permeable network for all road users. Notably, Transport for NSW (TfNSW) is planning to improve the existing bus priority and capacity in Macquarie Park area, including extension of new bus lanes. In addition, Council is proposing a number of active transport upgrades, including an integrated walking and bicycle network as part of Council's *Integrated Transport Strategy 2041* to align with *Future Transport 2056* and *Greater Sydney Service and Infrastructure Plan 2056*.

2.6.6 Education and Leadership

Major commercial buildings and precincts would have a large number of staff and visitors coming through each year. Therefore, commercial building owners would have a unique opportunity to encourage staff and visitors into sustainable travel behaviours. These travel behaviours can help shape long-term travel behaviours that extend long after their completion at the organisation. Successful travel planning and education can reduce traffic impacts on the road network while potentially supporting a positive influence on local areas by increasing public transport demand and improving amenities.

2.7 Transport Objectives

The following objectives have been identified in order to achieve the vision of the GTP:

Objective 1: Facilitate a modal shift towards more sustainable transport modes

- Improve access, safety, amenity and convenience of sustainable transport modes for travel to / from the site.
- Incentivise sustainable transport modes and establish a culture of active and public transport use.
- Improve awareness and knowledge of public and active transport options available within the area.

Objective 2: Reduce car ownership and promote car share use

- Improve awareness and access to car share facilities available within the area.
- Incentivise car share use as an alternative to owning a car.
- Manage car parking on-site to disincentivise car use.

Objective 3: Reduce the need to travel off-site

- Provide amenities on-site to reduce travel requirements for staff and visitors.
- Encourage social interactions amongst staff within the site to create a vibrant community on-site.

3 Existing Transport Policy Context

The review of existing relevant policies clearly illustrates a number of themes that should inform the approach to the ongoing management of transport demand, and investment in the transport network. These themes include:

- provision of high-quality local transport infrastructure, improved cycle paths and networks, and improving accessibility and connectivity
- address car parking issues in key locations, including residential and business districts, and encouraging active transport
- create connected, liveable communities where people can walk, cycle, and use public transport to promote healthier, active communities.

A summary of the existing policy framework documents relevant to the development site and its surroundings is provided in Table 3.1. Of note, the NSW 2021 plan and NSW Long Term Transport Master Plan aim to achieve a target of 25 per cent using public transport.

City of Ryde Council, however, seeks to meet a target of 45 per cent of trips using public transport, 40 per cent using private car and 15 per cent using active transport for Macquarie Park area by 2041 (City of Ryde Integrated Transport Strategy (ITS) 2041).

Table 3.1: Summary of Policy Framework

Policy/Strategy	Key Aims/Objectives/Goals
City of Ryde Council	
Ryde 2028 Community Strategic Plan	The Community Strategic Plan is framed around seven vision items, each with desired outcomes and monitoring progress. These visions are: • Vibrant and liveable city • Active and healthy city • Natural and sustainable city • Smart and innovative city • Connected and accessible city • Diverse and inclusive city • Open and progressive city The specific strategies relating to transport and parking are as follows: • Improve transport links and provide appropriate transport infrastructure to support major developments • Integrate new development with the transport network • Improve connectivity and accessibility to suburbs, centres, and places • Increase the use of public transport and active transport to destinations across the city • Improve car parking options, especially in town centres.
Integrated Transport Strategy (ITS) 2041	The Integrated Transport Strategy (ITS) outlines the direction that would guide City of Ryde's future transport planning to improve customer experience and sustainably accommodate future demand. The ITS sets out 40% private car mode, 45% public transport mode and 15% active transport mode for commuting trips in Macquarie Park area in 2041.

Policy/Strategy	Key Aims/Objectives/Goals
NSW State Government	
Future Transport Strategy 2056	The Strategy aims to increase the mode share of public transport services and reduce the use of single occupant vehicles. The proposed development will look to reduce private vehicle travel, aligning with the objectives of the Strategy. The Strategy initiatives include upgrading the cycle and pedestrian infrastructure, local walking connections and bus improvements within Macquarie Park area.
Greater Sydney Region Plan: A Metropolis of Three Cities – Connecting People	The site is well located to public transport which contributes towards creating a 30-minute city. The close proximity of the site to Macquarie Park and Macquarie University metro station, and extensive bus services, means tenants and tenants visitors can easily access the site via public transport modes. The site thus aligns with the objectives of the Plan in creating a workplace near public transport facilities to contribute towards a 30-minute city.
Sydney's Cycling Future, Cycling for Everyday Transport (NSW State Government, 2013)	Sydney's Cycling Future's key strategy is to improve cycling infrastructure. The Three Pillars of Sydney's Cycling Future include: • investing in separated cycleways • providing connected bicycle networks to major centres and transport interchanges promoting better use of our existing network; and, • engaging with our partners across government, councils, developers, and bicycle users.

4 Existing Transport Context

4.1 Existing Public Transport Facilities

The site is well serviced by a network of public transport services, including train, metro and bus services being located within 100-metres from the Macquarie Park Metro Station and bus routes along Lane Cove Road, Waterloo Road and Epping Road.

The subject site proximity to public transport services is shown in Figure 4.1.

Figure 4.1: Public Transport Network Surrounding the Subject Site

Basemap source: Nearmaps, last accessed on 08/01/2024.

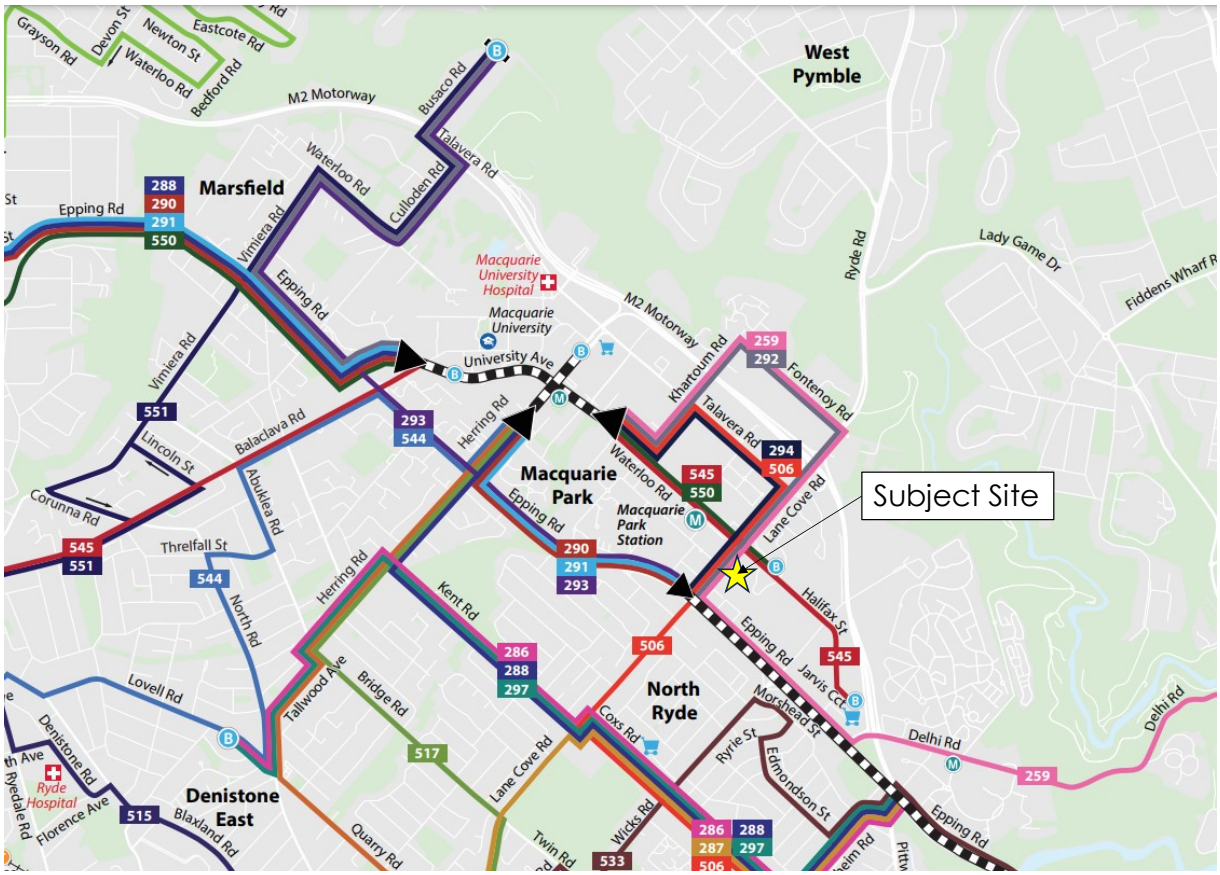
Table 4.1 provides a summary of the existing available bus services within immediate vicinity of the site and their associated frequencies. The bus route map is also illustrated in Figure 4.2.

Table 4.1: Available Bus Services and Associated Frequencies

Route Number	Route Name	Distance from Site to Nearest Stop	Service Frequency
197	Mona Vale to Macquarie University	170m (Waterloo Road)	Peak: 15 minutes Off-peak: 30 minutes
259	Macquarie Centre to Chatswood	Site frontage (Lane Cove Road)	Peak: 15 minutes Off-peak: 30 minutes
292	Marsfield to City Erskine Street		Peak: 5 – 15 minutes Off-peak: 30 minutes
294	Macquarie University to City Wynyard		Peak: 15 minutes Off-peak: No services
410	Macquarie Park to Hurstville		Peak: 10 minutes Off-peak: 15 minutes
506	Macquarie University to City Domain		Peak: 5 - 15 minutes Off-peak: 30 minutes
545	Parramatta to Macquarie Park	Site frontage (Waterloo Road)	Peak: 10 – 20 minutes Off-peak: 20 – 30 minutes
550	Parramatta to Macquarie Park		Peak: 10 minutes Off-peak: 15 – 30 minutes
562	Gordon to Macquarie University	550m (Talavera Road)	Peak: 1 hour Off-peak: No service
565	Chatswood to Macquarie University		Peak: 10 - 30 minutes Off-peak: 1 hour
572	Turramurra to Macquarie University		Peak: 15 minutes Off-peak: 30 minutes
575	Hornsby to Macquarie University		Peak: 20 minutes Off-peak: 30 minutes
611	Blacktown to Macquarie Park	Site frontage (Waterloo Road)	Peak: 5 – 15 minutes Off-peak: 15 - 30 minutes
619	Castle Hill to Macquarie Park		Peak: 15 – 20 minutes Off-peak: No service

Source: TfNSW

Figure 4.2: Local Bus Network Map



Source: TfNSW – North West Sydney Bus Network Map, last accessed on 08/01/2024

The Macquarie Park Metro Station is located adjacent to the site within a 50-metre walking distance. It is expected that the metro would be the main form of transport for staff to/from the site.

The metro station is serviced by Sydney Metro Northwest, which runs between Chatswood and Tallawong. Metro services arrive every five minutes during the peak periods and every 10 minutes during the off-peak periods. These services also provide connection to the wider Sydney Train suburban line to/from the City via Chatswood and Epping train stations. The Sydney Metro City and Southwest lines are also expected to be completed in 2024, which will provide further connections to the wider Sydney network.

In summary, the site benefits from good public transport connections to the wider Sydney network.

4.2 Pedestrian and Cyclist Infrastructure

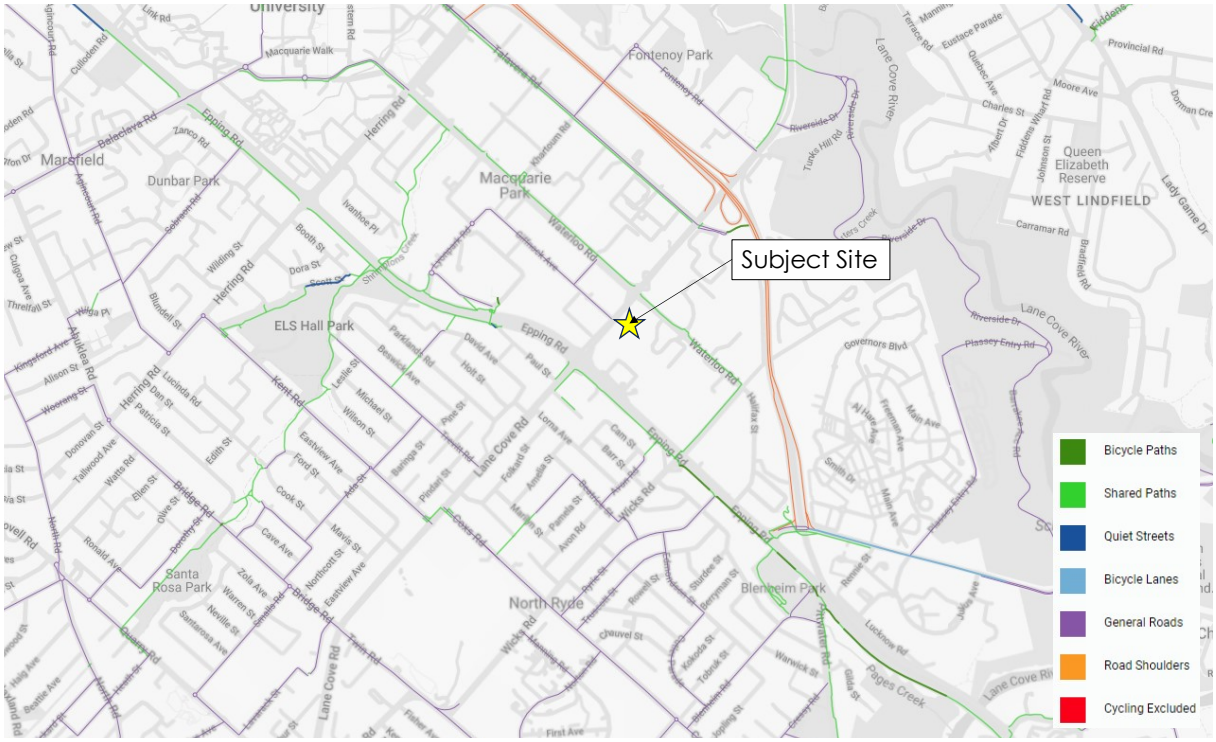
Well-established pedestrian infrastructure is provided within the vicinity of the site. Sealed pedestrian footpaths are provided on Lane Cove Road whereas shared paths between pedestrians and cyclists are provided on Waterloo Road and Epping Road. These footpaths

provide pedestrian connection to Macquarie University and Macquarie Park metro stations as well as the surrounding bus stops.

Dedicated pedestrian facilities are provided on three of the four approaches at the intersection between Waterloo Road and Lane Cove Road in the form of signalised crossings or zebra crossings.

The site is surrounded by cycling infrastructure, with shared pedestrian and cyclist paths provided on Waterloo Road, Talavera Road and Epping Road as shown in Figure 4.3. These shared paths provide good cycling connection to surrounding areas, including commercial offices, retail shops and the shopping centre within Macquarie Park, as well as the surrounding public transport network.

Figure 4.3: Surrounding Cycling Infrastructure



Source: TfNSW – last accessed on 08/01/2024.

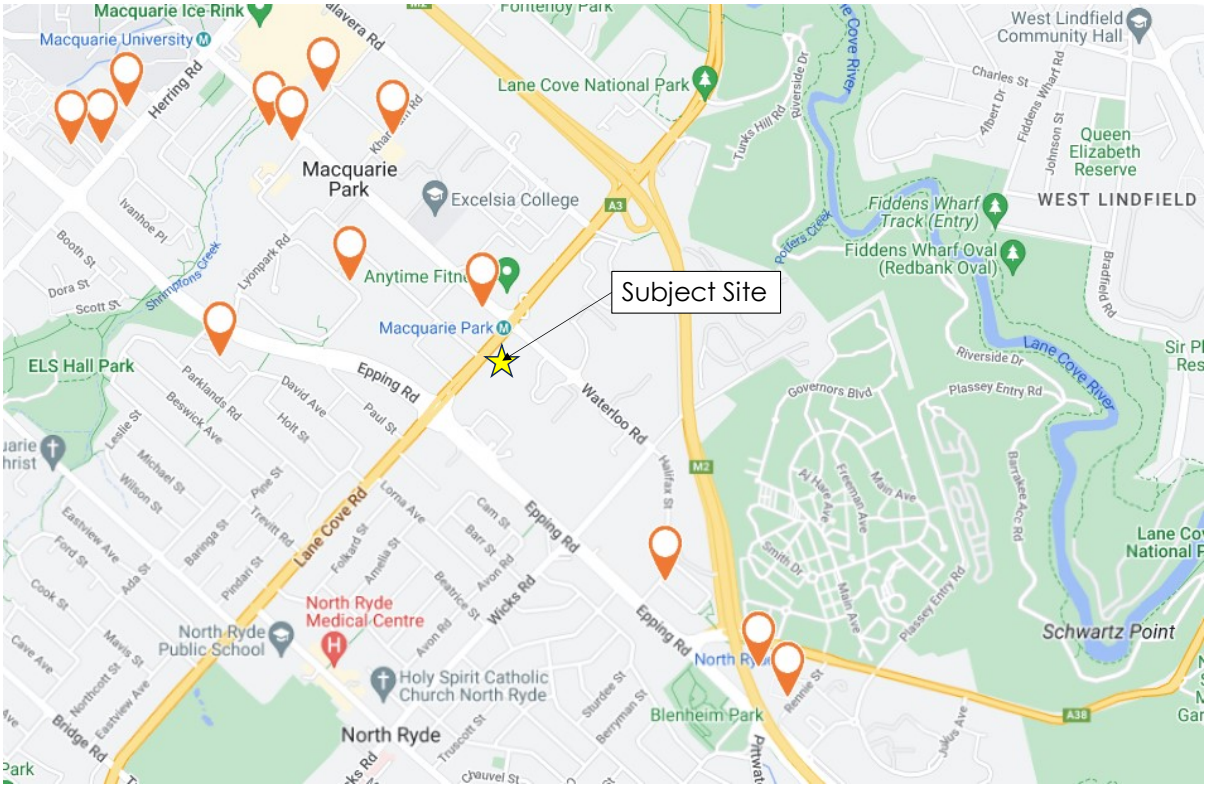
4.3 Car Share Facilities

Car share schemes are a flexible, cost-effective alternative to car ownership and are a convenient and reliable way for employees and clients to use a car when they need one. Car share is a concept by which members join a car ownership club, choose a rate plan, and pay an annual fee. The fees cover fuel, insurance, maintenance, and cleaning. The vehicles are mostly sedans, but also include SUVs, station wagons and vans. Each vehicle has a home location, referred to as a "pod", either in a parking lot or on a street, typically in a highly populated urban neighbourhood. Members reserve a car online or via telephone and use a key card to access the vehicle.

A study was commissioned by the International Carsharing Association in 2016, to review the impact of the car share services in Australia after more than a decade of operation. The study focuses on the City of Sydney council area which had about 20,000 users and 805 car share vehicles at the time of the study. The findings of the study indicate that car share users reduce their overall vehicle kilometres travelled (VKT) per year by 50 per cent compared with people who own a private vehicle. The resulting impact is reduced congestion on roads, lower levels of CO_2 pollution, fewer casualty accidents and an increase in use of active transport methods.

GoGet is one of the car share companies operating in Australia, with a number of pods (indicated by the orange location pins) located within the local Macquarie Park area as shown in Figure 4.4.

Figure 4.4: Surrounding GoGet Car Share Pods



Source: GoGet, last accessed on 08/01/2024.

4.4 Taxis and Related Services

Taxis and related taxi services (Uber, Lyft, DiDi, OLA, etc.) are point to point transport services that provide flexible and convenient transport options. Customers can choose the route the driver will take for a faster travel time and to destinations that cannot be reached by public and active modes of transport. Taxis are normally stationed at designated taxi ranks where customers can enter any available taxis waiting to depart. In addition to this, taxis can be hailed from the kerb on the street.

Other related taxi services, such as Uber, are point to point transport services that have increased in popularity over the recent years. Customers can download the respective app and organise a trip by inputting the destination and pick up location. In addition to this, customers can request a larger sized vehicle when travelling with large groups. The majority of these services can only be organised through the use of the apps via a mobile device.

Both taxis and Uber-alike taxi services allow people with common origins and/or destinations to share a vehicle and reduce overall car trips on the road network (e.g., single passenger trips) with the convenience of a private vehicle and reduced costs. Hence, this is considered favourable from a sustainable transport perspective.

4.5 Existing Modal Share

Macquarie Park is one of the major commercial/office areas in Sydney Greater Metropolitan Area. The site and surrounds are currently occupied by similar commercial land uses.

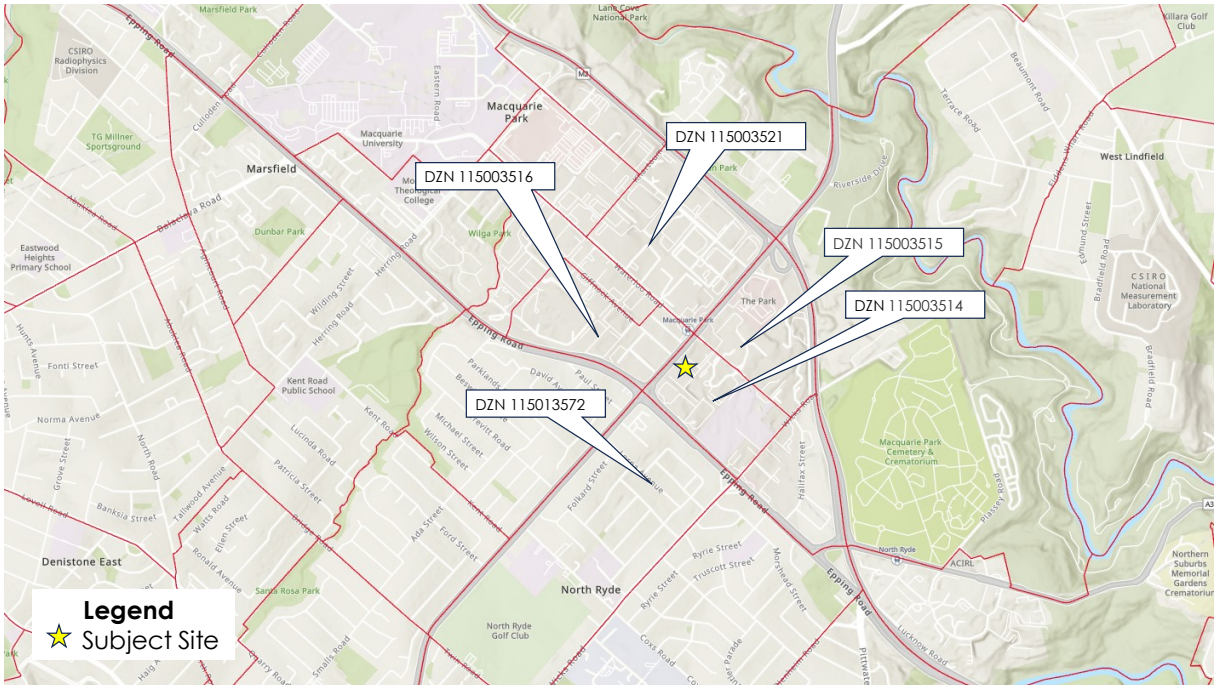
A review of the existing 2021 and 2016 Census data has been undertaken to understand existing travel modes of employees within the site, as well as surrounding the site, to obtain a good sample size to inform the future mode share targets for the site.

It is noted that the 2021 Census study was undertaken during the lockdown period of the Covid-19 pandemic on 10 August 2021. Therefore, most employees were working from home at the time. That is, approximately 67 per cent of people were working from home at the time of the 2021 Census. On this basis, TTPP has included 2016 Census data for comparative purposes as part of this assessment.

The 2016 and 2021 Census study areas (the selected destination zones for employees mode share analysis) are shown in Figure 4.5 and Figure 4.6 respectively.

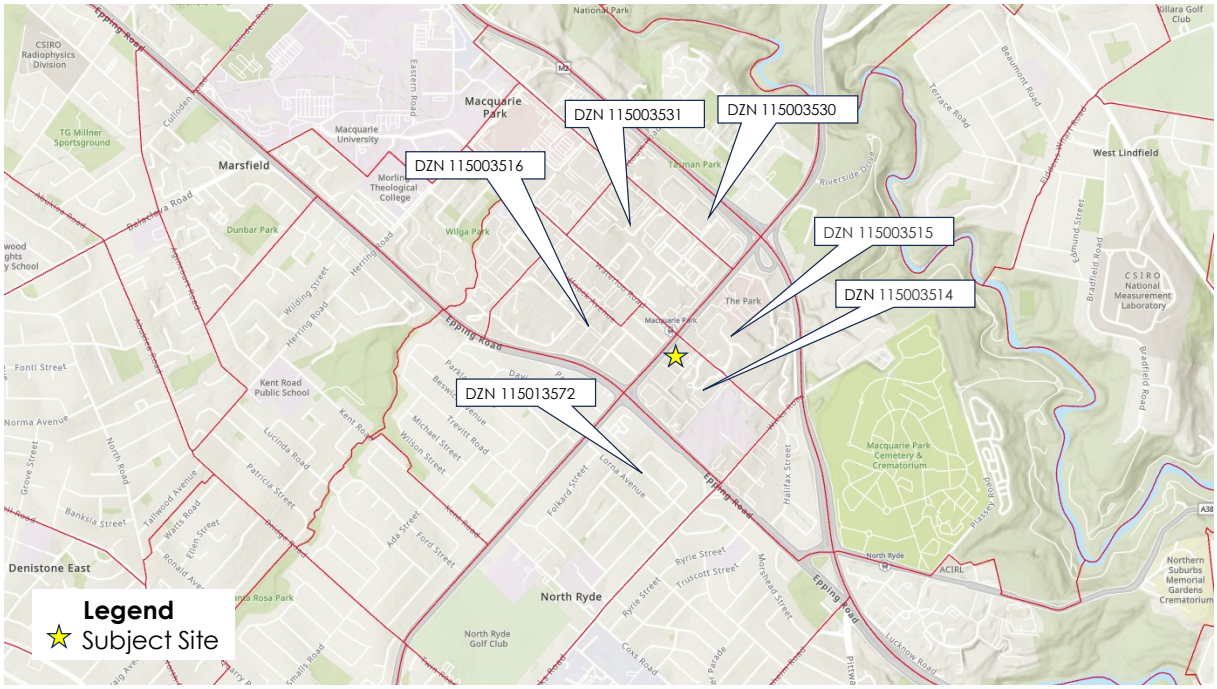
A summary of the existing modal splits of the study area is provided in Table 4.2, with a comparison between the 2016 Census (Pre-Pandemic) and 2021 Census (Pandemic).

Figure 4.5: Selected Destination Zones - 2016 Census



Source: ABS – ABS Maps – last accessed on 31/01/2024.

Figure 4.6: Selected Destination Zones - 2021 Census



Source: ABS – ABS Maps – last accessed on 31/01/2024.

Table 4.2: Existing Mode Share of Employees Working in Macquarie Park

Method of Travel	Employee Mode Share (Census 2016)	Employee Mode Share (Census 2021)
Train	18%	13%
Bus	8%	4%
Car Driver	66%	76%
Car Passenger	3%	3%
Motorbike / Scooter	2%	1%
Bicycle	1%	1%
Walk	2%	2%
Total	**100%**	**100%**

The 2021 Census data shows approximately 79 per cent of commuter trips are in a form of private vehicle travel, either by car as a driver or passenger. Public transport use (including train and bus) accounts for approximately 17 per cent of the mode share, with 2 per cent of employees walking to their workplace, and 1 per cent of employees traveling by bicycle. This represents a high uptake of trips made by car in the area during this time.

It is however noted that the 2021 Census data was undertaken during the lockdown period, which would have impacted travel modes to/from the site. Specifically, it is likely that private vehicle trips were higher during this time due to potential Covid-19 impacts near crowded areas, such as public transport.

On this basis, 2016 Census data was also reviewed for comparative purposes.

The 2016 Census data shows that the primary mode of travel to the Macquarie Park area was also by private vehicle, where 69 per cent of employees travelled to the area by car as a driver or passenger. Only 26 per cent of employees travelled to the area by public transport (train and bus), with one to two per cent of employees travelling by bicycle or walking to their workplace. Again, this represents a high uptake of trips made by car in the area.

It is also worth noting that these 2016 figures were recorded before the Metro Tallawong to Chatswood service was operational. The Metro opened in 2019 which has presumably increased public transport to/from Macquarie Park significantly. Statistical data from Sydney Trains indicate patronage at Chatswood and Epping station, which serve as interchanges for commuters to/from the metro, surged by 18 per cent in July from the same month a year earlier. This suggests that more people travel to/from the Macquarie Park area by the metro.

Notwithstanding this, NextDC will be undertaking a new travel survey once the site is fully occupied to update existing modal share data. The travel survey questionnaire to be issued

to staff once the site is fully occupied is provided in Appendix B. NextDC will be responsible to issue the travel survey and review/update mode share targets accordingly.

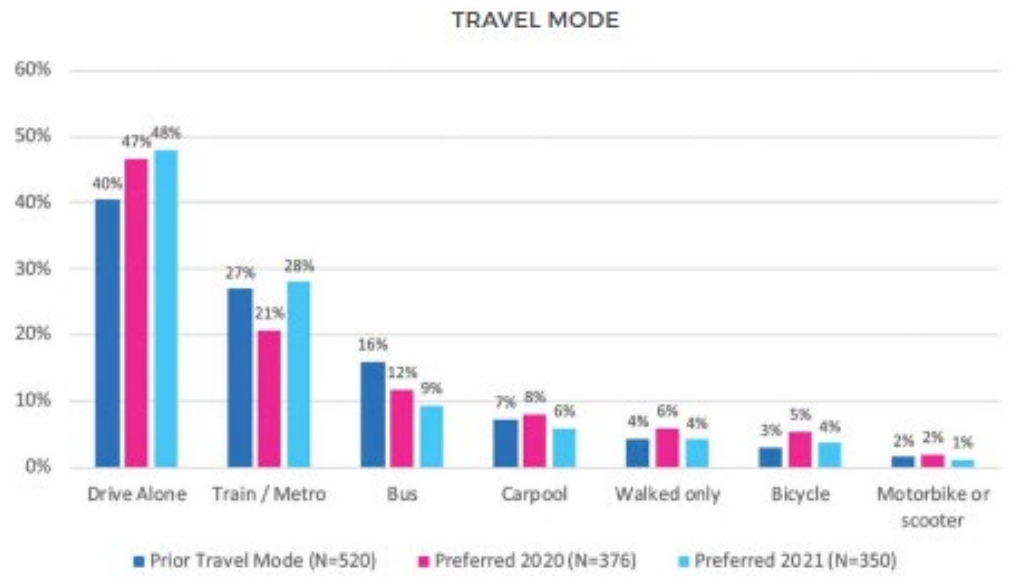
Given the site and immediate surroundings are well-connected by public transport services, there are opportunities to increase public transport usage amongst employees and reduce private vehicle usage. In addition, the well-established pedestrian footpaths and the surrounding cycling infrastructure could also be utilised to increase the active transport mode share.

4.6 Connect MPID Modal Share

In 2016, Macquarie Park Innovation District (MPID) was established to increase collaboration, innovation and commercialisation to drive growth in Macquarie Park. As part of this, Connect led three surveys to measure the immediate impacts of Covid-19 in Macquarie Park in April, May and June 2020. In May/June 2021, new surveys were undertaken to understand how travel behaviours and perceptions have changed in the year since.

A summary of the existing travel mode surveys is shown in Figure 4.7

Figure 4.7: Connect MPID Travel Mode



Source: Connect MPID

Figure 4.7 indicates that car trips have significantly decreased following the opening of the Metro compared to the above Census data. That is, car trips equate to about 40 to 48 per cent of trips to the Macquarie Park Area, whereas 30 to 44 per cent of trips were made by public transport services (train/metro and bus). This is generally consistent with the statistical data from Sydney Trains as outlined in Section 4.5.

5 Mode Share Target

The aim of the GTP is to encourage a modal shift away from private vehicles by implementing measures that influence the travel patterns of employees and clients of the proposed development. The implementation of the GTP would be regularly monitored to ensure that it is creating the desired effect. The success of the GTP is measured by setting modal share targets and identifying the measures and actions that have the greatest impact.

The targets have a 5-year timeframe.

Table 5.1 presents the proposed mode share for the proposal with achievable goals in mind. The targets will be updated when the GTP is reviewed to align with any changes to the site and/or City of Ryde Council strategies or plans.

Ultimately, based on existing travel behaviours of employees in the area, private vehicle is expected to remain the dominant mode of travel to/from site. This GTP does however aim to achieve higher public transport and active transport mode share to reduce the traffic and parking demand.

Table 5.1: Mode Share Targets (based on Connect MPID)

Method of Travel	Existing Benchmark (Connect MPID)	Target	Net Difference
Drive Alone	45%	**35%**	-10%
Train / Metro	25%	**31%**	+6%
Bus	12%	**14%**	+2%
Carpool	7%	**7%**	-
Walked Only	5%	**6%**	+1%
Bicycle	4%	**4%**	-
Motorbike / Scooter	2%	**3%**	+1%
Total	**100%**	**100%**	**-**

The above mode share targets are aligned with Council's targets for the precinct – that is, a 45 per cent public transport mode share. It is noted that the proposed mode share targets represent a reduction of private car trips by 10 per cent compared to Connect MPID data, which is moderately high.

It is however noted that the future Chatswood and Sydney CBD Metro connection is expected to be operational in 2024. Additionally, the remaining portion of Sydney Metro City and Southwest between Sydney CBD and Bankstown is expected to be open in 2025. These public transport upgrades will provide additional services between Sydney CBD, Bankstown

and Macquarie Park area and is likely to increase the public transport uptake within Macquarie Park area.

On this basis, the mode share targets are considered reasonable in a 5-year timeframe with appropriate management measures. This is further discussed in Section 5.

5.1 Feasibility of the Mode Share Target

This section analyses the feasibility of the mode share targets based on the number of employees to assess the adequacy of the provided basement car parking and bicycle parking spaces.

Based on a review of the Connect Macquarie Park Innovation District (MPID), existing travel mode surveys indicate that about 40 to 48 percent of employees travel by car, with only 3 to 5 per cent travelling by bike, as shown in Figure 4.7. This is consistent with the mode share targets for the site, being 35% for car trips and 4% for bicycle trips (albeit less for car trips but this is considered reasonable based on future Sydney Metro upgrades). Therefore, the mode share targets are feasible and supported by data provided in the Connect MPID.

Whilst the site would operate across a 24-hour period, staff would generally be rostered across 3 x 8-hour shifts per day. NextDC has confirmed that a typical 8-hour shift would generally have about 285 persons.

Based on the mode share targets outlined in Table 5.1 where 35% are car trips and 4% are bicycle trips, this could equate to 100 cars and 11 bike trips.

A critical component to ensure the success of the travel plan is to provide adequate facilities and manage car parking demand and allocation. There are 105 car parking spaces, including 4 DDA spaces and 10 EV spaces. and 12 bicycle spaces provided within the site. This is considered adequate to service the site and discourage travelling by car to/from the site. Further to this, the proposed car parking provision is well below DCP requirements for the site (which already has reduced car parking rates within the Macquarie Park corridor).

Notwithstanding the above, NextDC shall encourage staff to build a successful hybrid culture, consistent with objective and visions set in the Connect MPID as per a 5-step program as follows:

- Executive alignment
- Team ways of working
- Individual conversations
- The role of the office and
- Tools to go further

NextDC will also implement appropriate management measures and 'education campaigns' to encourage active travel to/from the site. This is further discussed in Section 6.

6 Encouraging Sustainable Transport

To achieve the objectives of the GTP, measures will be put in place to influence the travel patterns to/from the site, with a view to discourage car usage from the initial occupation of the proposed development.

6.1 Site Specific Measures

6.1.1 Walking and Cycling

The TPC will establish a walking and cycling group for the staff, to promote active travel to/from the site, followed by recreational activities/special events within the site. This initiative would help promote and encourage social inclusion, as well as promote walking and cycling as the choice of travel.

NextDC will provide a high-quality pedestrian footpath network within the site to connect to the wider pedestrian network, including to/from key public transport hubs surrounding the site. Additionally, 12 bicycle parking spaces will be provided within a secure bicycle parking area located in the basement. End of trip facilities (including lockers, change rooms and showers) will also be available within the basement car park for staff to encourage active travel to/from the site (e.g., walking and cycling).

Walking and cycling maps would be made available on the tenant's website to provide further information in relation to existing on-site facilities and how they connect to the wider walking and cycling network. Maps of the site and nearby facilities will also be provided on site to assist employees and visitors with navigation. This would ensure that all staff are made aware of existing nearby facilities to promote active transport to/from the site.

6.1.2 Public Transport

Public transport maps would be provided on newsletters, websites, social media to make both employees and clients more aware of alternative transport options available in the area. The format of the map would be based upon the Travel Access Guide (TAG) (see Section 6.2). This TAG will form part of a welcome pack for staff and made available to clients (via website, social media etc) to ensure that they are made aware of the necessary requirements to make use of public transport surrounding the area to connect with other Greater Sydney areas. This TAG would also be displayed in the lobby.

The TPC will work with tenants to consider providing subsidised public transport travel passes for staff to increase public transport travel. Opportunities for staff to purchase their travel pass through their salary, spreading the cost throughout the year, would also increase the potentials of increased public transport use amongst staff members.

6.1.3 Car Sharing

As detailed in Section 4.3, car share facilities (e.g., GoGet) are available within the vicinity site. Once at work, if car use is required by those employees who have not driven to work, employees and clients would be encouraged to use the car share facilities in the area. This information would be made available to all employees as part of the welcome pack, and to clients via email and/or website.

The TPC will encourage tenants to consider an organisational GoGet or other car share operation memberships.

6.1.4 Car Pooling

The TPC will provide education and promotional campaigns for tenant employees to increase carpooling activities and potentially reduce the number of vehicles on the road. The TPC will also provide information to all employees and new starters, which will be promoted on the business website, to help people find carpool buddies in their daily commute.

6.1.5 On-site Parking Management

It is proposed to provide 105 car parking spaces, including 4 DDA spaces and 10 EV spaces, within the basement car park to accommodate staff. The allocation of the spaces would be at the discretion of the employer and the TPC will discuss with the employer to consider employment-related transport needs of individuals.

6.1.6 Off-site Measures

The provision of food and beverage opportunities will also be provided within the site to enable staff to eat or even have a break within the building. The site will have ancillary retail within the site, but also be located within proximity to surrounding retail and restaurant services within the Macquarie Park area, specifically Macquarie Centre, which are all within easy walking distance. This would negate the need for employees and clients to travel far away from the site for food and services.

6.2 GTP Information

The information will be provided in the form of a package of easy-to-understand travel information known as a Travel Access Guide (TAG). This would be included in the welcome pack provided to tenants prior to occupation, and provided to clients via website, social media and/or email as relevant. The TAG would also be displayed in the lobby.

TAGs provide customised travel information for people travelling to and from a particular site using sustainable forms of transport – walking, cycling and public transport. It provides a simple quick visual look at a location making it easy to see the relationship of the site to train stations, light rail stations, bus stops, walking and cycling routes, etc.

TAGs encourage the use of non-vehicle transport mode which can reduce associated greenhouse gas emissions and traffic congestion while improving health through active transport choices. They can take many forms from a map printed on the back of business cards or brochures. Best practice suggests that the information should be as concise, simple and site centred as possible. If instructions are too complex, people are likely to ignore them.

A TAG has been prepared for the site in the form of a brochure and is provided in Appendix A. This would be appropriately reviewed and updated prior to occupation of the building, and regularly thereafter to ensure it remains current and relevant. NextDC will provide the TAG to all tenants and will also be included on the business website.

6.3 Information and Communication

A component of the TPC's role will be connecting tenant employees and visitors with information to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour.

Transport NSW info

- Bus, train and metro routes, timetables and journey planning are provided by Sydney Metro and Transport for New South Wales through their respective transport information website:
  - http://www.transportnsw.info/
  - https://www.sydneymetro.info/.

Similarly, phone apps such as TripView display Sydney public transport timetable data and shows a summary view showing current and subsequent services, as well as a full timetable viewer. This timetable data is stored on the phone, so it can be used offline.

Connecting employees via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

Sydney Cycleways

- City of Ryde, specifically Macquarie Park, provides a number of services and a range of information to encourage people of all levels of experience to travel by bicycle. https://www.ryde.nsw.gov.au/

6.4 Actions

A summary of the key strategy and framework action table is shown in Table 6.1. It should be noted that this framework action table will be reviewed and updated, as required. However, it is important to stress that the implementation of the suggested strategies from Day 1 upon opening is a key factor in influencing travel patterns.

Table 6.1: Framework Action Table

Action	Objective	Responsibility	Timeline
1. Reduce on-site car parking and provide designated EV spaces	1	Proponent	SSDA Design
2. Provide 12 bicycle parking spaces within a secure room in the basement car park.	1	Proponent	At Practical Completion of the Base Building
3. Provide public transport noticeboard at key locations within the site in the form of a Transport Access Guide (TAG). This will also be posted on the website, displayed in the lobby and included as part of the welcome pack distributed to all employees upon occupation.	1	Travel Plan Coordinator	Prior to Tenant Occupation
4. Provide food and beverage opportunities on-site.	3	Proponent	At Practical Completion of the Base Building
5. Provide tenants with a TAG on day one of occupation and post the TAG on noticeboards, front entrances, website, social media etc. Walking and cycling maps and the surrounding facilities will be available on site.	1	Travel Plan Coordinator	Upon Occupation
6. Provide discounted GoGet memberships for staff and provide information of existing car share facilities in the area as part of the welcome pack.	1,2	Proponent	In Accordance with Car Share Provider Agreement
7. Discuss providing public transport travel allowance for staff members (for each tenant to decide on)	1	Travel Plan Coordinator	Ongoing
8. Encourage Walking Groups and Bicycle User Groups for staff to encourage the active transport use	1	Travel Plan Coordinator	Ongoing
9. Ongoing review of the GTP to introduce additional measures as required.	1, 2, 3	Travel Plan Coordinator	Annually

7 Management and Monitoring of the Plan

7.1 Management

There is no standard methodology for the implementation and management of an GTP. However, the GTP will be monitored and reported to Council for the first five years, to ensure that it is achieving the desired benefits. The mode share targets set out in Section 4 are used in this regard to ensure there is an overall goal in the management of the GTP.

The monitoring of the GTP would require travel surveys to be undertaken with a focus to establish travel patterns including mode share of trips to and from the Site and identify any progress toward the mode share target and objectives. It is recommended that the first set of surveys should be undertaken within six months post occupation to obtain the baseline mode share of the site. In addition, travel surveys should be undertaken annually for a minimum of 5 years after the initial survey to monitor the progress of the GTP of travel mode change.

The implementation of the GTP will be the responsibility of Travel Plan Coordinator (TPC), who will be responsible for developing, implementing and monitoring the GTP.

The TPC will provide feedback to tenants and visitors to ensure that they can see the benefits of sustainable transport.

There are several key components to the development and implementation of a successful GTP. These include:

- **Communication** – Good communication is an essential part of the GTP. It will be necessary to explain the reasons for adopting the plan to promote the benefits of sustainable transport options.
- **Commitment** – GTPs involve changing established habits or providing the impetus for people in new developments to choose an alternative sustainable travel mode other than car use. To achieve cooperation, it is essential to promote positively the wider objectives and benefits of the plan. This commitment includes the provision of the necessary resources to implement the plan, beginning with the TPC.

Once the plan has been implemented, it is important to maintain interest in the scheme. Each new initiative in the plan will need to be publicised and marketing of the plan as a whole will be undertaken.

7.2 Remedial Actions

The regular annual review will take place to identify if any remedial actions, which are possible to be adopted, should the modal share targets not be achieved.

The TPC will coordinate with other organisations such as Connect MPID and Council to canvass any other initiatives that can be practically adopted.

Alternatively, the TPC could work with council to see how the measures might be aligned with council's strategic planning for active travel.

7.3 Consultation

The results of the GTP will be communicated via tenants' websites. Hence, it is recommended that a summary is produced presenting the results of the survey within two months of the undertaking of the travel surveys.

Subsequent surveys would be undertaken annually for a minimum of five years to monitor the travel patterns to/from the site. The results of the survey will be included in the annual reporting updates to Council. The TPC will liaise with relevant Council staff member to benchmark against survey results from other commercial sites to help inform the relativity of the success of the plan. This may then feed back into possible remedial actions.

8 Conclusion

This GTP outlines a number of transport demand management initiatives that will be adopted to assist with progression towards the target car driver mode share for the commercial building located at 269 Lane Cove Road, Macquarie Park.

Due to the site proximity to extensive public transport services, there is potential to increase public transport uses and reduce private car travel. The availability of cycling infrastructure and well-established footpaths in the vicinity of the site, providing connection to the surrounding suburbs and transport hubs, also highlights the potential to increase active travel mode share amongst employees and clients.

The implementation of this GTP, in combination with provision of facilities such as bicycle parking spaces and end-of-trip facilities, will be key to ensuring that tenants and clients are encouraged to use sustainable transport options to/from the site. This includes identification of opportunities and constraints to influence further changes to the travel behaviour of tenants and their visitors, wherever possible.

Appendix A

Transport Access Guide (TAG)

TRANSPORT ACCESS GUIDE

Multiple bus services are located within a 5-minute (400m) walk from site.

Route	Description
197	Mona Vale to Macquarie University
259	Macquarie Centre to Chatswood
292	Marsfield to City Erskine Street
294	Macquarie University to City Wynyard
410	Macquarie Park to Hurstville

Route	Description
506	Macquarie University to City Domain
545	Parramatta to Macquarie Park
550	Parramatta to Macquarie Park
611	Blacktown to Macquarie Park
619	Castle Hill to Macquarie Park

Sydney Metro Northwest line is located in close proximity to the site, providing connection between Chatswood and Tallawong.
Transit to other suburban train lines is available at Chatswood and Epping metro station.

Distance	Metro Station
50m	Macquarie Park
1.3km	North Ryde

Park your bike in the secure bike parking room located in the basement car park.
Map your route using RMS Cycleway Finder:
rms.nsw.gov.au/maps/cycleway_finder

Cycling Time to Key Destinations / Suburbs	
8 mins	North Ryde
13 mins	Marsfield
23 - 25 mins	Eastwood / Epping

Car Share vehicles are available on-site within the basement car park and in the surrounding vicinity of the site.

For your nearest car share vehicle visit GoGet:
goget.com.au/find-cars/

Plan your trip using Sydney's Trip Planning Tool:
transportnsw.info/trip

269 Lane Cove Road, Macquarie Park

Next DC Data Centre - HDR

Transport Access Guide

Appendix B

Sample Travel Survey Questionnaire

Employee Travel Survey

Q1. What is your address postal code?

Postcode: ……..

Q2. What time do you usually start and finish work?

Start time: ……..

Finish time: ……..

Q3. Do you work full time or part time?

- ☐ Full time
- ☐ Part time

Q4. How many days per week do you usually come to work at your workplace? Please specify what day of the week (tick all that applies)

Number of days: ……..

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday
- ☐ Saturday
- ☐ Sunday

Q5. What is the main transport mode you use to get to and from work? Please tick all that apply.

- ☐ Car as driver
- ☐ Car as passenger (by driver not working at your workplace)
- ☐ Car as passenger (carpooling with another colleague)
- ☐ Motorbike
- ☐ Train
- ☐ Bus only
- ☐ Train and Bus

- ☐ Walk only
- ☐ Bicycle
- ☐ Other (please specify) ……..

Q6. If you drive to work, where do you usually park your car?

- ☐ On-site car park
- ☐ Surrounding car parks
- ☐ On-street parking
- ☐ Car share service (i.e. GoGet, Car Next Door etc.)

Q7. Which of the following transport mode would you consider?

- ☐ Train
- ☐ Bus
- ☐ Car share
- ☐ Walk
- ☐ Bicycle

Q8. Choose from the following options that you think would encourage you to use this mode of transport on some of your trips travelling to and / or from work.

- ☐ Increased frequency
- ☐ Better operating hours
- ☐ Improved cleanliness
- ☐ Reduced costs
- ☐ Reliability
- ☐ Parking options at train station at your postcode.
- ☐ Safety improvements
- ☐ Carpool schemes
- ☐ Bike Buddy scheme
- ☐ Incentive schemes
- ☐ Other (please specify) ……..

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