

# **Preliminary Construction Traffic Management Plan**

## **S4 Data Centre**

**Prepared for NEXTDC**

14 June 2024

211085

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### Revision Register

Rev	Date	Status	Prepared By	Reviewed By	Approved By
0	20/12/2023	Draft for comment	SS	GC	
1	13/02/2024	Draft for comment	SS	GC	
2	19/04/2024	Final	SS	GC	PY
3	14/06/024	Final	SS	GC	PY

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## 1.0 Introduction

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 63,654m<sup>2</sup> including 52,916m<sup>2</sup> of technical data hall floor space and 10,738m<sup>2</sup> 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 9,900m<sup>2</sup> 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

### 1.1 Scope

Taylor Thomson Whitting (TTW) has been engaged by NEXTDC to provide traffic engineering consultancy services for the development of the S4 Data Centre. This Preliminary Construction Traffic Management Plan (CTMP) addresses the implications of the construction works for the proposed data centre development. It discusses the management of local traffic and construction vehicles related to the project.

This CTMP is in response to the SEARS requirement No. 6 Traffic, Transport and Accessibility, to provide a *"Construction Traffic Management Plan detailing predicted construction vehicle routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated."*

This CTMP also addresses the following item provided by Fairfield City Council in their SEARs advisory letter dated 22 November 2023, "A Construction Traffic Management Plan detailing the stages of works being carried out and the construction traffic impacts of the development proposal on the adjoining road network (state road and local road network) shall be assessed for each stage in more detail."

A detailed CTMP cannot be developed without the involvement of a contractor and consideration of all final design selections. This Preliminary CTMP is intended to provide a framework within which a future CTMP can be developed and implemented and to demonstrate the potential operation of the construction site.

A finalised CTMP will need to be prepared and approved prior to construction once contractor has been appointed and details are known about the staging of works.

A CTMP is developed to satisfy the duties of various work health and safety legislation, regulations, and codes of practice. Traffic Guidance Scheme (TGS) will also need to be developed for the future site to demonstrate

the traffic control procedures to be implemented. These must be in accordance with RMS and Australian Standards requirements.

The contractor shall be responsible for acquiring the necessary certificates, licences, consents, permits and approvals relevant to the construction on this site.

## 2.0 Project Description

### 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: Proposed staging of development design

Source: HDR

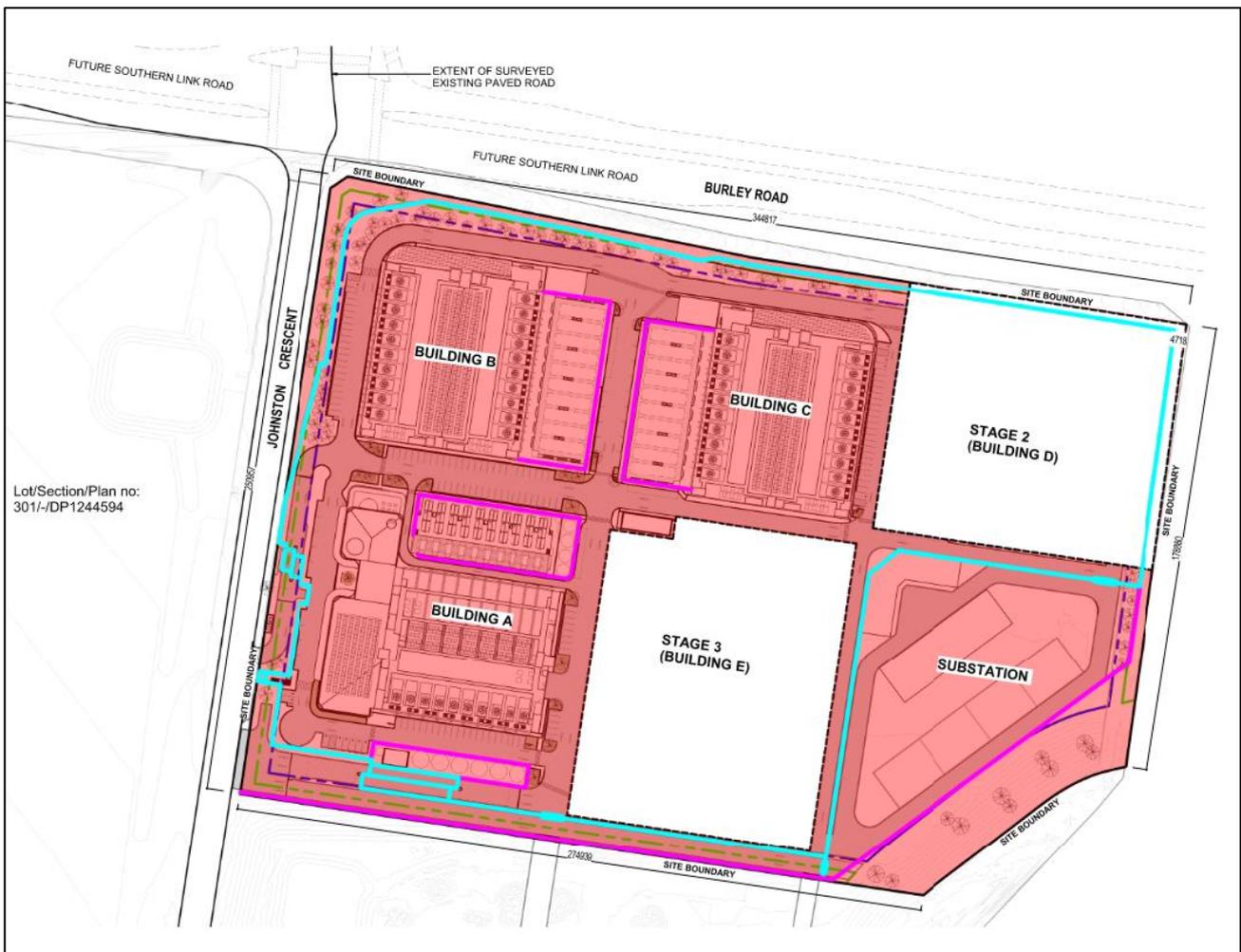
## 2.2 Project Staging

As previously mentioned, the proposed data centre development is to include the construction of five data centre buildings, vehicular driveways, internal private roads, associated car parking and loading facilities.

The S4 facility is to be built in three stages, which are to comprise the following:

- Stage 1 includes Buildings A, B C, substation, adjacent internal roads and parking areas
- Stage 2 includes Building D, adjacent internal roads and parking areas
- Stage 3 includes Building E, adjacent internal roads and parking areas

Figure 2.2 illustrates the proposed staging of the total development design.



**Figure 2.2: Proposed staging of development design**

*Source: HDR*

## 2.3 Construction Activities

The proposed **Stage 1** works are anticipated to be undertaken over a timeframe of approximately 36 months commencing mid-2025, with the following approximate timing breakdown:

- Building B: 24 month construction;
- Building C: 18 month construction commencing 12 months after Building B;
- Building A: 18 month construction commencing 6 months after Building C; and
- Substation: to be constructed concurrently and take approximately 17 months to complete.

Internal roads are to be constructed adjacent to each building and as required during the above 36-month period as required.

The proposed **Stage 2** and **Stage 3** works are anticipated to be undertaken over a timeframe of 18 months, with the following approximate timing breakdown:

- Building D: 12 month construction;
- Building E: 12 month construction commencing 6 months after Building D.

The above construction timeline will need to be confirmed once a Contractor has been appointed.

## 2.4 Hours of operation

It is anticipated that the site works will be undertaken during standard hours of operation as follows:

- |                               |            |
|-------------------------------|------------|
| • Monday to Friday            | 7am to 7pm |
| • Saturdays                   | 7am to 5pm |
| • Sundays and Public Holidays | None       |

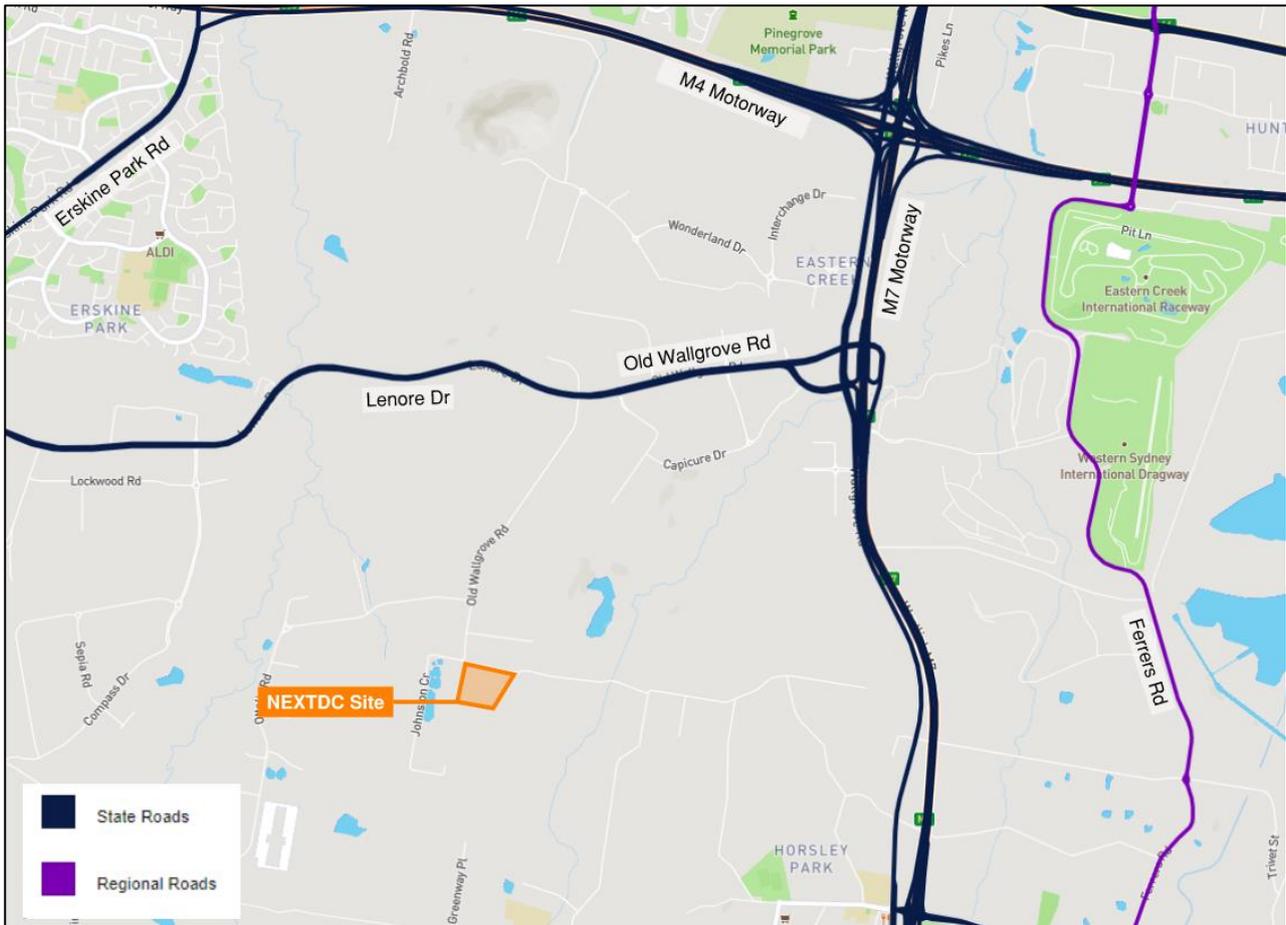
Night works will occur subject to approval.

### 3.0 Traffic Environment

#### 3.1 Road Network

##### 3.1.1 State Road Network

The state roads in the vicinity of the site are shown in Figure 3.1. To the north of the site, Old Wallgrove Road becomes a state road at its intersection with Lenore Drive, which is also a state road. The M7 and M4 motorways are also classified as state roads, as is Erskine Park Road. Ferrers Road to the east of the site is a regional road in the area.



**Figure 3.1: State Road Network**

Source: TfNSW Road Network Classifications

##### 3.1.2 Local Road Network

###### Burley Road

The site is located at 327 Burley Road on the southern side of the roadway. Burley Road is partially unsealed to the east of the development site for approximately 350 metres. The rest of the roadway has two traffic lanes, one in each direction. The road does not contain or kerb and gutter provisions and has sections with line marking and delineation. It is signposted with a 60 km/h speed limit.

### Johnston Crescent

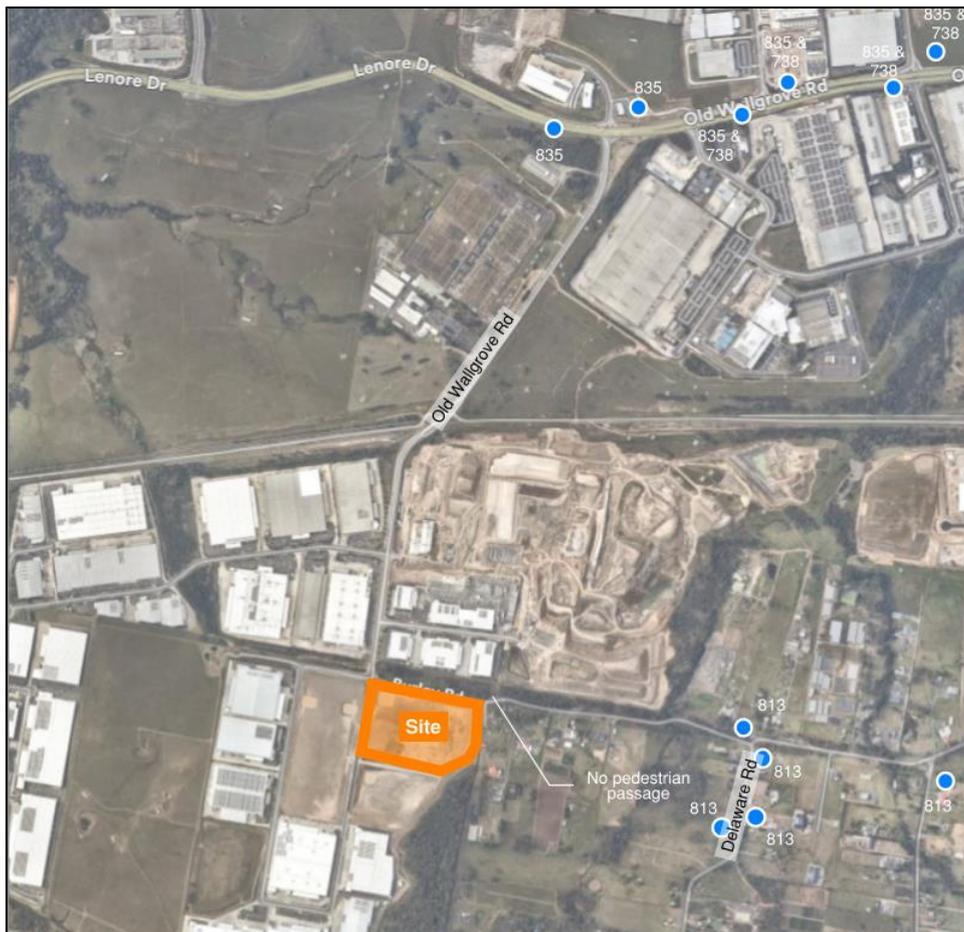
Johnston Crescent adjoins Burley Road at the intersection with Old Wallgrove Road. It then extends to the south, placing it to the west of the development site. The road contains one lane in each travel direction.

### Old Wallgrove Road

Old Wallgrove Road intersects with Burley Road and Johnston Crescent to the north-west of the site. At this point, the road contains two traffic lanes, one in each direction. The road widens to the north of the site at its intersection with Millner Avenue to become a four lane roadway, with two lanes in each direction and a speed limit of 80 km/h. Further north, Old Wallgrove Road intersects with Lenore Drive and extends towards the M7 motorway. On approach to the motorway, the road widens to three lanes in each direction.

## 3.2 Public Transport

There are limited public transport services available to travel to and from the site. There are bus stops located approximately 2 kilometres north of the site on Lenore Drive / Old Wallgrove Road and would take approximately 24 minutes to walk to. 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 3.2.



**Figure 3.2: Nearby Bus Stop Facilities**

The bus routes available at these bus stops are summarised in Table 3.1 and the relevant bus network maps are included in Table 3.1 and Figure 3.2.

**Table 3.1: 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)	<b>AM:</b> 30 minutes <b>PM:</b> 20 – 40 minutes
Transit Systems	813	Bonnyrigg and Western Sydney Parklands to Fairfield	<b>AM:</b> 105 minutes <b>PM:</b> 1 service offered
		Fairfield to Western Sydney Parklands and Bonnyrigg	<b>AM:</b> 1 service offered <b>PM:</b> 30 minutes
	835	WSU Penrith to Prairiewood	<b>AM:</b> 30 minutes <b>PM:</b> 30 minutes
		Prairiewood to WSU Penrith	<b>AM:</b> 30 minutes <b>PM:</b> 30 minutes

### 3.3 Pedestrians

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 3.3.



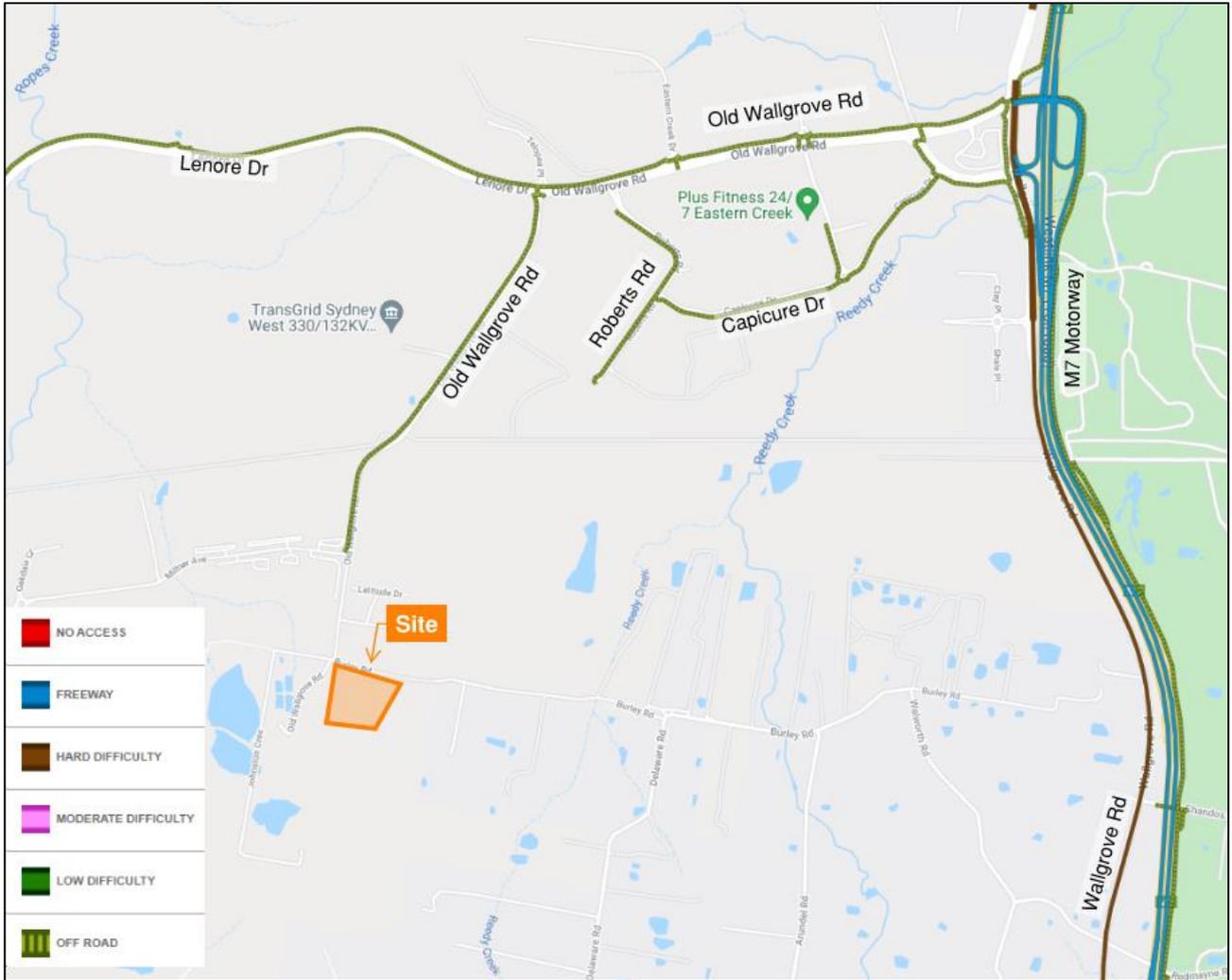
**Figure 3.3: Existing Pedestrian Facilities**

### 3.4 Cyclists

The closest designated cycleway to the site is 350 metres north on Old Wallgrove Road, as indicated in Figure 3.4. 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 provided to the south of the site.



**Figure 3.4: Existing Cyclist Facilities**

Source: TfNSW Cycleway Finder

## 4.0 Management of Construction Vehicles

### 4.1 Truck Routes to/from Site

The construction site access will occur from a construction driveway connecting with Johnston Crescent in the south-western corner of the site. Following this, access to the site will be via the following routes (refer to Figure 4.1):

#### From/To the north:

- Inbound – from southbound Westlink M7, exit to Old Wallgrove Road, turn left to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, through to Johnston Crescent and left turn into the site
- Outbound – right turn out of the site to Johnston Crescent, through to Old Wallgrove Road, right turn to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, right turn to Mini Link Road and left turn onto Northbound Westlink M7

#### From/To the south:

- Inbound – from northbound Westlink M7, exit to Mini Link Road, turn left to Old Wallgrove Road, turn left to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, through to Johnston Crescent and left turn into the site
- Outbound – right turn out of the site to Johnston Crescent, through to Old Wallgrove Road, right turn to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, through to Westlink M7 Onramp to access southbound lanes

#### From/To the east:

- Inbound – from westbound Western Motorway (M4), exit to Wallgrove Road, right turn to Old Wallgrove Road, turn left to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, through to Johnston Crescent and turn left into the site
- Outbound – right turn out of the site to Johnston Crescent, through to Old Wallgrove Road, right turn to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, left turn to Wallgrove Road, right turn to eastbound Western Motorway (M4)

#### From/To the west:

- Inbound – from eastbound Western Motorway (M4), exit to Wallgrove Road, right turn to Old Wallgrove Road, turn left to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, through to Johnston Crescent and turn left into the site
- Outbound – right turn out of the site to Johnston Crescent, through to Old Wallgrove Road, right turn to Old Wallgrove Road at the intersection of Lenore Drive / Telopea Place / Old Wallgrove Road, left turn to Wallgrove Road, left to westbound Western Motorway (M4)

The above construction vehicle routes have been chosen to avoid local roads and school zones, where possible.

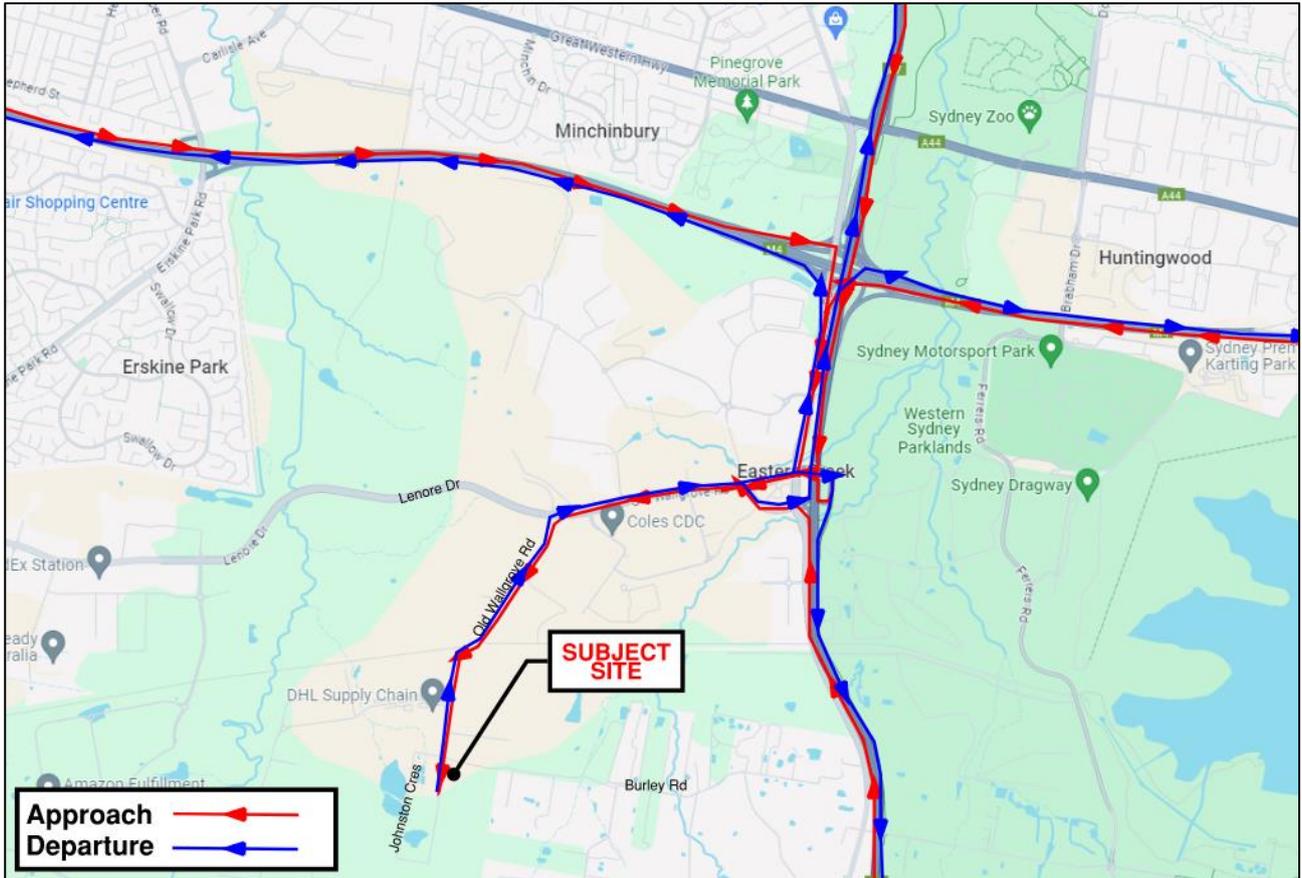


Figure 4.1: Construction Vehicle Access Routes

## 4.2 Construction Vehicles

Proposed truck types to be used during the construction works are expected to be vehicles up to and including 20m long Articulated Vehicles. The size of the biggest truck will need to be confirmed and finalised once a Contractor has been appointed.

During days of high estimated vehicle movements, it is expected that communication between the site, concrete batching plant and/or truck drivers will be maintained to stagger construction vehicle arrivals. This will allow for vehicles to be accommodated within the worksite and for traffic disruptions to be minimised.

Truck loading and unloading shall occur wholly within the site. all deliveries will be made within the approved work hours, with emphasis made on deliveries outside of peak periods where possible to reduce the impact on traffic flows.

## 4.3 Construction Site Access

Vehicles will enter the site from the construction driveway connecting with Johnston Crescent in the south-western corner of the site.

Construction vehicle movements and turning paths within the site should be investigated once the staging of works finalised which generally occurs during Construction Certificate stage.

## **4.4 Construction Traffic Generation**

### **4.4.1 Heavy Vehicles**

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Based on the scale of the proposed development, approximately 75 construction vehicle movement per day are estimated to be generated during the peak construction phase. It is assumed that these movements are to be distributed approximately evenly throughout the day.

Therefore, approximately 10% of vehicle movements will occur during the road network peak hours. Therefore, approximately 16 total construction vehicle movements will occur to and from the site during peak hours (8 inbound and 8 outbound movements).

### **4.4.2 Light Vehicles**

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It is also anticipated that construction workers will generate traffic movements to and from the site in the form of vans, utilises and utes. An approximate workforce of about 250 – 300 employees will be generated during peak construction of the site.

In order to present a worst-case scenario, it is assumed that 50% of construction workers will travel to and from the site during peak hours. Therefore, approximately 150 vehicle trips will enter the site during the morning peak hour and 150 outbound trips will exit the site during afternoon peak hours associated with construction worker movements.

## **4.5 Work Zones**

It is anticipated that a Work Zone will not be required for this site as all works and deliveries will be fully accommodated within the site boundary.

## **4.6 Construction Vehicle Parking**

There is no on-street parking in proximity of the subject site. Therefore, all construction vehicle parking is to be accommodated with dedicated and staged parking areas on-site.

## 5.0 Impact of the Proposed Works

### 5.1 Local Traffic

#### 5.1.1 Traffic Flow

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Traffic impacts from the construction works are to be expected to be limited to the truck routes detailed in this report. These routes are likely to experience only minor impacts due to the presence of additional truck movements. These truck movements are not expected to cause delays on local roads or create flow-on impacts to other streets.

Local traffic patterns during construction are expected to remain consistent with the existing conditions.

All deliveries and construction works are likely to take place on site, with no Works Zone, lane closures or other traffic impacts. Traffic will flow as per the existing scenario, with all lanes generally operating at full capacity.

Traffic impacts from the construction works are expected to be limited to the volume of construction vehicles only. The number of daily vehicles is expected to be minimal in comparison to the total volumes of daily traffic on local roads.

It is unlikely that there will be changes to local public transport routes and services as a result of this construction.

Access to all adjoining properties will be maintained throughout the works.

#### 5.1.2 Parking impacts

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As Johnston Crescent currently does not permit kerb-side parking, it is not anticipated that on street parking will be lost as a result of the works.

There may be an increase in local parking congestion during construction as a result of construction workers accessing the site. These workers will be encouraged to carpool or use more sustainable methods of transport to decrease reliance on single occupancy private vehicle trips.

The site workers will be encouraged to utilise carpooling to decrease the number of employee vehicles. Site employees will be encouraged to make use of carpooling options and nearby public transport facilities as part of being inducted into the site.

#### 5.1.3 Traffic Safety

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As all construction works and operations are expected to be contained within the site, there shall be no safety concerns for passing traffic adjacent to the site.

Manoeuvring and merging of heavy vehicles exiting the site is to be managed carefully such that traffic safety is maintained. It is advised that construction vehicle movements into/out of the site to be occurred outside of road network peak hours. It is expected that vehicles exiting the site will be able to use suitable gaps in traffic.

#### 5.1.4 Communication of Works

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Prior to any site works taking place, notification of commencement of the works shall be distributed to the neighbourhood. Notification is to include information on the type of works, hours of operation and contact numbers for further information or comment. Community notification will be undertaken as per a Construction Management Plan that will be prepared once the Contractor has been appointed.

Traffic control advance warning signage in accordance with Roads and Maritime Services guidelines and Australian Standards is to be in place to notify motorists of roadwork and when traffic controllers are present. Sign size is to be size "A" and is to be monitored throughout the works to ensure they are clearly visible.

As part of the site induction procedures, all contractors will be made aware of the finalised Construction Traffic Management Plan, the Traffic Guidance Scheme(s) and their responsibility to adhere to these plans.

### **5.1.5 Public Infrastructure Impacts**

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While it is anticipated that the site will utilise driveway crossovers, it is possible that some mounting or crossing of adjacent kerbs may be necessary. The builder will be required to repair any damage to this infrastructure as a result of vehicles driving over kerbs.

The developer may be held liable for any damage to public infrastructure in the vicinity of the site occurring as a result of the construction works.

### **5.1.6 Cumulative Local Impacts**

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Once the construction phasing has been finalised and during the preparation of the finalised Construction Traffic Management Plan, review of any development applications near to the site should be conducted to determine if any other local developments may have an impact.

## **5.2 Pedestrians**

Public pedestrian movements through the site shall be prohibited at all times during construction. The site will need to be secured from pedestrian access with site fencing.

Appropriate pedestrian traffic measures will be in place such as signage, traffic controllers and barriers to control access. This will be detailed in a Traffic Guidance Scheme that will be prepared for the site once a Contractor has been appointed.

It is anticipated that pedestrian access to the site will be restricted by site fencing and boarding. Directional signage will be provided to guide pedestrians around the site and access will be maintained to adjacent operational buildings.

As pedestrian volumes within the surrounding road network are minimal, it is not anticipated that the proposed works will generate significant impacts to the safety and amenity of pedestrians.

## **5.3 Cyclists**

No dedicated cycleways are present in the vicinity of the site and cycling activity is expected to be limited. Any cyclists on the roadway will continue to follow the same routes.

## **5.4 Emergency Service**

Emergency access to the site will be maintained during the works.

Emergency services access to all local properties will be retained, with no road closures or major lane changes expected.

## 6.0 Construction Requirements

### 6.1 Traffic Guidance Scheme and Signage

Temporary construction traffic related signposting will need to be developed in accordance with AS 1742.3 – Traffic Control Devices for Works on Roads. These Traffic Control Plans will need to be developed once a Contractor has been appointed and further construction details are known.

During construction the contractor shall each morning, prior to work commencing, ensure all signage is erected in accordance with the TGS and is clearly visible. Each evening, upon completion of work, the contractor is to ensure relevant signage is removed as required. A review of the TGS(s) can be undertaken as required to determine any need for future amendments.

### 6.2 Certificate and Approvals

Approval may need to be obtained from TfNSW, Fairfield City Council and other relevant authorities. Approval may be required for items including, but not limited to:

- Road occupancy approvals
- Hoarding/fencing approvals
- Oversized vehicle use on local roads

Only certified personnel will be used on site to implement, monitor and carry out the Traffic Control Plan.

Responsibility for acquiring the necessary certificates, permits and/or approvals rests with the Contractor and must be completed prior to commencement of the associated works.

### 6.3 Environmental Control

Vehicle inspection and wash areas in accordance with industry standards will be provided. Construction vehicle wheels shall be cleaned prior to leaving the site to prevent transport of dust, dirt or gravel from the worksite onto the road network or pedestrian footpaths.

All loads are to be sealed or covered when entering or leaving the site. Loading of disposable material into vehicles leaving the site is to occur only within the site.

## 7.0 Further Information

### 7.1 Construction Traffic Management Plan

Once a Contractor has been engaged a finalised Construction Traffic Management Plan shall be prepared. This will include, but is not limited to, the following:

- Details on the construction staging and the length of each stage.
- Expected vehicle volumes during each stage of works.
- Expected number of workers during each construction stage.
- Site establishment plan showing vehicle entry and exit points and any areas for manoeuvring.
- Traffic control plans.

### 7.2 Emergency Services

In the event of an incident related to construction traffic on the public road network it will be the responsibility of the Site Manager to ensure that emergency services are notified. Contact "000" in cases of emergency to advise the relevant emergency service.

Furthermore, it is the responsibility of the Site Manager to advise the emergency services of any restriction of vehicular access to the public and private areas a minimum of one week prior to its implementation.

### 7.3 Responsibility

The Site Manager is responsible for, but not limited to:

- Implementing the Construction Traffic Management Plan and TCPs
- Informing contractors of the requirements of the Construction Traffic Management Plan
- Undertaking site inspections to ensure all signage is clearly visible and not damaged
- Monitoring the Construction Traffic Management Plan
- Reporting on incidents
- Obtaining permits

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