

Green Travel Plan

S4 Data Centre

Prepared for NEXTDC / 14 June 2024

211085

Contents

1.0	Introduction.....	5
1.1	Project Description.....	5
1.2	Objectives.....	5
1.3	Benefits.....	6
2.0	Site-Specific Transport Assessment.....	7
2.1	The Site.....	7
2.2	Active Transport.....	8
2.2.1	Pedestrian Facilities.....	8
2.2.2	Cyclist Facilities.....	10
2.3	Public Transport.....	11
2.3.1	Train Services.....	11
2.3.2	Bus Services.....	11
2.3.3	Sydney Metro West.....	14
2.4	Car Share Services.....	15
2.5	Electric Vehicle Charging.....	15
2.6	Existing Travel Patterns.....	15
3.0	Proposed Development.....	18
3.1	Detailed Project Description.....	18
3.2	Detailed Project Description.....	21
3.3	Development Active Transport.....	22
3.3.1	Pedestrian Facilities.....	22
3.3.2	Cyclist and EOT Facilities.....	22
3.4	Vehicular Parking.....	22
3.4.1	Passenger Vehicles.....	22
3.4.2	Electric Vehicles.....	23
3.4.3	Motorcycles.....	23
3.4.4	Passenger Drop-Off.....	23
4.0	Travel Plan Objectives.....	24
4.1	Promote Alternative Transport Usage.....	24
4.2	Improve Health and Wellbeing.....	24
4.3	Improve User Safety.....	24

4.4	Reduce Traffic Congestion	24
4.5	Reduce the Environmental Footprint of the Development.....	25
5.0	Mode Share Targets	26
6.0	Actions.....	27
6.1	User Information.....	27
6.1.1	Transport Access Guide	27
6.1.2	Induction Information	29
6.1.3	Periodic Reminders	29
6.2	Carpooling	29
6.2.1	Staff Pairing	29
6.2.2	Priority Parking.....	29
6.3	Active Transport	29
6.3.1	Bicycle Storage and EOT	29
6.3.2	Health and Activity Events	34
6.3.3	Public Transport Initiatives.....	34
6.4	Ongoing Monitoring and Management	34
6.4.1	Travel Plan Reviews.....	34
6.4.2	Staff Responsibility	34
6.4.3	Data Collection	34
7.0	Conclusion.....	36

Revision Register

Rev	Date	Prepared By	Review By	Approved By	Remarks
0	20/12/2023	SS	GC		Draft for comment
1	13/02/2024	SS	GC		Draft for comment
2	18/03/2024	SS	GC		Draft for comment
3	19/04/2024	SS	GC	PY	Final
4	14/06/2024	SS	GC	PY	Final

1.0 Introduction

1.1 Project Description

This report has been prepared to accompany a detailed SSDA for the proposed S4 data centre development at 16 Johnston Crescent, Horsley Park (SSD-63741210).

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 key features of the Proposal are summarised as follows:

- Site preparation works including bulk earthworks.
- Staged construction and operation of five data centre buildings comprising a total gross floor area (**GFA**) of 63,654m² including 52,916m² of technical data hall floor space and 10,738m² of ancillary office and innovation floor space, including 'front of house' meeting and function spaces, and a café.
- Associated and ancillary on-site facilities on-site parking for 200 cars, business identification signage (pylon and elevation signage), civil and stormwater works and 9,900m² of deep soil landscaping.
- Delivery of 232 megawatts of power, including a 330kV substation and a 33kV switching station, plus above ground diesel storage tanks and above ground water tanks for industrial water and fire water.

The Project will be delivered in three construction stages as follows:

- Stage 1 = Buildings A, B, C, and substation
- Stage 2 = Building D
- Stage 3 = Building E

Taylor Thomson Whitting (TTW) has been engaged by NEXTDC to provide traffic engineering consultancy services for the development of the S4 Data Centre. This Green Travel Plan (GTP) has been prepared to support the proposal.

1.2 Objectives

A Green Travel Plan (GTP) is a way to sustainably manage the transport needs of staff and visitors to a development. The aim is to reduce the environmental impact of travel to and from a development site and encourage active and public transport, while reducing dependence on private vehicles. This Plan contains objectives and mode share targets for the development and management strategies intended to fulfil these.

This GTP has been prepared to support the development and future operation of the site, and to promote sustainable travel choices for employees and visitors to the site.

This plan provides a review of existing facilities and travel habits, and overarching principles and objectives relating to sustainable travel. The plan details specific programs and actions which are proposed for the development site, which will assist in achieving sustainable travel outcomes. The document is intended to be dynamic and respond to staff and visitor behaviours once the buildings are operational.

1.3 Benefits

The aim of this Plan is to encourage active and sustainable travel behaviours. Environmental and social benefits commonly result from Green Travel Plans. These may include¹:

- Reducing congestion and pollution in the local area;
- Reducing greenhouse gas emissions;
- Reducing costs associated with car parking, fleet maintenance and travel;
- Reducing journey times;
- Increasing physical activity, leading to greater productivity and improved health and wellbeing;
- Increasing accessibility to a site; and
- Improving corporate image.

¹ *City of Ryde Travel Plan Guidelines (City of Ryde, 2015)*

2.0 Site-Specific Transport Assessment

2.1 The Site

The site is located at 16 Johnston Crescent, Horsley Park within the Fairfield Local Government Area (LGA). The site is legally described as Lot 305 in Deposited Plan 1275011.

An aerial photograph of the site is provided at Figure 2.1. The site comprises vacant land which has been cleared of vegetation and does not contain any existing built form structures. Bulk earthworks approved under DA-893-201 are currently underway on the site.

The site will be well serviced by infrastructure. The signalised intersection of Lenore Drive and Old Wallgrove Road at Eastern Creek is approximately 2 kilometres to the north, providing access to Wallgrove Road and the Westlink M7 Motorway to the east and Erskine Park Road and Mamre Road to the west. Each of these roads provides access to the M4 Motorway to the north and M5 Motorway to the south. A utilities and site services report will accompany the EIS.

The site is located approximately 35 kilometres west of the Sydney Central Business District (CBD), 17 kilometres west of the Parramatta CBD and 10 kilometres north-east of the future Western Sydney International (WSI) airport.

The site is within a developing employment precinct, including the ESR Horsley Logistics Park, Oakdale Central, Oakdale South and Horsley Park Employment Precinct. It is also close to other established and emerging employment-generating precincts, including Eastern Creek to the north, Huntingwood to the north-east, Wetherill Park and Mamre Road West to the north-west and Wetherill Park to the east.



Figure 2.1: Site Aerial Photograph (Proposed Lot 305 - Development Site)

Source: Nearmap (2023)

2.2 Active Transport

2.2.1 Pedestrian Facilities

There is limited pedestrian infrastructure available within the road network in proximity to the site.

A shared path is provided along the northbound lanes of Old Wallgrove Road to the north of the intersection of Old Wallgrove Road and Millner Avenue. Pedestrian footpaths are provided along both sides of Millner Avenue, Latitude Road and Johnston Crescent adjacent to the site.

Signalised pedestrian crossings are provided approximately 350 metres north of the site at the signalised intersection of Old Wallgrove Road and Millner Avenue, providing a safe crossing opportunity for pedestrians.

The available pedestrian facilities near to the site are shown below in Figure 2.2.



Figure 2.2: Existing Pedestrian Facilities

2.2.2 Cyclist Facilities

The closest designated cycleway to the site is 350 metres north on Old Wallgrove Road, as indicated in Figure 2.3. From here, the local cycle network provides good connection to the west along Lenore Drive and east along Old Wallgrove Road, with access to the local roads such as Roberts Road and Capicure Drive.

The Westlink M7 Shared Path is approximately 3.5 kilometres from the site, or a 12-minute cycle. The shared path runs alongside the motorway for approximately 40 kilometres between Baulkham Hills and Prestons and is separated from the roadway.

However, cycling infrastructure is still limited around the site, with no cyclist facilities currently provided to the south of the site.

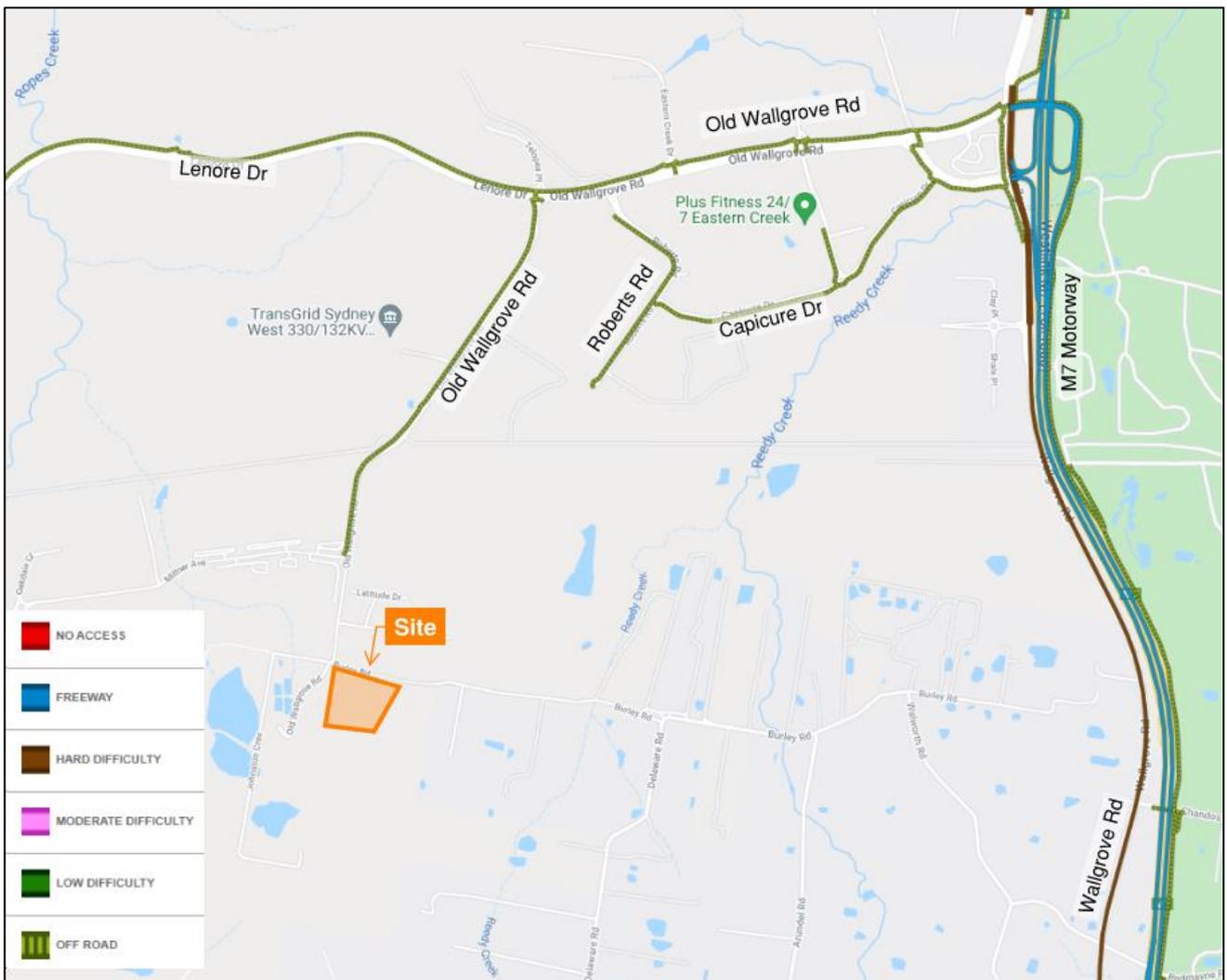


Figure 2.3: Existing Cyclist Facilities

Source: TfNSW Cycleway Finder

2.3 Public Transport

2.3.1 Train Services

The site is currently not situated in close proximity to train services, with the closest train station being Mount DrUITT Station, located approximately 6.5km to the north of the site.

Mount DrUITT Station is serviced by the T1 Western Line on the Sydney Trains network. Connectivity to additional train lines is provided at Blacktown and Parramatta Stations.

An extract of the Sydney Trains network illustrating the extent of connectivity is provided as Figure 2.4.



Figure 2.4: Sydney Trains Network Map

Source: Transport for NSW

2.3.2 Bus Services

The closest bus stops to the site are located approximately 2 km to the north of the site on Lenore Drive / Old Wallgrove Road (approximately a 24-minute walk). Other bus stops are available on Burley Road and Delaware Road to the east of the site. However, these bus stops are accessible via the unsealed segment of Burley Road, meaning that pedestrians cannot easily access these bus stops. The locations of all nearby bus stops are shown in Figure 2.5.



Figure 2.5: Nearby Bus Stop Facilities

The bus routes available at these bus stops are summarised in

Table 2.1 and the relevant bus network maps are included in Figure 2.6.

Table 2.1: Summary of Available Bus Services

Operator	Route Number	Route	Frequency during AM and PM peak hours
Busways Western Sydney	738	Mount Druitt to Eastern Creek via Rooty Hill (Loop Service)	AM: 30 minutes PM: 20 – 40 minutes
Transit Systems	813	Bonnyrigg and Western Sydney Parklands to Fairfield	AM: 105 minutes PM: 1 service offered
		Fairfield to Western Sydney Parklands and Bonnyrigg	AM: 1 service offered PM: 30 minutes
	835	WSU Penrith to Prairiewood	AM: 30 minutes PM: 30 minutes
		Prairiewood to WSU Penrith	AM: 30 minutes PM: 30 minutes

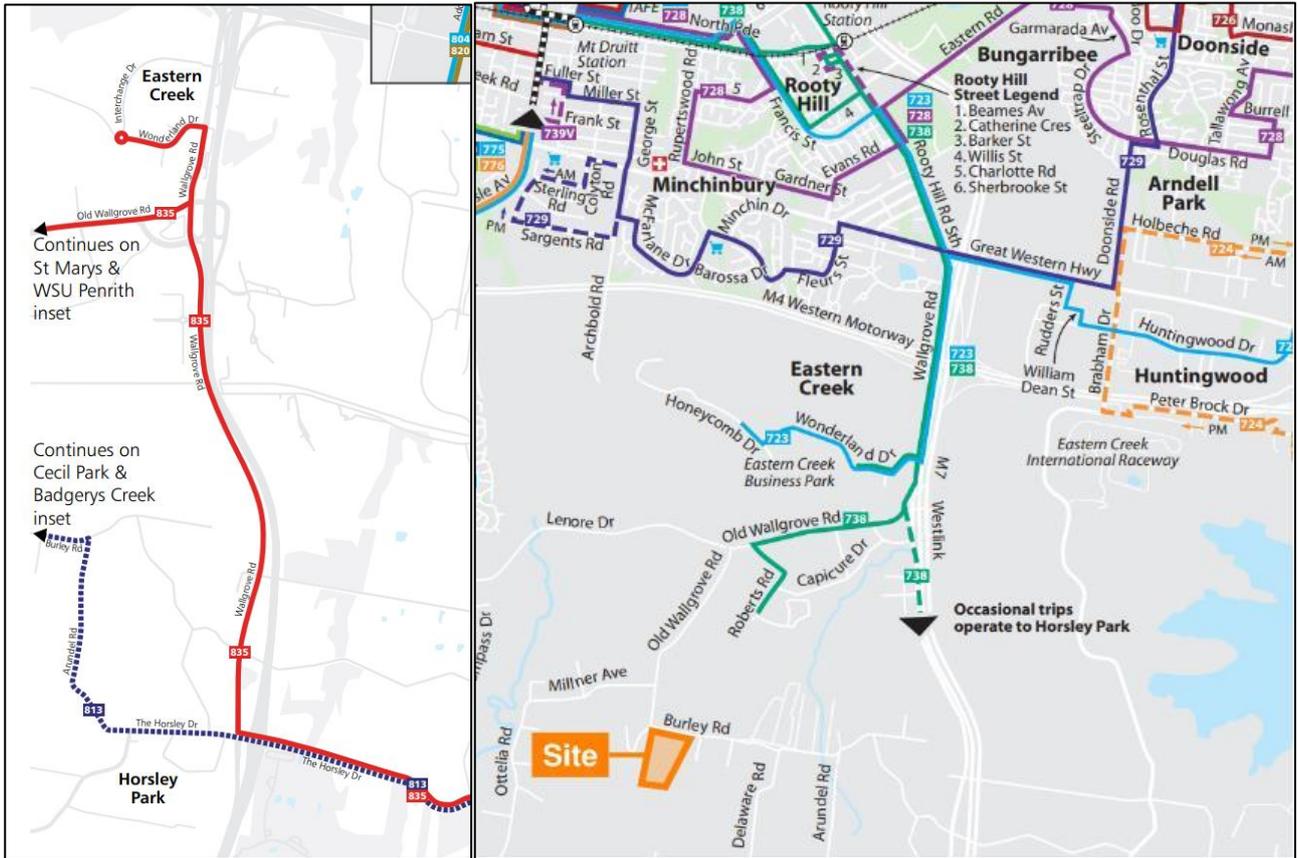


Figure 2.6: Transit Systems and Busways Bus Network Maps

Source: Transit Systems

2.3.3 Sydney Metro West

Planning approval has been granted for Sydney Metro West, an underground rail project which will connect the western Sydney suburbs and the Sydney CBD.

Sydney Metro West will connect more broadly to the growing Metro network, including the existing North West Line and future City & Southwest line and Western Sydney Airport line. Long-term planning is underway which would provide an extension of Sydney Metro West through to the Western Sydney International Airport, as illustrated in Figure 2.7.

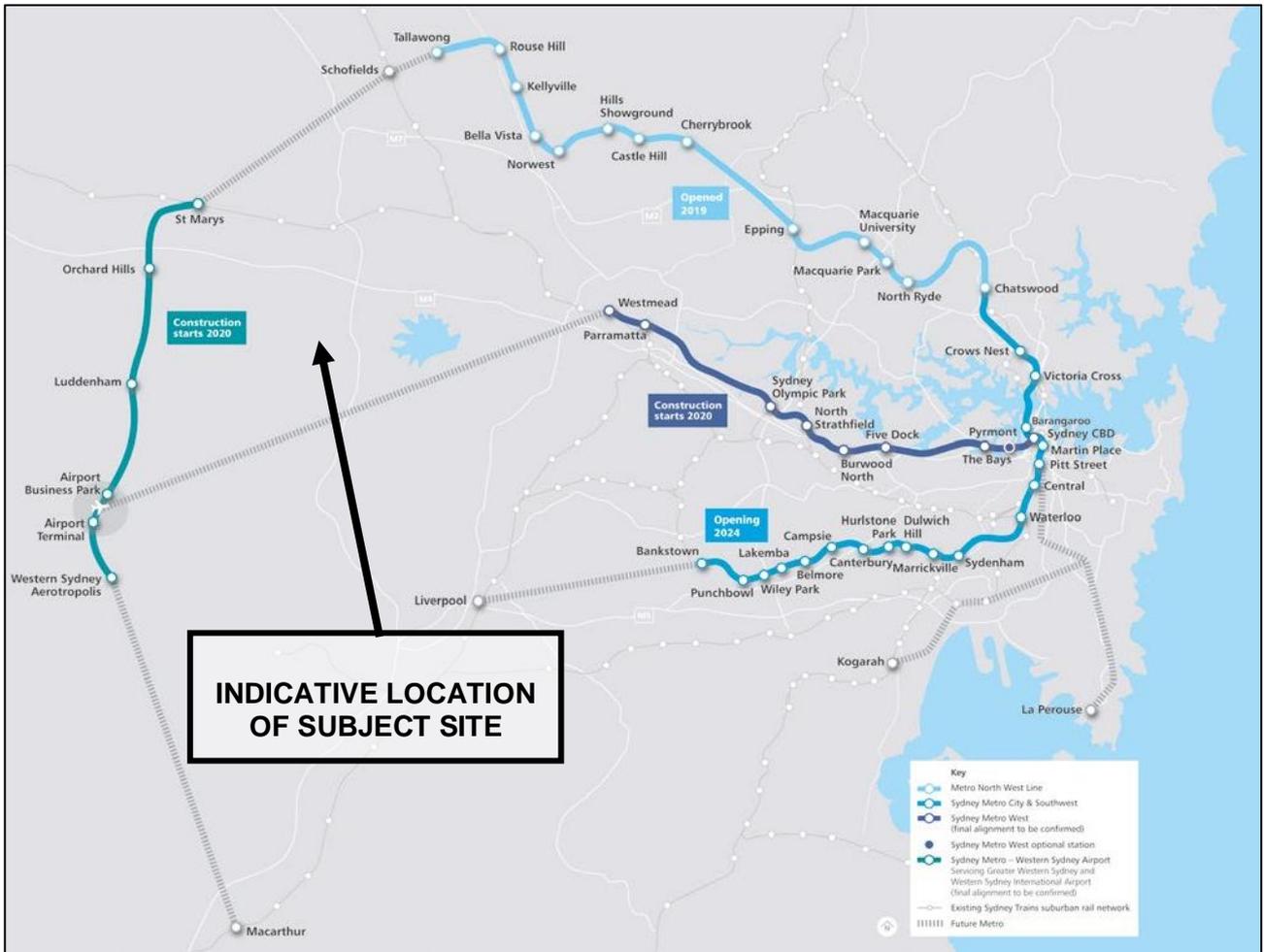


Figure 2.7: Sydney Metro Network

Source: Sydney Metro West Amendment Report – Westmead to The Bays and Sydney CBD

2.4 Car Share Services

Car share services within the Greater Sydney area include the major car share operators GoGet and Car Next Door. There are currently no car share services available within walking distance of the subject site. However, as these services gain popularity, additional car share pods may become available in proximity of the site in future years. Therefore, consistent monitoring of nearby car share services is encouraged so that nearby they can be identified and shared with the development users.

2.5 Electric Vehicle Charging

The following link provides access to an electric vehicle charging locator map developed by TfNSW:

<https://www.transport.nsw.gov.au/projects/electric-vehicles/charging-an-electric-vehicle/nsw-electric-vehicle-charging-map>

The above website indicates that the nearest electric vehicle charging station is located approximately 11.5km (16-minute) drive to the north-east of the subject site at Sydney Motorsport Park, where two 22kw charging stations are provided.

The above link should be made available to development users in order to locate the nearest electric vehicle charging locations.

2.6 Existing Travel Patterns

The 2021 Census of Population and Housing provides data on Mode of Travel to Work (MTW) for workers travelling to or from a specified geographical area. Travel modes are defined based on a simplified subset of 15 travel modes. Areas are defined based on statistical area Level 2 (SA2) zoning classifications.

The subject site is located within the Horsley Park – Kemps Creek SA2 zone, as illustrated in Figure 2.8.

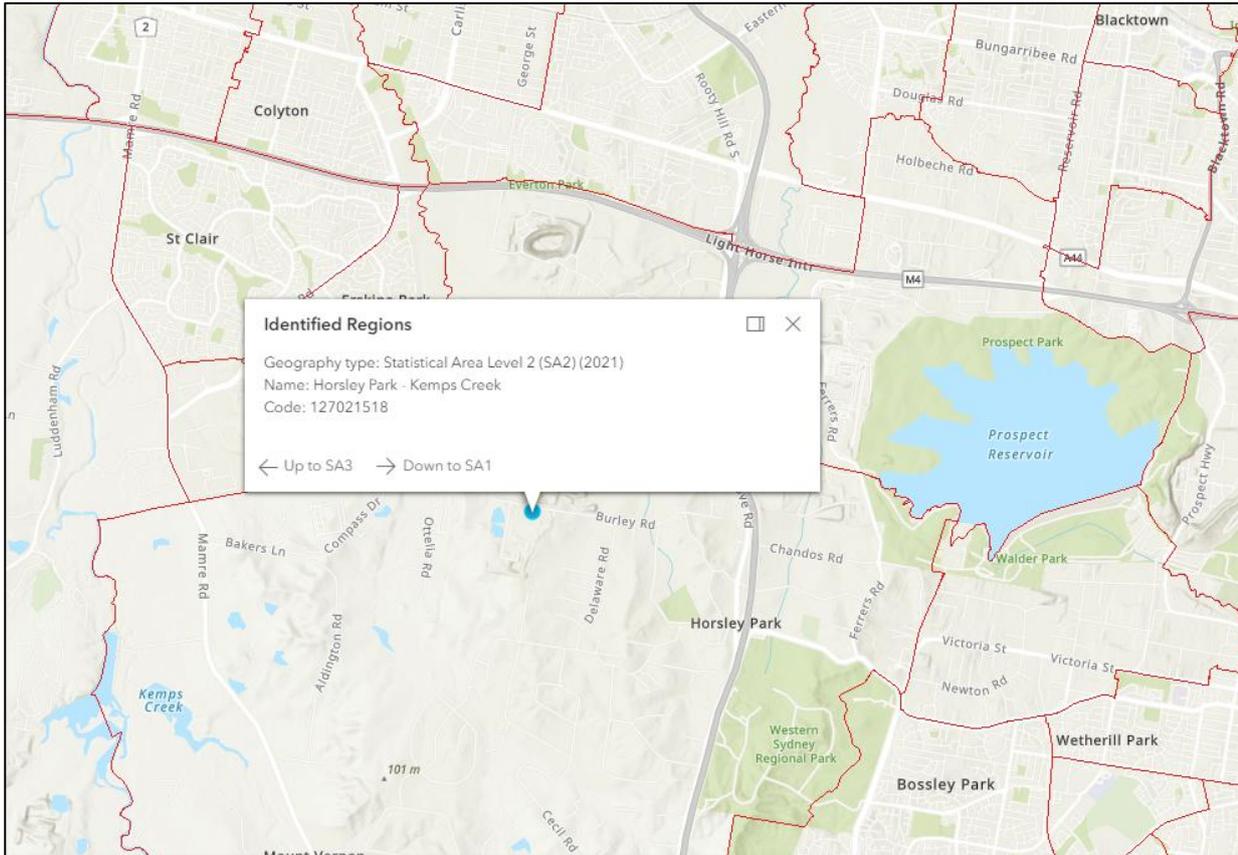


Figure 2.8: Horsley Park – Kemps Creek SA2 Zone

Source: Australian Bureau of Statistics – ABS Maps

An assessment of the 2021 mode share data for the local SA2 zone is detailed in Table 2.2. A simplified 15-mode categorisation has been utilised to allocate a primary mode when multiple modes have been used in one trip. For reporting purposes, this table excludes responses for “Worked at home”, “Did not go to work”, “Not stated”, and “Not applicable”.

‘Place of Work’ data relates to those respondents who are travelling to work within the nominated zone (and may reside either within that zone or in any other location). ‘Usual Residence’ data relates to those respondents who reside within the nominated zone (and may work either within that zone or in any other location). For the purposes of this development, which is a commercial / industrial site generating regular employees, the most relevant data set is considered to be the *Place of Work*.

Table 2.2: Method of Travel to Work Data

Source: Australian Bureau of Statistics – Census TableBuilder

Travel Mode (MTW15P)	Mode share (%)	
	Place of Work	Usual Residence
Train	0.5%	1.2%
Bus	0.1%	0.0%
Tram / Light Rail	0.0%	0.0%
Taxi	0.3%	0.0%
Car, as driver	88.5%	80.8%
Car, as passenger	5.3%	5.2%
Truck	2.4%	6.0%
Motorbike/scooter	0.4%	0.0%
Bicycle	0.1%	0.0%
Walked only	1.1%	4.7%
Other Mode	1.2%	1.6%
Total	100.0%	100.0%

The travel data shows the following:

- The main method of travel to the area is by car (as driver) for the significant majority of all workers.
- Approximately 1% of workers travel to the area by public transport, with most of these travelling via train.
- The majority of residents living within the area travel to and from work by car.

3.0 Proposed Development

3.1 Detailed Project Description

The key features of the Proposal are summarised as follows:

- Site preparation works including bulk earthworks.
- Staged construction and operation of five data centre buildings comprising a total gross floor area (**GFA**) of 63,654m² including 52,916m² of technical data hall floor space and 10,738m² of ancillary office and innovation floor space, including ‘front of house’ meeting and function spaces, and a café.
- Associated and ancillary on-site facilities on-site parking for 200 cars, business identification signage (pylon and elevation signage), civil and stormwater works and 9,900m² of deep soil landscaping.
- Delivery of 232 megawatts of power, including a 330kV substation and a 33kV switching stations, plus above ground diesel storage tanks and above ground water tanks for industrial water and fire water.

The Project will be delivered in three construction stages as follows:

- Stage 1 = Buildings A, B, C, and substation
- Stage 2 = Building D
- Stage 3 = Building E

The key components of the proposed data centre development are listed in the following table.

Table 3.1 Project Details

Descriptor	Project Details
Project Area	The site has a total area of 8.206 hectares. The entire site will be disturbed by the Project.
Use and Activities	Data centre with ancillary office and innovation floor space and café
Project Summary	<ul style="list-style-type: none"> ▪ Site preparation works including bulk earthworks. ▪ Staged construction and operation of five data centre buildings comprising a total gross floor area (GFA) of 63,654m² including 52,916m² of technical data hall floor space and 10,738m² of ancillary office and innovation floor space, including ‘front of house’ meeting and function spaces, and a café. ▪ Ancillary development including on-site parking for 200 cars, business identification signage (pylon and elevation signage), civil and stormwater works. ▪ Delivery of 232 megawatts of power, including a 330kV substation and a 33kV switching station, plus above ground diesel storage tanks and above ground water tanks for industrial water and fire water.

Descriptor	Project Details
Gross Floor Area (GFA)	Total GFA of 63,654m ² , broken down as follows: <ul style="list-style-type: none"> ▪ Data halls/technical: 52,916m². ▪ Mission critical (MCX) office, innovation and admin floor space: 10,738m². ▪ Total number of data houses: 34 data houses
Maximum Height	<ul style="list-style-type: none"> ▪ Building A – 32 metres over three storeys ▪ Buildings B, C, D and E – 39 metres over four storeys
Floor Space Ratio	0.78:1
Deep Soil Area	9,900m ² (12.1% of site area)
Car Parking	200 car spaces including 6 DDA spaces and 10 EV spaces
Motorbike Parking	5 spaces
Bicycle Parking	24 spaces
Utilities	Provision of required utilities: <ul style="list-style-type: none"> ▪ Building A Utilities including: <ul style="list-style-type: none"> – Above ground diesel storage tanks (10 x 25kL each) – Above ground water tanks for industrial water (4 x 170kL each) ▪ Building B Utilities including: <ul style="list-style-type: none"> – Above ground diesel storage tanks (10 x 65kL each) – Above ground water tanks for industrial water (4 x 580kL each) ▪ Building C Utilities including: <ul style="list-style-type: none"> – Above ground diesel storage tanks (10 x 65kL each) – Above ground water tanks for industrial water (4 x 580kL each) ▪ Building D Utilities including: <ul style="list-style-type: none"> – Above ground diesel storage tanks (10 x 65kL each) – Above ground water tanks for industrial water (4 x 580kL each) ▪ Building E Utilities including: <ul style="list-style-type: none"> – Above ground diesel storage tanks (14 x 65kL each) – Above ground water tanks for industrial water (6 x 580kL each) Fire Water Storage Tanks: <ul style="list-style-type: none"> ▪ Above ground water tanks for fire water (6 x 340kL each) Substation: <ul style="list-style-type: none"> ▪ On site 330kV substation plus 33kV switching station
Power Consumption	232 megawatts
Operations and Management	The facility would be constructed and operated by NEXTDC. The site would be operated on a 24-hour, 7 day a week basis.

Descriptor	Project Details
Existing Services and Infrastructure	Existing services and infrastructures will be extended, adapted and augmented to meet the demands of the Project.
Staging/Phasing	The Project will be constructed in three stages: <ul style="list-style-type: none"> ▪ Stage 1 = Buildings A to C and Substation ▪ Stage 2 = Building D ▪ Stage 3 = Building E

The anticipated staffing levels for the site is a total of 411 specialists and related full-time roles during operation. These staff will comprise the following roles:

- Executive / sales
- Security / CSR / Concierge
- Operational
- Mission critical office
- External and intermittent maintenance contractors
- Café

Many of the above roles work on an 8hr shift basis, as the development will operate 24/7. Therefore, it is anticipated that the maximum total staff on-site at any given time will be 196 (inclusive of all roles specified above). A staffing occupancy schedule prepared by NEXTDC has been provided as Appendix 5 of this report for reference.

Figure 3.1 below indicates the general arrangement plan illustrating the proposed data centre development site layout.

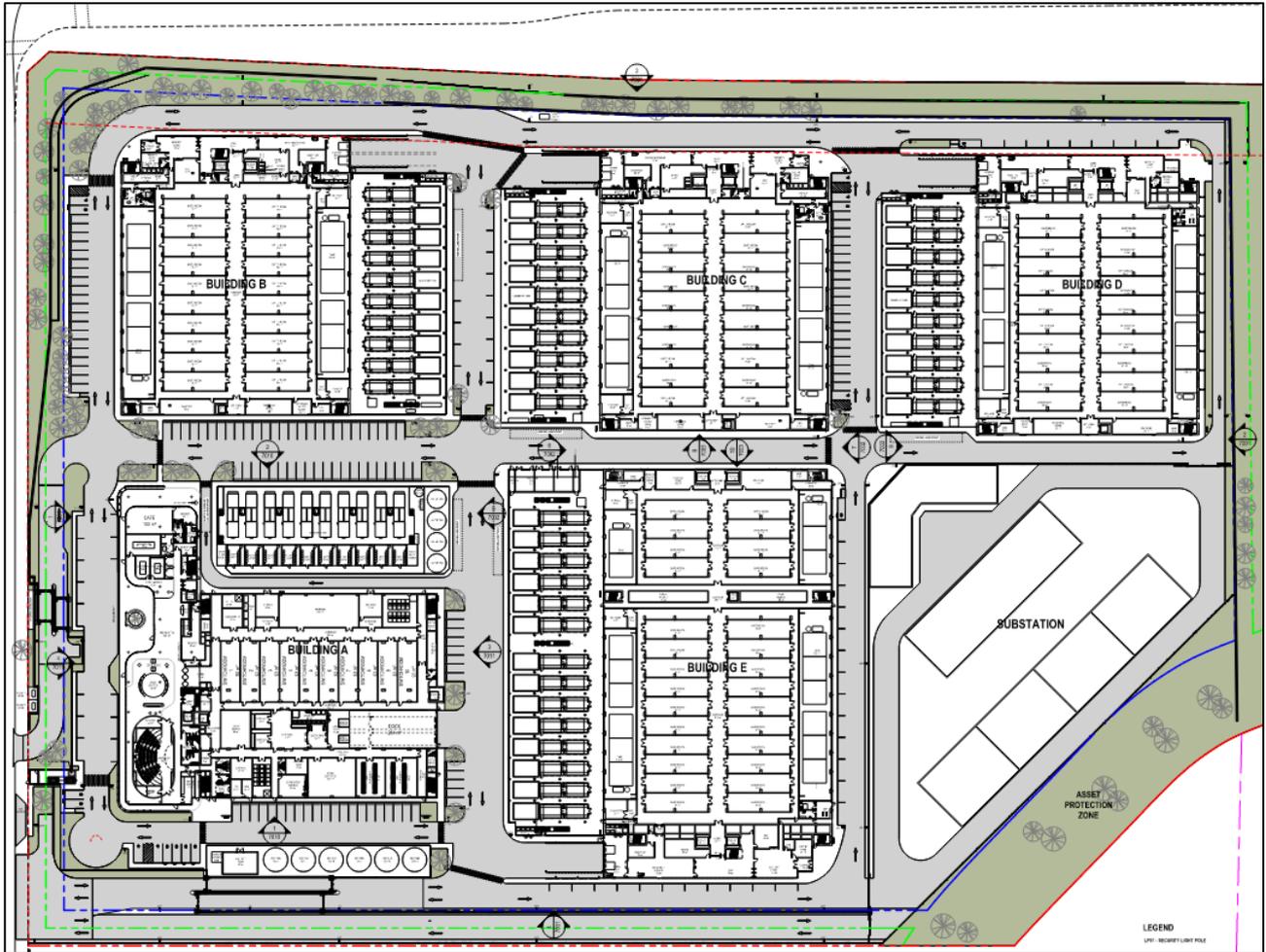


Figure 3.1: General Arrangement Plan

Source: HDR

3.2 Detailed Project Description

The anticipated staffing levels for the site is a total of 411 specialists and related full-time roles during operation. These staff will comprise the following roles:

- Executive / sales
- Security / CSR / Concierge
- Operational
- Mission critical office
- External and intermittent maintenance contractors
- Café

Many of the above roles work on an 8hr shift basis, as the development will operate 24/7. Therefore, it is anticipated that the maximum total staff on-site at any given time will be 196 (inclusive of all roles specified above).

3.3 Development Active Transport

3.3.1 Pedestrian Facilities

Pedestrian access to the site is proposed to be facilitated by a pedestrian staircase and adjacent accessible ramp connecting with the eastern Johnston Crescent footpath and providing access to the entrance of Building A in the western portion of the site. Marked pedestrian crossings have been provided throughout the site where pedestrians are required to cross any internal roads.

Appropriate pedestrian wayfinding signage is provided throughout the site in order to manage pedestrian movements.

This development application does not include any proposed upgrades to nearby external pedestrian facilities or public domain.

3.3.2 Cyclist and EOT Facilities

The development is proposed to provide a total of 24 bicycle parking spaces within enclosed and secure bicycle storage rooms within each data centre building.

To accompany the new bicycle parking, end-of-trip facilities (EOT) are proposed to be provided in each building near the secure bicycle parking room in the form of unisex and accessible toilets and showers and lockers. Table 3.2 below indicates the proposed bicycle and EOT facilities incorporated into each of the proposed building on-site.

Table 3.2 – Proposed Bicycle Parking and EOT facilities

Proposed Building	Number of Bicycle parking spaces	EOT facilities
A	8	2x unisex showers 1x accessible shower 8x lockers
B	4	1x unisex shower 1x accessible shower 5x lockers
C	4	1x unisex shower 1x accessible shower 5x lockers
D	4	1x unisex shower 1x accessible shower
E	4	1x unisex shower 1x accessible shower
Total	24	6x unisex showers 5x accessible showers 18x lockers

The site is in proximity to cycling routes throughout the region, as detailed in Section 2.2.2 of this report, and this is expected to be an encouraged travel mode for building users, supported by the availability and ease of the proposed EOT in each building. These facilities are designed and expected to assist in encouraging sustainable and healthy travel for users of the site.

3.4 Vehicular Parking

3.4.1 Passenger Vehicles

The proposed development includes a total of 200 passenger vehicle parking spaces situated across the site with sections of 90-degree and parallel parking spaces provided in close proximity to each building.

A summary of the number of parking spaces provided per building is provided in Table 3.3.

Table 3.3 – Proposed Parking Provision

Proposed Building	Parking Provision
A	77
B	53
C	32
D	11
E	27
Total	200

This level of parking provision has been determined to be satisfactory to accommodate the demands of the development, noting the reduced connectivity of the site to public transport, whilst not being excessive in order to encourage carpooling and active modes of travel to ultimately reduce the reliance on private vehicles.

3.4.2 Electric Vehicles

Of the above proposed 200 passenger vehicle parking spaces, 5% or 10 spaces, have been equipped with electric vehicle charging capabilities and have been marked as electric vehicle spaces.

The electric vehicle parking space provision is considered to be satisfactory to meet the needs of the proposed development. Further provision for electric vehicle charging can be monitored based on the evolving needs of the users of the development.

3.4.3 Motorcycles

The proposed development includes the provision of five motorcycle parking spaces.

The provision of motorcycle parking spaces may assist in encouraging usage of more fuel and space-efficient vehicles and act as a passive reminder to car park users during their time in the site.

3.4.4 Passenger Drop-Off

Building A provides an area dedicated to passenger pick-up and drop-off along the kerb alignment adjacent to the entrance to the building.

It is also proposed that an approximately 12m long section for 'Taxi Drop Off' zone be imposed along the eastern Johnston Crescent kerb alignment, capable of accommodating approximately two taxis at a time for the external drop-off of passengers to the site.

4.0 Travel Plan Objectives

4.1 Promote Alternative Transport Usage

As part of any long-term sustainable transport plan, promotion of sustainable travel modes is a critical component. Users often face difficulties in using alternative modes due to a simple lack of awareness of their options. If these options can be presented to users in an easy-to-understand format, they may be more likely to change their travel behaviours.

To improve user understanding of alternative and sustainable transport, this GTP seeks to inform all building occupants clearly and regularly.

Promotion of sustainable travel modes assists in educating the community in their awareness of transport opportunities, travel safety, and becoming generally more comfortable with using modes other than private vehicle. This is of significant long-term benefit to the general public, by developing a community with a good understanding of transport and who are more likely to consider their transport choices in the future.

4.2 Improve Health and Wellbeing

The encouragement of sustainable and active travel can result in the improved health and wellbeing of staff, visitors and personnel of the proposed Data Centre development. This responsibility extends beyond work hours to include daily travel to and from the office. A change from vehicular transport to active transport such as walking or cycling provides health benefits to users by increasing their amount of daily physical activity.

To improve health and wellbeing of staff, this GTP seeks to increase the use of active transport modes such as walking or cycling.

A reduction in vehicle usage will also create environmental benefits through reduced emissions, which provides further improvements to health and wellbeing of the community more broadly.

4.3 Improve User Safety

In the interest of user safety around the site, it is important that the volume of vehicles moving around the site is reduced as much as possible. This applies to vehicles interacting with pedestrians, and vehicles interacting with other vehicles. While pedestrians are generally separated from vehicles on formal footpaths or controlled signalised crossings, mistakes and accidents can occur which cannot be foreseen or fully prevented.

To improve user safety for pedestrians and vehicles around the site, this GTP seeks to reduce the total volume of vehicles travelling to the site.

We note that it is not only building user safety but also the safety of the wider road network and community that shall be improved by a reduction in vehicle volumes.

4.4 Reduce Traffic Congestion

The development is located within the Horsley Park industrial area with limited road access to the site. The traffic demand for the site is therefore highly concentrated to a single route in and out, with all traffic travelling via Old Wallgrove Road.

To decrease the likelihood of congestion experienced by users and the general public, efforts must be taken to reduce the total volume of vehicles traveling to the site.

4.5 Reduce the Environmental Footprint of the Development

Reducing the environmental footprint of a development is an essential component of any sustainable transport plan. The use of private vehicles by visitors and staff members is a major contributor to the environmental footprint of the development.

This Plan seeks to decrease the site's environmental footprint by promoting and increasing the use of more sustainable travel options such as public and active transport and educate users about the importance of sustainable practices. These measures aim to decrease the overall environmental impact of the development, advocating the importance of sustainable behaviours to the staff and visitors attending the site and providing a sustainable future.

4.6 Encourage Higher Vehicle Occupancy Rates

This GTP provides actions to encourage higher vehicle occupancy rates, with the aim to reduce the number of vehicles travelling to and from the site via carpooling initiatives. As outlined in Objective 4.4, this has several benefits including a reduction in traffic congestion and parking impacts.

5.0 Mode Share Targets

Based on a review of the existing local Journey to Work data for the site, an analysis of the alternative transport provisions within the site and external public transport options in proximity of the site, targeted mode share splits for building occupants are detailed below in Table 5.1.

The total proposed parking opportunities within the site, including bicycle, motorcycle, taxi and car parking spaces, of 232 spaces on-site at any given time.

In addition to the above it is considered a reasonable carpool target to achieve a vehicle occupancy rate on average of 2 occupants per vehicle. Hence, with 200 carparking spaces, 400 people (200 drivers and 200 passengers) would be serviced. With this carpool target, the total number of people that can be serviced by the development parking opportunities at any given time would be 432 people. As the development is to generate up a maximum of 196 staff on-site at any given time, this is considered to exceed the developments requirements.

Taking into account the mode share data from the 2021 census, other travel modes for the *place of work* category, including train, bus, ferry, tram, truck, walked only and 'other' mode only accommodate for approximately a total of 5.3% of the mode share. Hence, incorporating these modes, the total number of potential people serviced is approximately 455 (432 x 1.053).

Based on this potential total number of people serviced, the proposed 24 bicycle spaces provided results in up to 5.3% of building occupants to cycle and store their bike on-site. Therefore, the *targeted* mode share for bicycles (being the occasion when all provided bicycle parking spaces are utilised) is expected to be 5.3%.

Using this method, the targeted operational travel modes calculated and are shown in Table 5.1. The operational mode splits for those with known values are shown in **bold**, while those unchanged and in accordance with the remaining local travel data are shown in normal text.

Table 5.1: Targeted Operational Mode Share

Travel mode	Mode share (%)	
	2021 Census (Place of Work)	Targeted Site Operations
Train	0.5%	0.5%
Bus	0.1%	0.1%
Ferry	0.0%	0.0%
Tram	0.0%	0.0%
Taxi	0.3%	0.4%
Car, as driver	88.5%	44.0%
Car, as passenger	5.3%	44.0%
Truck	2.4%	2.4%
Motorbike/scooter	0.4%	1.1%
Bicycle	0.1%	5.3%
Walked only	1.1%	1.1%
Other Mode	1.2%	1.2%
Total	100.0%	100.0%

6.0 Actions

As previously discussed, the main objectives of this Green Travel Plan are to:

- Promote alternative transport usage;
- Improve health and wellbeing;
- Improve user safety; and
- Reduce traffic congestion.

In order to achieve these objectives, a number of initiatives and programs are recommended to be implemented as detailed in the following sections. Four base strategies are considered which aim to meet the objectives of the Plan:

1. Provide building / fit-out users' information
2. Encourage carpooling
3. Encourage active transport
4. Ongoing management

Actions to encourage carpooling, active transport, and public transport will assist in reducing total vehicular demand and activity at the site. This will assist in achieving the objectives of reduced traffic congestion, improved user safety, and reduced need for off-street or on-street parking. Encouraging active transport is also intended to improve health and wellbeing for staff and visitors. Additionally, by ensuring users are enabled with the appropriate information and undertaking continued management of the sustainable travel strategies, the objectives of the GTP can best be achieved over time.

Each strategy consists of a number of actions which should be implemented to achieve a shift toward the ultimate objectives of the Plan. These actions are summarised and included in a table which can also be used as a convenient checklist to assess the progress of sustainable travel initiatives. The staff member responsible for sustainable travel (as recommended in these initiatives) should review this checklist periodically to reflect on progress and opportunities.

6.1 User Information

6.1.1 Transport Access Guide

Users often face difficulties in using sustainable travel modes due to a simple lack of awareness of their travel options. If these options can be presented to users in an easy-to-understand format, they may be more likely to change their travel behaviours.

It is recommended that a brochure or leaflet be developed that provides information on bus routes and active transport facilities near the development. Brochures can easily be given to staff and can be developed in-house or by an external consultant. One example is shown in Figure 6.1 below.

Transport Access Guide

Trains and Metro

Macquarie University station is on the Metro line, connecting Tallawong to Chatswood. Services run every 4 minutes during peak hour, connecting you to the city within 35 minutes.

Eastwood and Epping stations are on the T9 Northern Line, connecting to Hornsby and the City. Services run every 7 to 15 minutes, connecting you to the city within 45 minutes. Get to Epping via the metro line, or to Eastwood via bus route 544.

Car Share

Our basement car park includes two car share vehicles operated by Popcar. It's easy to become a member with Popcar and only takes a few minutes online or by phone – visit popcar.com.au or call 1300 707 227.

Similar services are available nearby – check goget.com.au for options and availability.

Transport Access Guide

B

T

M

Your guide to accessible and sustainable transport around
NEUE at 137-143 Herring Road

Buses

The following bus routes are within walking distance of home:

- 288 – Epping to Erskine St
- 290 – Epping to Erskine St via Macquarie Uni & Nth Syd
- 291 – Epping to MacMahons Point
- 293 – Wynyard to Marfield (weekday peak only)
- 517 – Macquarie Centre to Ryde
- 518 – Macquarie Uni to Meadowbank Wharf
- 544 – Macquarie Centre to Auburn via Eastwood

Macquarie Park & North Ryde

Work in the Macquarie Park or North Ryde areas? Check out [Connect](http://connect.com.au), a website and information hub for local businesses and employees. Trip planning, carpooling, car share, and transport information are all available, and the Connect Concierge can provide you with a personalised trip plan.

Connect members and their employees get discounts, freebies and travel benefits – so take a look!

Walking

Safe and convenient walking routes are available to many local services and transport routes:

- Less than 5-minute walk to a variety of buses
- 7-minute walk to Macquarie University metro station
- 8-minute walk to Macquarie Centre
- 10-minute walk to Kent Road Public School

Remember to use safe crossing points, such as signalled intersections and pedestrian crossings, wherever possible.

Plan Your Trip

Not sure how to get to your destination? Visit www.transportnsw.info to check public transport times and services with the Transport for NSW Trip Planner. Alternatively, download one of these apps to get the latest information and plan your trip on the go:

Opal Travel – the official Opal app

Trip Go

Triplastic

Tripview

Transit App

Moovit

Cycling

Don't forget that many storage lockers are large enough to store a bike – check yours in the car park! Outdoor storage for you or your visitors is available outside the lobby.

Convenient cycling routes are available through the local area including paths on Epping Road, Waterloo Road and Shrimptons Creek bike trail.

For information about cycleways and cycling tips, visit Council's website: <https://www.ryde.nsw.gov.au/Recreation/Cycling>

Questions?

Chat to your building manager Scott Shearer on 0411 530 822.

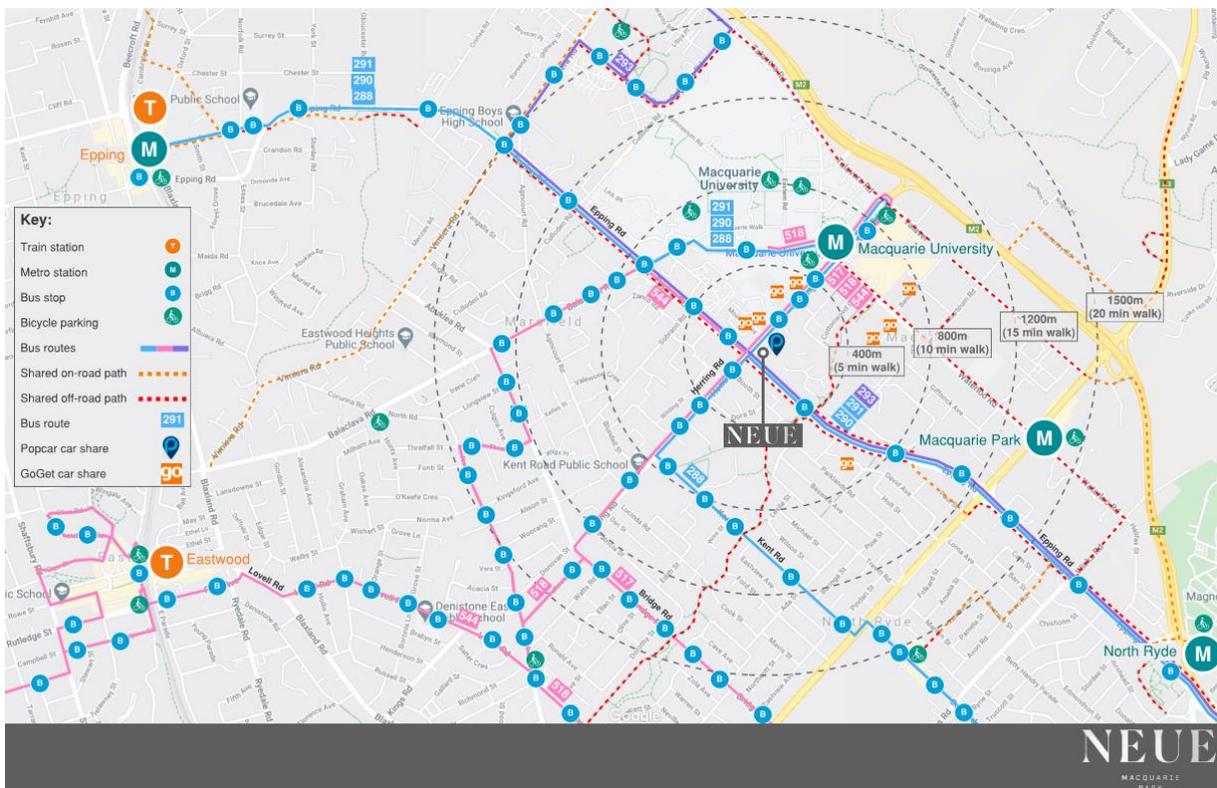


Figure 6.1: Transport Access Guide (TAG) Brochure Example

Source: TTW

6.1.2 Induction Information

To ensure that users are aware of their options, a TAG (discussed in Section 6.1.1) and any other relevant information such as health and activity leaflets should be distributed to all staff. Distribution methods will include information being included in induction or orientation packages.

Information provided directly in this manner results in users being more likely to engage in sustainable travel patterns, rather than being required to seek out information independently.

6.1.3 Periodic Reminders

Travel options can change over time, and new site users may miss evolving information. Periodic reminders can assist in providing continued information to users and aim to provide a greater reach and impact. One convenient way to reach a broad user base is to include information and reminders in periodic staff newsletters, site websites or updates. Content could include details on new travel initiatives, mode share progress, and upcoming events or changes, as well as reminding staff of the importance of sustainable travel.

This style of communication should also request feedback from staff regarding current initiatives and any other travel-related concerns.

6.2 Carpooling

6.2.1 Staff Pairing

Staff could be encouraged to carpool by sharing information about potential carpooling pairs. Not all staff may be aware of others who live near to them, or along their travel route to the site.

A meeting could be held for staff to provide an opportunity for staff members to discuss carpooling options, including coordination of staff by region and place of residence.

6.2.2 Priority Parking

Staff committed to carpooling with others should be allocated priority parking spaces. The provision of dedicated spaces, ensuring that these users will be able to find a space on-site, may encourage users to investigate carpooling, particularly with the limited parking provision.

6.3 Active Transport

6.3.1 Bicycle Storage and EOT

The proposed development includes 24 bicycle spaces provided across the site. Storage areas are to be maintained and kept to an appropriate standard as part of ongoing maintenance procedures. Usage of the storage should be monitored, and consideration of additional storage should be given if demand increases. Bicycle storage areas should be well signposted to assist with wayfinding. Frequent signage can also bring awareness to the available cycling facilities.

Installation of any future additional bicycle storage should be in accordance with Australian Standards AS2890.3: Bicycle parking, and any other specifications from authorities including Fairfield City Council.

Users wishing to engage in active transport often face difficulties dealing with physically exerting journeys travelling long distances or along steep grades. EOT are designed to allow users to shower and change after their journey, feeling refreshed and ready for their daily routine.

AS previously mentioned, EOT facilities are proposed within each building. Lockers, showers and bike parking spaces are provided, separated into unisex and accessible facilities. These facilities are expected to assist in encouraging sustainable and healthy travel for users of the site.

The proposed bicycle and EOT facilities with pedestrian access to each building are illustrated in Figure 6.2 – 6.6.

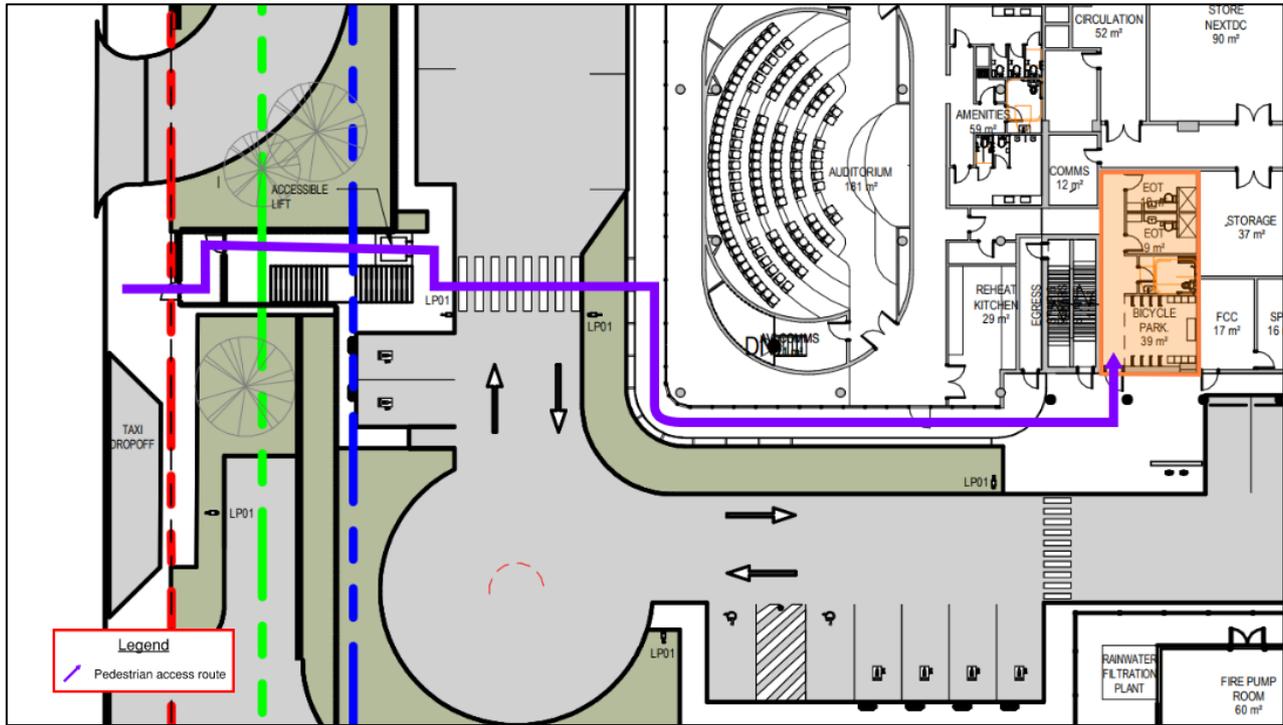


Figure 6.2: Building A – Proposed End of Trip Facilities and Pedestrian Access

Source: HDR

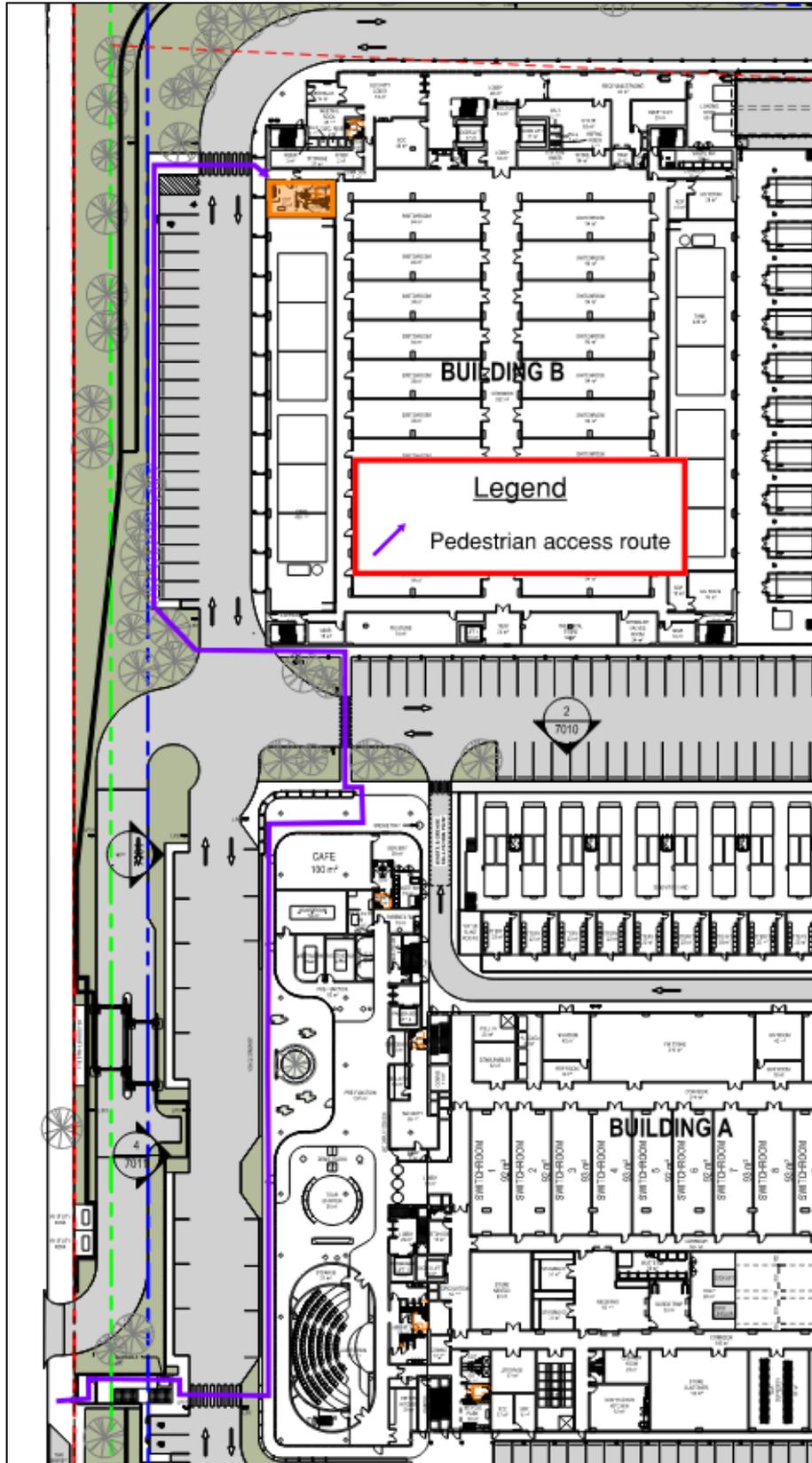


Figure 6.3: Building B – Proposed End of Trip Facilities and Pedestrian Access
Source: HDR



Figure 6.4: Building C – Proposed End of Trip Facilities and Pedestrian Access

Source: HDR

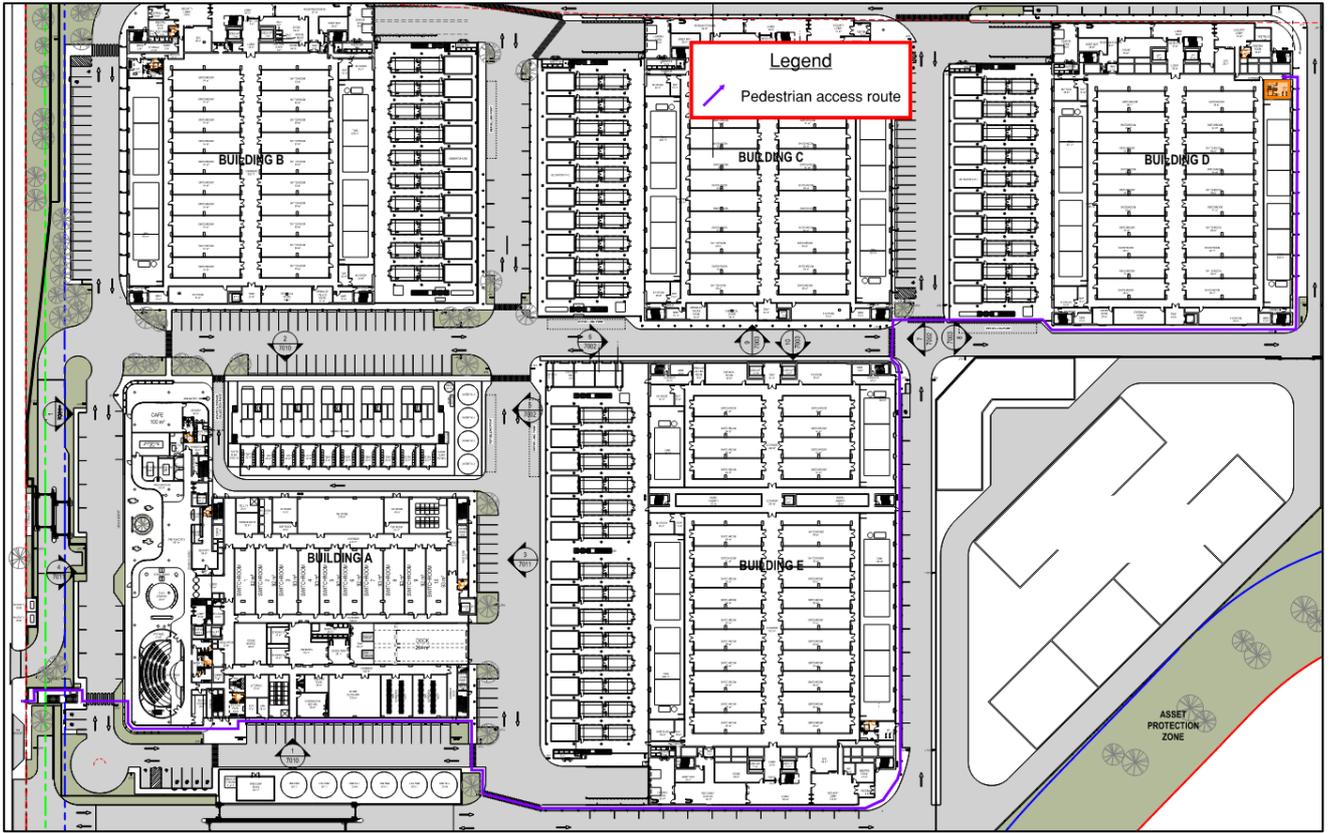


Figure 6.5: Building D – Proposed End of Trip Facilities and Pedestrian Access

Source: HDR

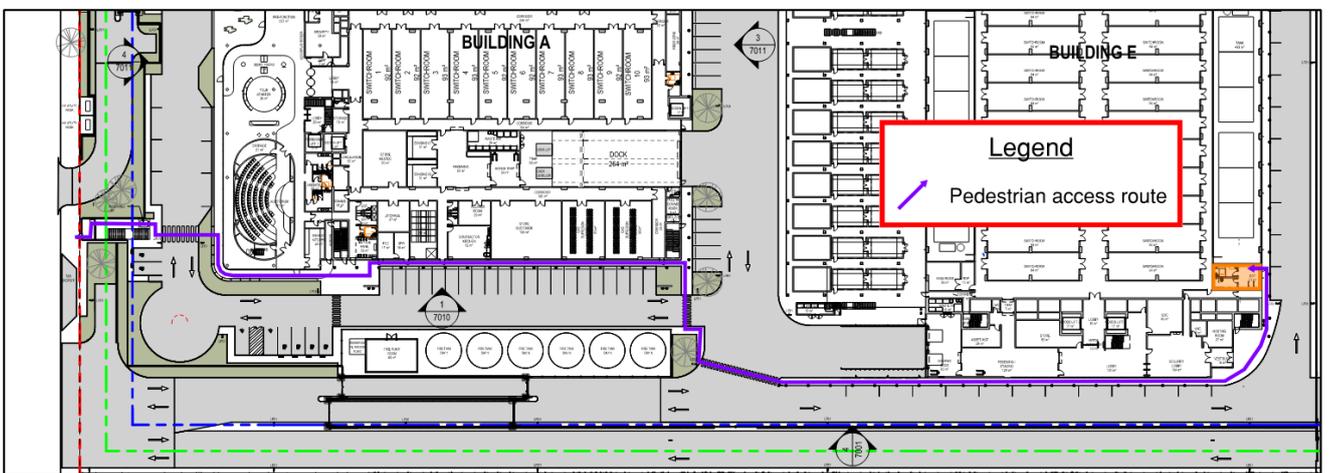


Figure 6.6: Building E – Proposed End of Trip Facilities and Pedestrian Access

Source: HDR

6.3.2 Health and Activity Events

Various organisations and groups develop programs and events to encourage active transport. For example, Bicycle Network coordinates a Ride2Work Day each year. These events provide a good opportunity for organisations to encourage cycling for their staff respectively, and each event can also assist in influencing the travel behaviour of other group through general publicity and awareness. Events hosted at building could include organised preferred cycling routes, bike safety programs, bike maintenance instructions, and more.

Building management should investigate avenues to promote this event and encourage staff involvement. Subject to further discussion, incentives may include competitions or rewards such as a free breakfast.

This, and other such events, should be considered annually.

6.3.3 Public Transport Initiatives

Public transport maps and information should be provided on staff and development website, as well as on public displays throughout the development. Consideration could be given to providing staff with pre-paid travel credits in the form of pre-loaded Opal cards.

6.4 Ongoing Monitoring and Management

6.4.1 Travel Plan Reviews

This GTP and other associated documentation (such as a Transport Access Guide) will be reviewed regularly and updated as required. It is recommended that an annual review would be an appropriate update schedule. This annual review should include:

- Updating to reflect any travel-related changes in the local area such as public transport services, new cycle routes, car share pods or pedestrian facilities (this should occur as changes arise rather than annually).
- Reviewing progress against the proposed mode share targets and update targets if required.
- Identification of any shortfalls in the Plan and an updated action plan to address these shortfalls.
- An updated travel mode survey to be distributed to all building occupants.
- Consultation with building occupants and visitors.
- Adjustments to initiatives and targets.

6.4.2 Staff Responsibility

To ensure that the ongoing review of this Plan is carried out as expected, responsibility of this task should be allocated to a specific staff member. This staff member could form a sustainability group that would assist in updating the GTP and champion the travel initiatives. Responsibilities may include:

- Implementation and promotion of the actions outlined in the GTP.
- Monitoring the effectiveness of the actions.
- Ongoing maintenance of the GTP.
- Providing advice to building occupants and visitors about transport-related issues.
- If required, liaising with external parties such as Council.

6.4.3 Data Collection

To ensure that the ongoing review of this Plan is carried out as expected, staff and visitors of the development should be surveyed annually to track mode share trends and alter the GTP as needed in order to meet the outlined mode share targets. In order to get a baseline indication of travel habits, it is proposed that staff and

visitors of the facility be surveyed 6 months after occupation of the development. The results of these surveys will inform the GTP for subsequent stages of the development, as necessary.

7.0 Conclusion

A Green Travel Plan is a critical step in achieving more sustainable travel behaviour for staff and visitors to the proposed S4 data centre development at 16 Johnston Crescent, Horsley Park. The proposal and ongoing operation of the data centre provides opportunities to promote active and public transport and influence overall travel behaviour to and from the precinct.

This document should not be taken as a strict guide to strategies and actions for the development, but rather a suggested framework based in current investigations and habits. Some actions may not ultimately be suitable for the development, and additional actions may be identified which could provide further improvements not yet identified in this Plan.

Importantly, this document should be recognised as a site-specific Plan for the S4 Data Centre development and actions listed here should be undertaken in association with typical sustainable transport plans actions. Baseline actions should include adequate signposting of active and public transport infrastructure, sufficient lighting and security in all areas, genuine consultation with local agencies and authorities when opportunities arise, and other actions relevant to all development types.

It is recommended that this Plan, including its targets and methodologies, be updated regularly (approximately every 12 months). Updates to the Plan should consider consultation with relevant stakeholders, particularly staff, and external bodies such as Fairfield City Council where necessary.

Prepared by
TTW (NSW) PTY LTD



SOPHIE SLADE
Senior Traffic Engineer

Authorised By
TTW (NSW) PTY LTD



GRACE CARPP
Associate (Traffic)

P:\2021\2110\211085\Reports\TTW\Traffic\1. SSDA\Prelim Green Travel Plan\240320 - S4 Green Travel Plan - Final.docx