asongroup

Prepared for

FRASERS PROPERTY AUSTRALIA

Traffic Impact Assessment Report

Proposed Warehouse/Industrial Facility
Lot 3, Horsley Drive Business Park, Horsley Park

Ref: 0315r01v2
05/10/2016

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Appendices

1 Introduction

1.1 Study Objectives

Ason Group has been commissioned by Frasers Property Australia to prepare a Traffic Impact Assessment (TIA) report to support a Development Application for a proposed warehouse/industrial facility (the Proposal) on the subject site at Lot 3, Horsley Drive Business Park, Horsley Park (the Site). The Proposal generally seeks approval for 2 warehouses summarised below:

- Warehouse/Industrial Facility 1:
  - 13,690m^2 warehouse/industrial facility,
  - 500m^2 office mezzanine, and
  - 100 parking spaces
- Warehouse/Industrial Facility 2:
  - 8,690m^2 warehouse/industrial facility
  - 500m^2 office mezzanine, and
  - 59 parking spaces

This TIA report addresses the relevant traffic, transport and parking implications of the development, including compliance with relevant State and Local Government controls and Australian Standards. In preparing this TIA report, Ason Group has referenced the following key planning documents that are relevant to development at the site:

- Fairfield Development Control Plan 2013 (FDCP2013).
- State Environmental Planning Policy (Western Sydney Employment Area) 2009 (SEPP WSEA).
- Horsley Drive Business Park Traffic Impacts Assessment for a Part 4 Concept Plan Application by Traffix May 2012 (Reference: 12.096r01v4 TRAFFIX Report)
- The Horsley Drive Business Park Revised Structure Plan, Traffic Report by Road Design Solutions December 2014 (Reference: 20140209)
- Proposed Lot 2, Proposed Warehouse/Industrial Facilities, The Horsley Drive Business Park, Traffic Impact Report by Road Delay Solutions April 2016 (Reference: 20160263)

This TIA report also references general access, traffic and parking guidelines, including:

- RMS *Guide to Traffic Generating Developments* (RMS Guide)

- RMS Technical Direction TDT 2013/04a, *Guide to Traffic Generating Developments – Updated traffic surveys* (RMS Guide Update).
- Australian Standard 2890.1 (2004): *Off-street car parking* (AS2890.1).
- Australian Standard 2890.2 (2002): *Off-street commercial vehicle facilities* (AS2890.2).
- Australian Standard 2890.6 (2009): Off-street parking for people with disabilities (AS2890.6).
- The Building Code of Australia 2004, *Class 2 to Class 9 Buildings Volume 1* (BCA 2004)

1.2 Report Structure

The remainder of this report is structured as follows:

- Section 2 provides the summary of the planning context associated with the HDBP
- Section 3 provides a summary of the proposed development.
- Section 4 describes the site, existing road network and accessibility to alternative transport modes.
- Section 5 describes the traffic impacts of the proposed development including projected trip generation.
- Section 6 describes the parking requirements of the proposed development.
- Section 7 describes the access, internal configuration of the proposed car parking and servicing facilities of the development.
- Section 8 responds the SEARS.
- Section 9 provides a conclusion of the key traffic and parking impacts.

2 Planning Context

2.1 Site History

The application has been lodged having regard to the Horsley Drive Business Park (HDBP) Masterplan Development (SSD 5169), approved by the Department of Planning and Environment (DP&E) on 8th January 2013. The original Masterplan consisted of a 12 Lot subdivision (total site area of 216,370m^2) with the access road under leasehold agreement. The original Masterplan was approved for 321 vehicles per hour during each peak hour, with access to the HDBP via signalised intersections at Cowpasture Road/Newton Road intersection.

The subsequent modification (SSD 5169 MOD1) was lodged but later withdrawn, following this Modification 2 (SSD 5169 MOD2) was lodged and approved on 6th August 2015. Modification 2 sought approval for an amendment to the development scheme, including the reduction in the number of allotments (from 12 to 6 Lots), the increase of the total developable site area by 3,471m^2 (to a total developable area of 204,278m^2), and an increase in the total Gross Floor Area (GFA) of 117,852m^2. This application included an inherent traffic generation of 684 vehicles per hour during each peak hour, with access to the HDBP via a new roundabout controlled intersection at Burilda Close with Cowpasture Road (approximately 130m north of the Cowpasture Road/Newton Road roundabout intersection).

This was followed by Modification 3 (SSD 5169 MOD3) approved on 16th September 2015, which reduced the number of total lots to 5 (by consolidating Lots 5 and 6), with the traffic generation assessment and access arrangement from Modification 2 still being relevant. The modified Masterplan MOD 3 is provided in **Figure 1** and demonstrates the proposed lot layout and access provisions to Cowpasture Road.

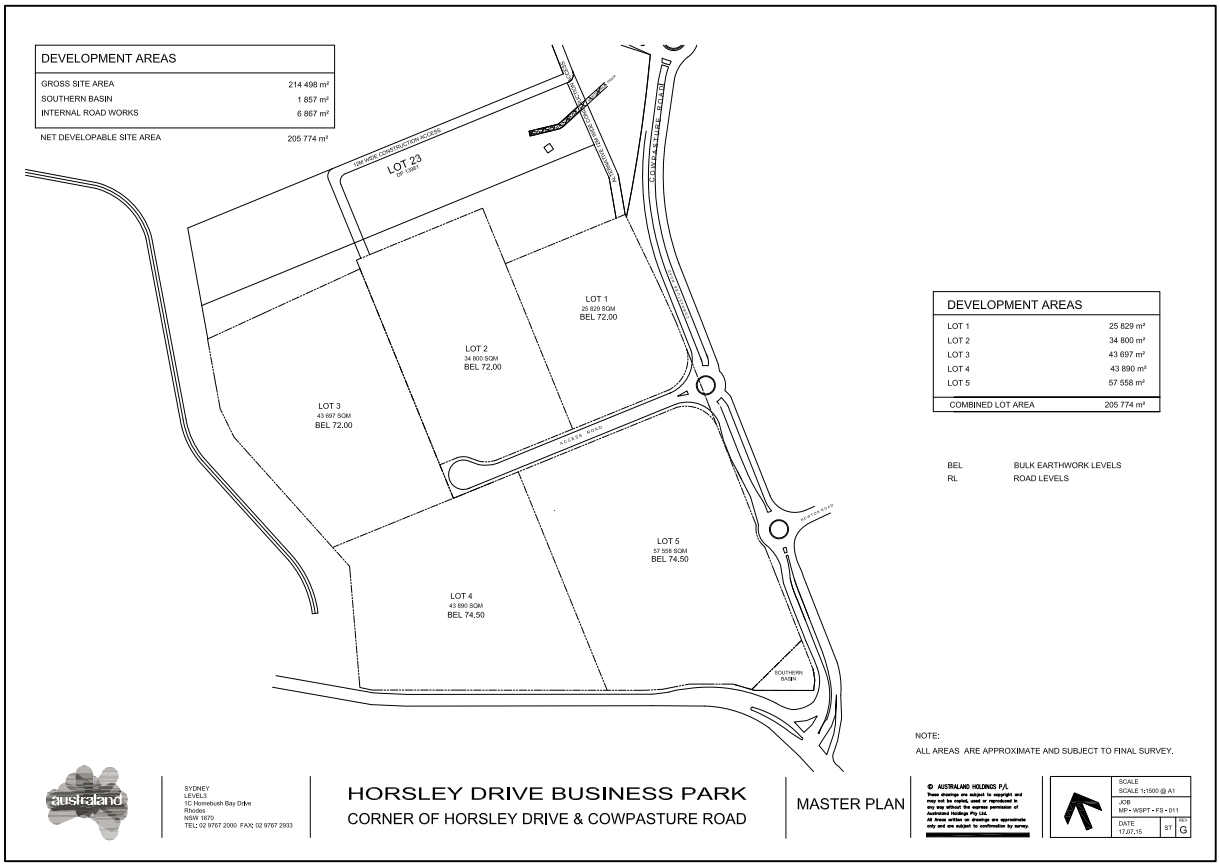


Figure 1: HDBP Modification 3 Masterplan Layout

2.2 Masterplan Intersection Operation

2.2.1 HDBP Masterplan Traffic Generation

The MOD2 proposal (as approved) resulted in a total traffic generation of 684 vehicles an hour during both the morning and evening peak periods. As a consequence of the traffic generation resulting from the MOD2 application, a roundabout controlled intersection with Cowpasture Road was approved to provide access to the site – no other infrastructure upgrades were required as a consequence of the application. The rates adopted in the MOD2 are consistent with the RMS Guide Update, and included:

- 0.5 vehicles per hour per 100m^2 GFA of warehouse
- 2 vehicles per hour per 100m^2 GFA of office

A breakdown of the generation, inherent in the MOD2 application, is provided in **Table 1**. The analysis outlines the generation of each Lot of the Masterplan and the assumptions that underpinned the MOD2 approval. It is noted that this application relates to the Lot 3 development scenario.

Table 1: HDBP Modification 2 Peak Hour Traffic Generation

Lot	Use	GFA (m^2)	Peak Hour Trip Rates	Total Peak Hour Traffic Generation
Lot 1	Warehouse Stage 1A	6,085	0.5 per 100m^2 GFA	30
	Office Stage 1A	600	2 per 100m^2 GFA	12
	Warehouse Stage 1B	6,980	0.5 per 100m^2 GFA	35
	Office Stage 1B	600	2 per 100m^2 GFA	12
Lot 2	Warehouse Stage 2	21,300	0.5 per 100m^2 GFA	107
	Office Stage 2	800	2 per 100m^2 GFA	16
Lot 3	Warehouse Stage 3	24,160	0.5 per 100m^2 GFA	121
	Office Stage 3	1,000	2 per 100m^2 GFA	20
Lot 4	Warehouse Stage 3	20,055	0.5 per 100m^2 GFA	100
	Office Stage 3	1,000	2 per 100m^2 GFA	20
Lot 5	Warehouse Stage 5A	6,255	0.5 per 100m^2 GFA	31
	Office Stage 5A	800	2 per 100m^2 GFA	16
	Warehouse Stage 5B	6,255	0.5 per 100m^2 GFA	31
	Office Stage 5B	800	2 per 100m^2 GFA	16
Lot 6	Office Stage 6A	8,930	0.5 per 100m^2 GFA	45
	Office Stage 6A	800	2 per 100m^2 GFA	16
	Warehouse Stage 6B	7,935	0.5 per 100m^2 GFA	40
	Office Stage 6B	800	2 per 100m^2 GFA	16
Total	**-**	**115,155m^2**	**-**	**684**

2.2.2 Trip distribution and Assignment

Modification 2 assumed an inbound/outbound directional split of 85% in and 15% out during the morning peak, with the reverse occurring during the evening peak hour. Of these vehicles, 70% of traffic was assumed to arriving and depart to / from the M7 Motorway (west), and 30% to arrive and depart via the M4 Motorway (north / east). This distribution formed the basis of traffic impact assessment and network operation analysis submitted with the MOD2 assessment and discussed in the following sections.

2.2.3 Network Performance Testing

The following analysis assesses the performance of the interim signalised intersection using SIDRA modelling. In this regard, SIDRA modelling outputs a range of performance measures, in particular:

- Degree of Saturation (DOS) – The DOS is used to measure the performance of intersections where a value of 1.0 represents an intersection at theoretical capacity. As the performance of an intersection approaches DOS of 1.0, queue lengths and delays increase rapidly. It is usual to attempt to keep DOS to less than 0.9, with satisfactory intersection operation generally achieved with a DOS below 0.8.
- Average Vehicle Delay (AVD) – The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- Level of Service (LOS) – This is a comparative measure that provides an indication of the operating performance, based on AVD.

Table 2 provides a recommended baseline for assessment as per the RMS Guide. The future intersection operation that resulted from the MOD2 analysis is presented in **Table 3** for the ultimate development scenario of the HDBP.

Table 2: Level of Service Criteria for Intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

Table 3: MOD2 Intersection Operation Summary – AM / PM Peak

Intersection	Period	Degree of Saturation (DOS)	Average Vehicle Delay (AVD)	Level of Service (LOS)
Burilda Close/Cowpasture Road Roundabout	AM	0.50	8.6 seconds	A
	PM	0.72	11.2 seconds	A
Cowpasture Road/ Newton Road Roundabout	AM	0.53	9.4 seconds	A
	PM	1.06.	27.8 seconds	A
The Horsley Drive/Cowpasture Road Signalised Intersection	AM	0.89	28.9 seconds	C
	PM	0.94	50.7 seconds	D

The SIDRA results demonstrate that the Burilda Close/Cowpasture Road roundabout and Cowpasture Road/Newton Round roundabout is expected to have a 'good' operating performance with a LOS A expected during both morning and afternoon peak periods. The Horsley Drive/Cowpasture Road signalised intersection is expected to 'operate near capacity' with a LOS D or better during the morning and afternoon peak periods.

This intersection operation represents the future operation of the network under the final development scenario approved by the Department of Planning and RMS and forms the basis of all future assessment including this application.

3 Overview of Proposed Development

The Proposal generally seeks approval for the construction of a warehouse/industrial facility with the following characteristics:

- Warehouse/Industrial Facility 1:
  - 13,690m^2 warehouse/industrial facility,
  - 500m^2 office mezzanine, and
  - 100 parking spaces (including 2 disabled spaces)
- Warehouse/Industrial Facility 2:
  - 8,690m^2 warehouse/industrial facility
  - 500m^2 office mezzanine, and
  - 59 parking spaces (including 2 disabled spaces)
- Construction of two access driveways (separating light vehicles and heavy vehicles) servicing both warehouse/industrial facility making use of Burilda Close and the recently completed roundabout controlled intersection with Cowpasture Road.
- Vehicle circulation areas

Figure 2 below presents a plan illustrating the proposed development showing the general layout of the warehouse/industrial facility and associated traffic circulation, loading, and parking areas. This plan is also attached at reduced scale at **Appendix A**.

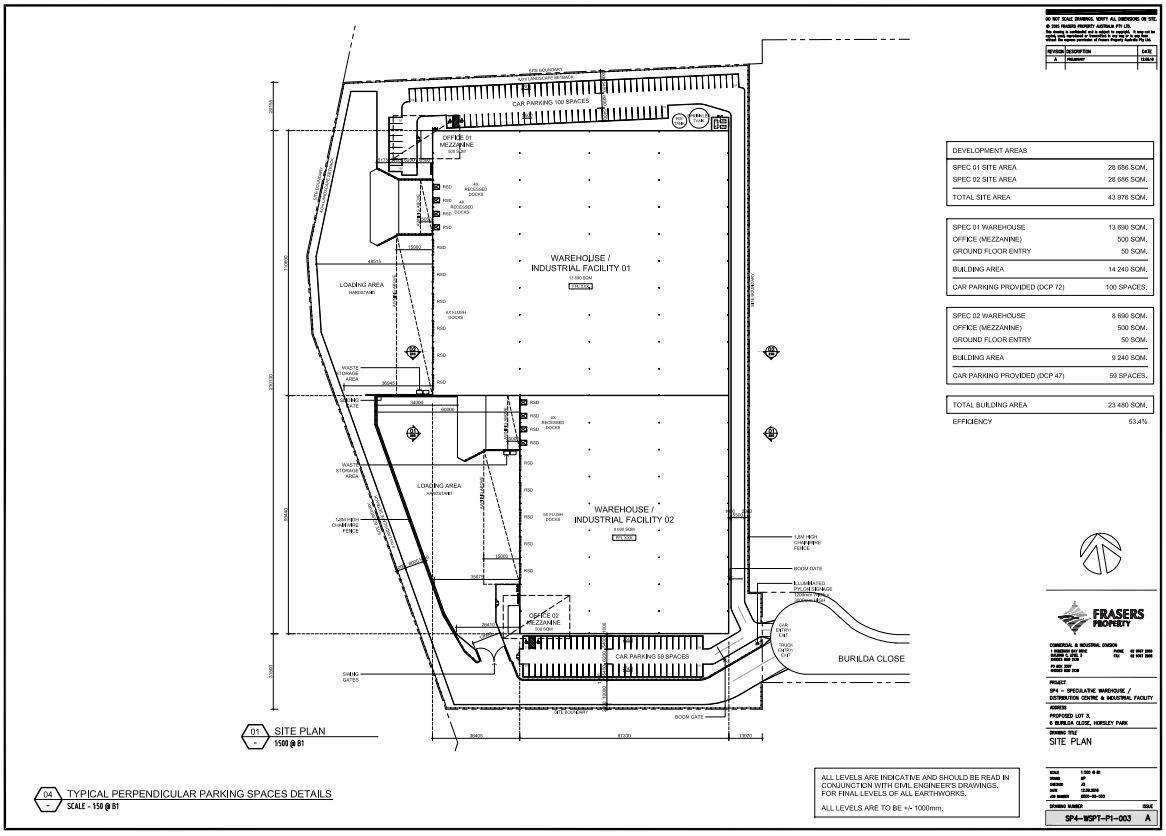


Figure 2: Proposed Development

4 Existing Conditions

4.1 Site Overview

The Horsley Drive Business Park (HDBP) comprises of approximately 21.4 hectares of industrial/employment land within the Western Sydney Parkland Trust (WSPT), and the Western Sydney Employment Area (WSEA), and sits on the north-western corner of The Horsley Drive and Cowpasture Road intersection. Access to the HDBP is provided by Burilda Close/Cowpasture Road roundabout.

At a regional level, the Site is located approximately 30km west of Sydney CBD and 12km southwest of Parramatta CBD. It is within the Local Government Authority (LGA) of Fairfield City Council.

Lot 3 is located near the north western corner of the HDBP, and comprises of a total site area of approximately 43,976m^2 with an irregular configuration. It is bounded by vacant land to the west and north, as well as Lot 2 to the east and Lot 4 to the south. Direct access to the Lot is provide by Burilda Close.

4.2 Road Network

The existing and proposed road hierarchy in the vicinity of HDBP is shown in **Figure 3** and key roads and intersections providing access for HDBP are detailed below.

4.2.1 M7 Motorway

A major arterial road that provides Sydney with key links to the M2, M4 and M5 motorways. It runs in a north-south direction to the west of the site, and runs between M2 to the north and M5 to the south, with the M4 intersecting in between. It carries approximately 70,000vpd within the vicinity of HDBP, with 2 lanes of traffic in each direction.

4.2.2 The Horsley Drive

An RMS State Road (MR 609) That runs in an east-west direction between the Hume Highway to the east, and Wallgrove Road to the west. It generally consists of 2 lanes of traffic on each direction and carries approximately 20,000vpd within the vicinity of HDBP.

4.2.3 Wallgrove Road

A classified road (MR 515) that generally runs in a north-south direction. Historically, it carries approximately 31,500vpd, however with the completion of the M7 it has reduced to approximately 20,000vpd.

4.2.4 Cowpasture Road

Within the HDBP, it comprises of a RMS State Road (MR 648), a Regional Road and a collector road and carries approximately 29,000vpd. To the south of Cowpasture Road and The Horsley Drive roundabout, Cowpasture Road is a State Road, while to the north of Cowpasture Road and The Horsley Drive signalised intersection it is a collector road. Between the Cowpasture Road and The Horsley Drive roundabout and signalised intersections, Cowpasture Road is a Regional Road. It generally carries 2 lanes of traffic in each direction with the vicinity of HDBP.

4.2.5 Newton Road

A local road that runs in an east-west direction links Victoria Street to the east and Cowpasture Road to the west. It generally comprises of a single lane of undivided traffic in each direction.

4.2.6 Ferrers Road

A Regional Road (RR 7153) that runs in a north-south direction between Brabham Drive in the north to The Horsley Drive in the south. It carries a single lane of traffic in each direction.

4.2.7 Victoria Road

A Regional Road that runs in an east-west direction between Cowpasture Road in the east and Warren Road in the west. It carries 2 lanes of traffic in each direction within a divided carriageway.

4.2.8 Northern Link Road

A major RTA road currently under construction which will eventually provide a link between Erskine Park in the west and Wallgrove Road in the east.

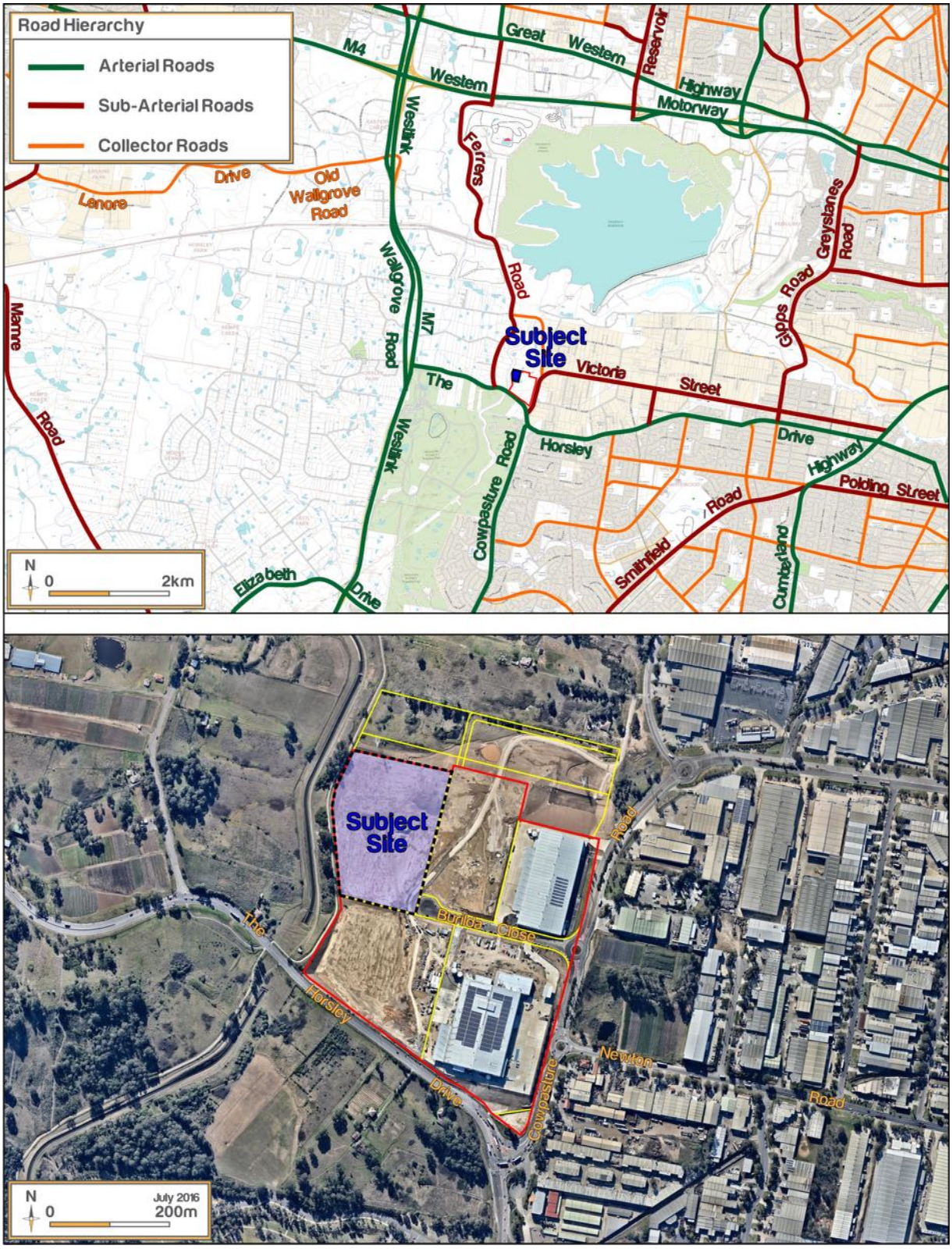


Figure 3: HDBP Location Plan

4.3 Public Transport

The HDBP's proximity to public transport is shown in **Figure 4**, which demonstrates the locations and distances to the bus and rail services surrounding the site. The bus services that travel within the vicinity of the Site include:

- Route 814 – Fairfield to Smithfield
- Route 813 – Bonnyrigg to Fairfield
- Route 835 – UWS to Prairiewood (connecting to St Mary's Railway Station)

These services run approximately every 30 minutes during the weekday morning and afternoon peak periods.

4.4 Cycle Paths

The existing cycle network in the vicinity of the Site is also shown in Figure 4. Off road bike paths are provided to the west of the Site providing a north-south connection, with The Horsley drive providing the main east-west connection.

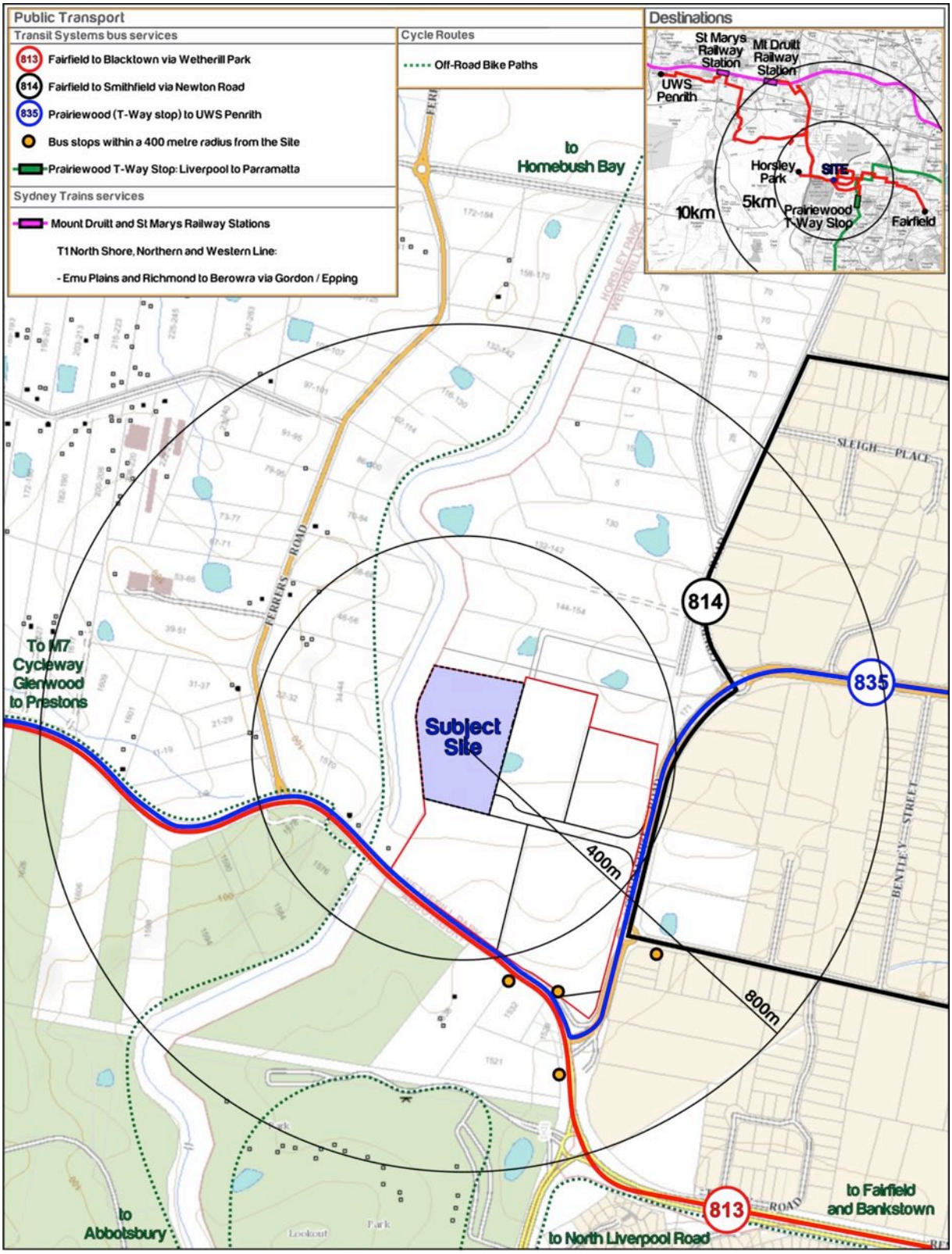


Figure 4: Public Transport and Cycle Network

4.5 Mode Share

The Journey to Work (JTW) data, provided by the Bureau of Transport Statistics (BTS) of employee mode share for Travel Zone (TZ) 3480, is shown in **Figure 5.** The data indicates that approximately 92% of employees travel to work via private car with minimal usage of non-vehicle alternatives.

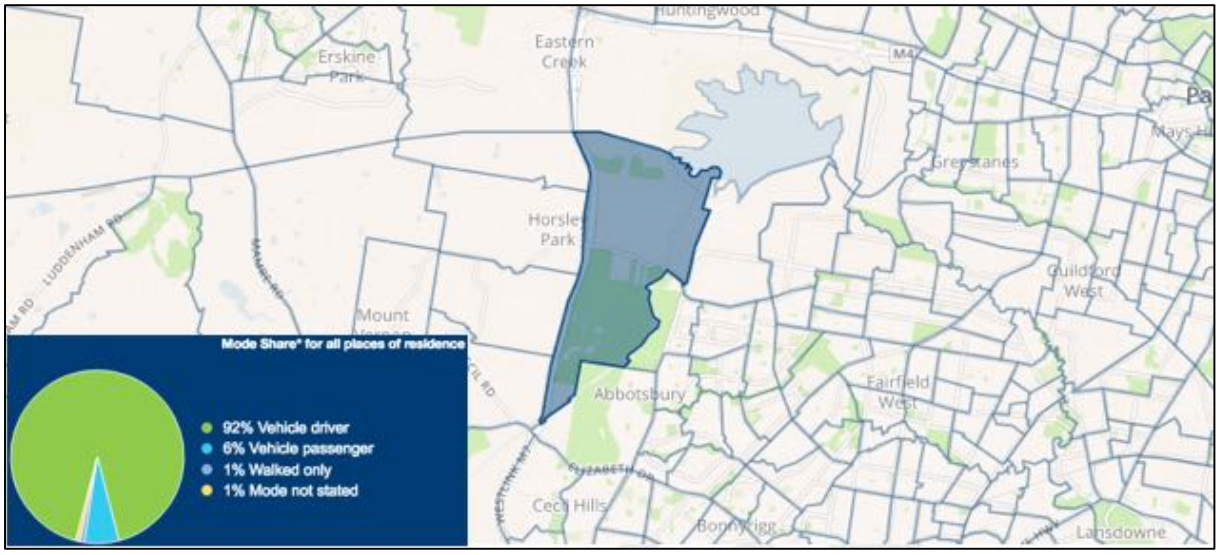


Figure 5: Journey to Work Data of Employee Mode Share

5 Traffic Impacts

5.1 Lot 3 Traffic Generation

The application seeks approval for the total development of 22,380m^2 GFA of warehouse/industrial facility, and 1,000m^2 mezzanine office. The application of the traffic generation rates adopted for the MOD2 application and summarised in Section 2.2.1 to the area proposed under this application results in the following peak hour and daily traffic movements.

Table 4: Lot 3 Traffic Generation Summary

Use	Area (m^2)	Peak Hour Generation (vph)	Daily Generation (vpd)
Warehouse 01	13,690	68	548
Office 01	500	10	50
Warehouse 02	8,690	43	348
Office 02	500	10	50
Total	23,380	131	996

Based on the use of the RMS Guide traffic generation rates, the future development is expected to generate in the order of 131 vehicles per hour during peak periods roughly expected to occur in a 70:30 split in the direction of peak flow. Of these, it is expected that roughly 10% of all movements will be associated with commercial vehicles equating to 13 vehicles per hour during the morning and evening peak hour and 100 daily vehicle movements.

5.2 Future Intersection Operation

As discussed in Section 2 above, the MOD2 development was approved on the basis of a future traffic generation of approximately 684 vehicles per hour during peak periods. This generation underpinned the proposed access arrangements and network upgrades, including the now constructed roundabout controlled intersection of Cowpasture Road with Copeland Close.

In this regard, a summary of the approved and now proposed development yields and associated traffic generation for the Lot 3 development is provided in **Table 5**.

Table 5: HDBP Traffic Generation Comparison – Approved vs Proposed

Item	GFA (m^2)	Peak Hour Generation (vph)
Lot 3 - MOD2 Approval	25,160	141
Lot 3 - Proposed	23,380	131
Difference	**-1,780**	**-10**

It is evident that both the overall GFA and resultant traffic generation for the Lot 3 development is less than that which was inherently approved under the MOD2 application. Accordingly, the traffic impacts of the Lot 3 development as now proposed would not result in any adverse impacts on the external road network from that previously approved. Accordingly, the key intersections in the vicinity will operate with the level of service and delays as prescribed below under the full development of the HDBP:

Table 6: Intersection Operation – Full Development of HDBP

Intersection	Period	Degree of Saturation (DOS)	Average Vehicle Delay (AVD)	Level of Service (LOS)
Burilda Close/Cowpasture Road Roundabout	AM	0.50	8.6 seconds	A
	PM	0.72	11.2 seconds	A
Cowpasture Road/ Newton Road Roundabout	AM	0.53	9.4 seconds	A
	PM	1.06.	27.8 seconds	A
The Horsley Drive/Cowpasture Road Signalised Intersection	AM	0.89	28.9 seconds	C
	PM	0.94	50.7 seconds	D

5.3 Construction Traffic Impacts

A detailed construction traffic management plan (CTMP) for the Site has been prepared, and is expected to be lodged as a separate application. In summary, the construction activities are expected to result in traffic movements less than those prescribed in Section 5.1 and as such the key intersections in the vicinity of the site are expected to operate similar to that which will occur under full development of the HDBP. Other key aspects of the CTMP include:

- The construction activities are expected to occur over five stages with a peak traffic volume of 350 daily traffic movements including approximately 200 heavy vehicle movements.
- Most construction vehicles are expected to access the site via either the M7 Motorway - The Horsley Drive and Cowpasture Road route or via Smithfield Road to the M4.
- All contractor parking can be provided on-site with no reliance on off-street parking
- No road closures are expected as a consequence of the construction activities.

The construction of the proposed development is therefore expected to have no major impact on the operation of the road network or on the availability of off-street parking.

6 Parking Requirements

6.1 Proposed Parking Provisions

Parking for the development is proposed having regard for the rates approved by the Department of Planning and supported by Fairfield City Council (as per Council correspondence included at **Attachment B**). The applicable rates are as follows:

- 1 space per 200m^2 of warehouse GFA
- 1 space per 200m^2 of office GFA

The application of these rates to the areas proposed as part of this application is summarised in **Table 7**.

Table 7: Parking Requirements

Land Use	Area	Council Parking Rate	Council Parking Requirement	Parking Provided
Warehouse 1	13,690m^2	1 space per 200m^2	68	
Office 1	500m^2	1 space per 200m^2	3	
Warehouse 1 Total	14,190m^2	-	71	100
Warehouse 2	8,690m^2	1 space per 200m^2	43	
Office 2	500m^2	1 space per 200m^2	3	
Warehouse 2 Total	9,190m^2	-	46	59
Site Total	**23,380m^2**	**-**	**117**	**159**

The application proposes a total of 159 parking spaces including 100 spaces for Warehouse/Industrial Facility 1 and 59 spaces for Warehouse/Industrial Facility 2. This provision exceeds the minimum requirement stipulated by council of 117 spaces and is therefore supported.

The Fairfield Council refers to the BCA 2004 for the number of disabled parking space required. As such, 1 space is required for every 50 parking spaces, resulting in a requirement of 3 spaces. The Proposal has provided 2 accessible parking spaces for each warehouse/industrial facility (4 accessible space in total) and therefore satisfies the requirement under BCA 2004.

Accordingly, the Proposal is expected to accommodate all future parking demands off street and is consistent with relevant parking controls.

7 Access and Internal Design Aspects

The site access, internal circulation and car parking arrangements have been developed with consideration of the requirements of Council's DCP and relevant Australian Standards (i.e. AS2890.1, AS2890.2 and AS2890.6). The following characteristics are noteworthy with regard to the design of the site access driveway, loading docks and on-grade car park.

7.1 Site Access

As shown in the site plan, which is attached as Appendix A, access to the Site is proposed via the following 2 vehicle crossings on Burilda Close:

- A southern vehicle crossing provides two-way access for heavy vehicles
- A northern vehicle crossing provides two-way access for light vehicles.

The driveway is approximately 275m west of the Cowpasture Road roundabout with Burilda Close, which is considered to be more than adequate for acceptable operation.

The proposed driveway for light vehicles is approximately 5.5m at the site boundary, which meets requirements for a Category 1 driveway (User Class 1, and 1A with a local frontage road and between 25 – 100 parking spaces (for each warehouse)) under the provision of AS2890.1.

Furthermore, the proposed shared heavy vehicle driveway configuration is adequate to accommodate entry and exit manoeuvres of the largest vehicle anticipated to access the Site, which is a 26m B-double. The swept path analysis is included in **Appendix C** demonstrates that the necessary manoeuvres would be able to be accommodated at the proposed site access driveway.

7.2 Car Park Design

The design of the car park has been developed with consideration of the requirement of Section 6A.3.5 – Vehicular Access Design of the Fairfield Council DCP, as well as the relevant Australian Standards, as outlined in the following:

- Parking spaces are 2.5m wide, which meets the requirements stipulated in AS2890.1 for User Class 2 car parking areas
- Parking spaces are 5.4m long as required in AS2890.1 for User Class 2 car parking areas
- The parking aisles are 6.2m in width, exceeding the requirement stipulated in AS2890.1 for User Class 2 car parking areas

- All spaces located adjacent to obstructions greater than 150mm in height are to be provided with an additional width of 300mm. This includes any landscaping that exceeds 150mm.

- All accessible parking spaces are designed in accordance with AS2890.6. Spaces are provided with a clear width of 2.4m and located adjacent to a minimum shared area of 2.4m.

7.3 Commercial Facilities

As discussed previously, the largest vehicle anticipated to access the Site is a 26m B-double. Accordingly, a swept path analysis has been performed used 26m B-double as defined in AS2890.2, to verify the design widths of the driveway and internal manoeuvring area. The results of this analysis, which are presented on **Appendix C,** reveal that the necessary manoeuvres would be able to be accommodated under the proposal.

7.4 Design Summary

The internal configuration of the Site – including light and heavy vehicular access, car parking and servicing areas – has been designed generally in accordance with the requirements of Council's DCP and the relevant Australian Standards (AS2890.1, AS2890.2 and AS2890.6).

8 Response to SEARs

A Secretary's Environmental Assessment Requirements (SEARs) was issued by the DP&E on June 2016 (included at **Appendix D**), which outlines the key areas for consideration in any SSD application. Relevant responses to the traffic and transport issues raised in the SEARs are outlined below:

A Traffic Impact Assessment detailing all daily and peak traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, including a description of vehicle access routes and the impacts on nearby intersections; including The Horsley Drive/Cowpasture Road and the Cowpasture/Newton Road intersections

Operational Traffic:

Details in relation to long-term operational traffic volumes are outlined in Section 5.1.

Application of the traffic generation rates provided in the RMS *Guide* to the proposed building area results in the following peak hourly and daily traffic movements:

- 131 vehicles per hour during the morning and evening peak
- 996 vehicles per day

The traffic impacts of the Proposal are consistent with that of the approved Masterplan. Therefore, the impacts of the vehicular access routes and impacts on nearby intersections would be consistent of that previously assessed.

As shown by the JTW data published by BTS in Section 4.5, it is anticipated that minimal cycling, public transport and pedestrian trips will be generated by the development.

Construction Traffic:

Construction traffic volumes and vehicle access routes are discussed in the CTMP provided in Appendix B. The CTMP demonstrates that traffic and transport movements during the construction of the development are expected to be lower than the movements anticipated for the proposed development once it becomes operational.

Most construction vehicles are expected to access the site via the M7/M4 Motorways, The Horsley Drive, and Cowpasture Road or via the Smithfield Road, The Horsley Drive and Cowpasture Road route, and therefore would have impacts on intersections along this route. However, recognising that the key intersections are anticipated to perform satisfactorily once the Proposal is completed, it can be

assumed that the nearby intersections would satisfactorily accommodate the lower volumes of construction traffic.

Details of access to the site from the road network including intersections location, design and sight distance

Access to the Site is proposed via the Burilda Close access road, which forms a newly constructed roundabout controlled intersection with Cowpasture Road. Access from Burilda Close to the site is proposed via two vehicle crossings (one for light vehicle and one for heavy vehicles), as shown in the site plan attached as Appendix A. The proposed access arrangements have been developed to achieve compliance with the relevant Australian Standards with consideration of appropriate intersection location, suitable access design to accommodate the intended use and adequate sight distance to vehicles and pedestrians on public roads

An assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development

As discussed above, the Site is estimated to generate at most 131 vehicles per hour based on the application of the RMS Guide, which is within the approved traffic generation of the Masterplan. This generation is generally consistent with the traffic generation assumed under the MOD2 Application (141veh/hr.). As such, the conclusions and recommendations of the detailed background traffic and transport assessments of key sub-regional intersections remain entirely relevant and valid. Therefore, further detailed analysis of road safety and capacity is not warranted

Plans of any road upgrades or new roads required to service the development, if necessary

Recognising that the traffic generated by the Proposal is consistent with the approved Masterplan, it is anticipated that the road and intersection upgrades that are currently being delivered are adequate to cater for the traffic generated by the Proposal. Accordingly, no further road upgrades are considered to be required to support the proposed development.

Detailed plans of the proposed layout of the internal road network and parking provision on-site in accordance with relevant Australian Standards

The layout of the internal road network and on-site parking provisions can be seen in the proposed Site Plan presented in Figure 2 and included in Appendix A of this TIA report. The site access, internal circulation and car parking arrangements have been developed with consideration of the requirements of the relevant Australian Standards (i.e. AS2890.1, AS2890.2 and AS2890.6

9 Conclusions

The key findings of this Traffic Impact Assessment can be summarised as follows:

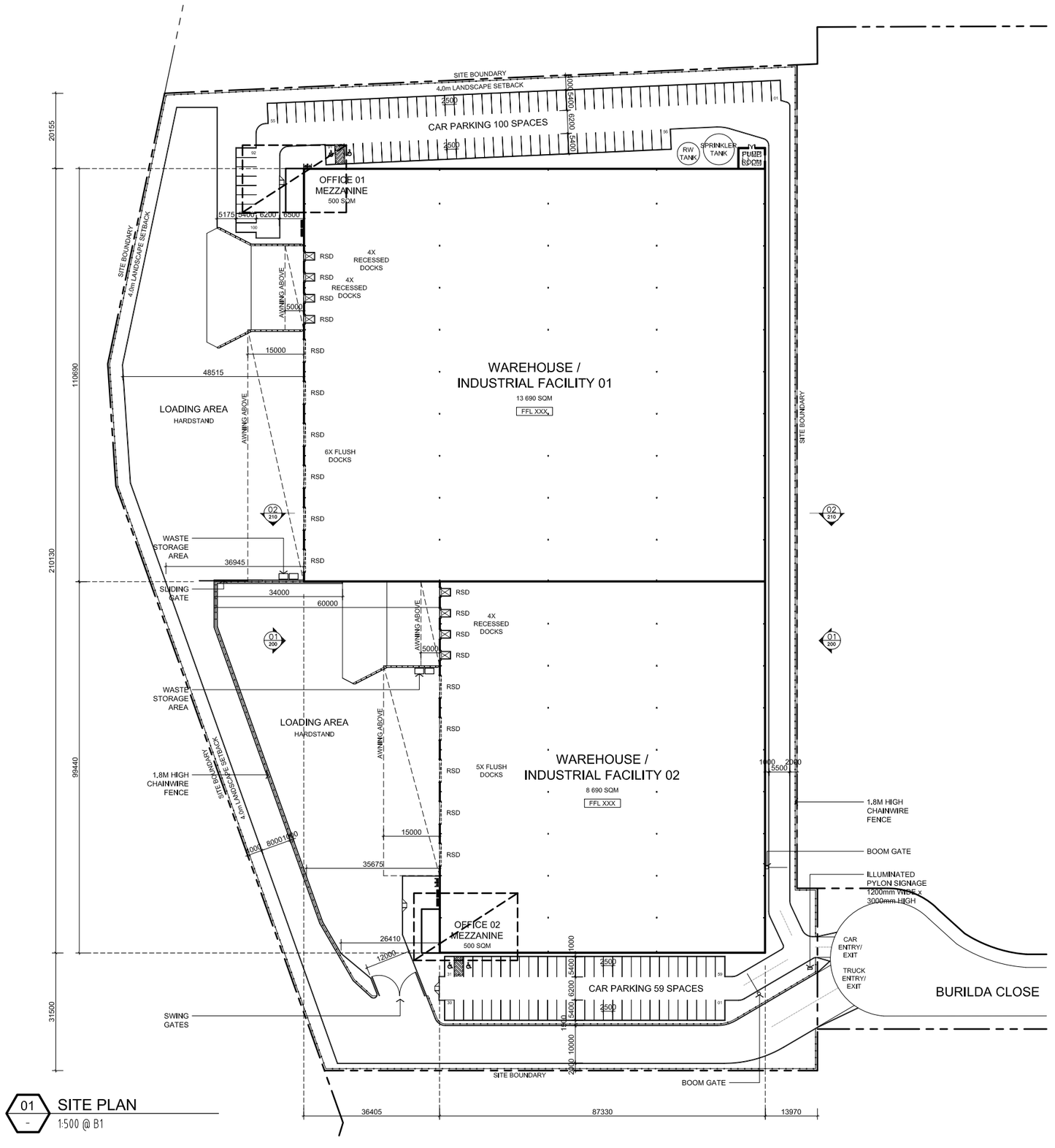
- The Proposal seeks approval for two warehouse/industrial facilities with an approximate area of 13,690m^2 for warehouse/industrial facility 1 (with an additional 500m^2 office) and 8,690m^2 for warehouse/industrial facility 2 (with an additional 500m^2 office)
- The Proposal is expected to generate 131 vehicles per hour during the morning and afternoon peak hour, and approximately 996 vehicles per day based on the RMS Guide traffic generation rates.
- The proposed traffic generation of the site is consistent with that assumed for the traffic modelling required for the Masterplan Modification 2 – which adopted an overall generation of 141 veh/hr. As such, no further infrastructure upgrades are required other than that currently proposed / delivered as part of the HDBP Masterplan.
- The Proposal requires 71 parking spaces for warehouse/industrial facility 1 and 46 parking spaces for warehouse/industrial facility 2 under the permitted Fairfield Council parking rates. Accordingly, the proposed allocation of 100 spaces for warehouse/industrial facility 1 and 59 spaces for warehouse/industrial facility 2 is considered supportable and exceeds the minimum requirements of Council's controls It is therefore anticipated that the Proposal would adequately accommodate the future parking demand generated by the proposed development.
- The site access, internal circulation and car parking arrangements have been developed with consideration of the requirements of Council's DCP and relevant Australian Standards (i.e. AS2890.1, AS2890.2 and AS2890.6). The access arrangements have been developed to permit entry and exit movements in a forward direction, separate commercial (heavy) vehicle and passenger vehicle traffic, and minimise pedestrian crossing distances.

It is therefore concluded that the proposed development is supportable on traffic planning grounds.

Appendix A

Reduced Plans

REVISION	DESCRIPTION	DATE
A	PRELIMINARY	12.09.16



01 - SITE PLAN
1:500 @ B1

DEVELOPMENT AREAS	
SPEC 01 SITE AREA	28 686 SQM.
SPEC 02 SITE AREA	28 686 SQM.
TOTAL SITE AREA	43 976 SQM.

SPEC 01 WAREHOUSE	13 690 SQM.
OFFICE (MEZZANINE)	500 SQM.
GROUND FLOOR ENTRY	50 SQM.
BUILDING AREA	14 240 SQM.
CAR PARKING PROVIDED (DCP 72)	100 SPACES.

SPEC 02 WAREHOUSE	8 690 SQM.
OFFICE (MEZZANINE)	500 SQM.
GROUND FLOOR ENTRY	50 SQM.
BUILDING AREA	9 240 SQM.
CAR PARKING PROVIDED (DCP 47)	59 SPACES.

TOTAL BUILDING AREA	23 480 SQM.
EFFICIENCY	53.4%

04 - TYPICAL PERPENDICULAR PARKING SPACES DETAILS
SCALE - 1:50 @ B1

ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS. FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE +/- 1000mm.

FRASERS PROPERTY

COMMERCIAL & INDUSTRIAL DIVISION
1 HOMEBUSH BAY DRIVE
BUILDING C, LEVEL 3
RHODES NSW 2138
PHONE 02 9767 2000
FAX 02 9767 2908
PO BOX 3307
RHODES NSW 2138

PROJECT
SP4 – SPECULATIVE WAREHOUSE / DISTRIBUTION CENTRE & INDUSTRIAL FACILITY

ADDRESS
PROPOSED LOT 3,
6 BURILDA CLOSE, HORSLEY PARK

DRAWING TITLE
SITE PLAN

SCALE	1:500 @ B1
DRAWN	MP
CHECKED	JO
DATE	12.09.2016
JOB NUMBER	0000-00-000

DRAWING NUMBER: SP4-WSPT-P1-003
ISSUE: A

Appendix B

Fairfield Council Letter

FairfieldCity
Celebrating diversity

Fairfield City Council, Administration Centre, 86 Avoca Road, Wakeley 2176
Tel: (02) 9725 0222 Fax: (02) 9725 4249 ABN: 83 140 439 239
All communications to:
Fairfield City Council, PO Box 21, Fairfield NSW 1860
Email address: mail@fairfieldcity.nsw.gov.au

In reply please quote: 12/02624 **Contact**: Andrew Mooney 9725 0214

29 August 2011

Mr Ben Eveleigh
Planner
NSW Department of Planning & Infrastructure
GP0 Box 39
SYDNEY NSW 2001

Dear Mr Eveleigh

HORSLEY DRIVE BUSINESS PARK – SSD 5169 – PUBLIC EXHIBITION OF STATE SIGNIFICANT DEVELOPMENT

I refer to correspondence from the Department dated 6 July 2012 regarding public exhibition of the abovementioned proposal. I advise that Council at its meeting of the 21 August 2012 endorsed the following submission to the proposal.

That Council advise the Department of Planning and Infrastructure (DP&I) and Western Sydney Parklands Trust that;

1. *It does not support the establishment of any stand alone commercial (offices, retail) uses in the Business Park aimed at servicing the surrounding residential areas and/or industrial workforce. Any proposed offices should only be associated with an industrial headquarters or be ancillary to industrial development within the Business Park.*

2. *Insufficient information is included in the EIA to demonstrate the proposal complies with:*

   (a) The Interim Construction Noise Guideline (ICNG) (Department of Environment and Climate Change NSW 2009) and
   (b) NSW EPA Contaminated Land Series requirements

   The proponent must provide the information detailed in this report on how the proposal complies with these requirements prior to any approval for the proposal being issued by the Department of Planning and Infrastructure.

3. *A separate approval is required from the Roads and Maritime Service in regards to the proposed signalisation of the Roundabout at Newtown Road and Cowpasture Road including the banning of right turn movements from Newton Road into Cowpasture Road. This process will also require consultation with business owners in Newton Road.*

- Proposed land farming activities, including, but not limited to, the location of stockpiles, odour control measures to be employed, measures to prevent off-site migration of contaminated soils, etc.

TRAFFIC

Parking Requirements:

Council's DCP requires one (1) space per 80m2 for Warehouse uses. The Roads and Maritime Services' Guide to Traffic generating Development specifies 1 space per 300m2 for Warehouse. For the proposed development, a rate of 1 space per 200m2 has been proposed. The applicant has argued the rate of 1 space per 200m2 has been adopted in other industrial precinct subdivisions within the Western Sydney Employment Area (WSEA) including areas within the Fairfield Council LGA.

Based on Council's parking requirement, the number of parking spaces required for the development is 1,193 and based on the RMS' requirement is 318. The number of parking spaces proposed is 477. The shortfall in number of parking spaces proposed, based on Council's parking requirement is 716. When compared with RMS requirement, the number of parking spaces provided will be in excess of 159 spaces. The number of parking spaces provided for the use of Warehouse is considered sufficient.

If the applicant proposes change of use in the future, the adequacy of parking needs to be reviewed. This would also need to take into account the provision of any office space component associated with the business park.

Network Analysis

The estimated traffic generation and development yield were included to the existing traffic generation and the proposed development was modelled using Paramics Model. The access to the development was proposed from the existing roundabout at the intersection of Cowpasture Road and Newton Road. Different options were applied to the network to assess the benefits. The preferred option was signalisation of the existing roundabout controlled intersection of Cowpasture Road with Newton Road.

As the existing network operates with limited spare capacity due to the interaction of the signalised intersection and roundabout controlled intersection of The Horsley Drive and Cowpasture Road, there is an inability to coordinate major movements at these intersections and this results in considerable delays and queues on some approaches. The signalisation of the existing roundabout controlled intersection of Cowpasture Road, will result in improved traffic flow. The signalisation of the roundabout will result in banning of right turn movements from Newton Road to travel north along Cowpasture Road toward Ferrers Road and onto Blacktown. Whilst this has potential to create

inconvenience for some of the businesses in Newton Road, there will still be an option for businesses to use an alternative route (via Victoria Street) to travel north along Cowpasture Road.

Ultimately, the Roads and Maritime Service is the consent authority for the proposed signalisation of the roundabout and any proposal to undertake this measure should also include consultation with the business owners in Newton Road so that they are aware of the issue and alternative route.

In light of the above, the following recommendations are provided;

- The number of parking spaces provided for the use of Warehouse is considered sufficient. If the applicant proposes change of use in the future, the adequacy of parking needs to be reviewed.

- A separate approval is required from the Roads and Maritime Service in regards to the proposed signalisation of the Roundabout at Newtown Road and Cowpasture Road including the banning of right turn movements from Newton Road into Cowpasture Road. This process will also require consultation with business owners in Newton Road.

SUBDIVISION ISSUES

Upon completion of the construction for the works proposed under the proposal, the Trust will seek to transfer ownership and ongoing maintenance of the access road to Fairfield City Council.

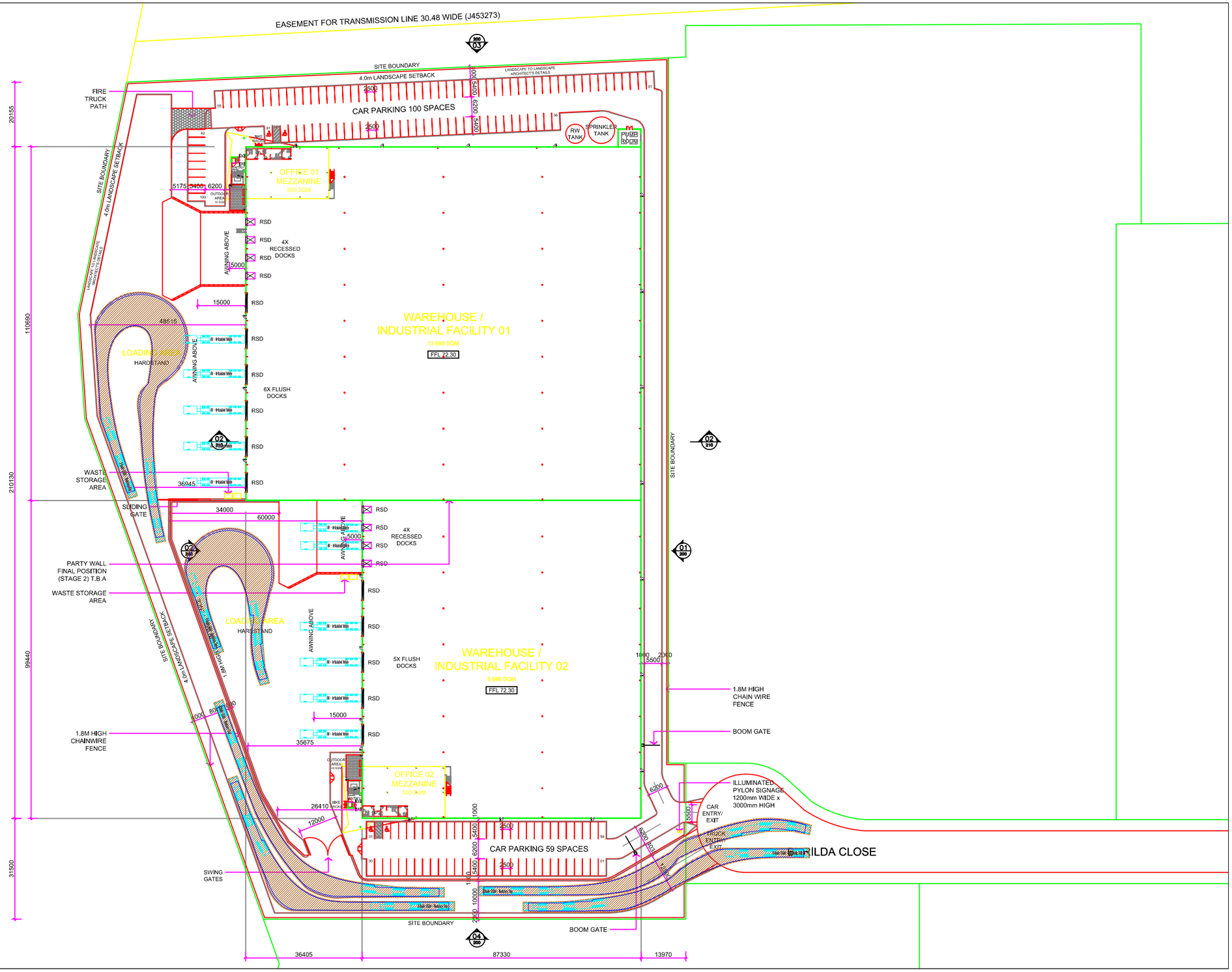
The applicant's intention is to limit retaining walls through landscaped batters and fitting of pads to external contours and the proposed access road levels. Retaining walls are proposed to be up to 4m in height. Proposed embankment stability permanent batters slopes in clay will be no steeper than 4 horizontal to 1.

The applicant stated that the proposed earthworks will require, "Smoothing of contours to provide a transition across the site and to facilitate access through the proposed internal estate layout". However, given that the differences between existing and future levels and the falls over the existing site, large amounts of cut and fill is proposed, (11m of fill at some points).

In regards to the subdivision of the site, the proposed development is for a 12 lot industrial lease-hold estate with an additional service lot and access road. A subdivision layout has been provided, but with no clear indication as to the proposed type of subdivision. It is anticipated that future subdivision of the site would need to be Torrens Title as this is the existing system of subdivision applying to the development site.

Appendix C

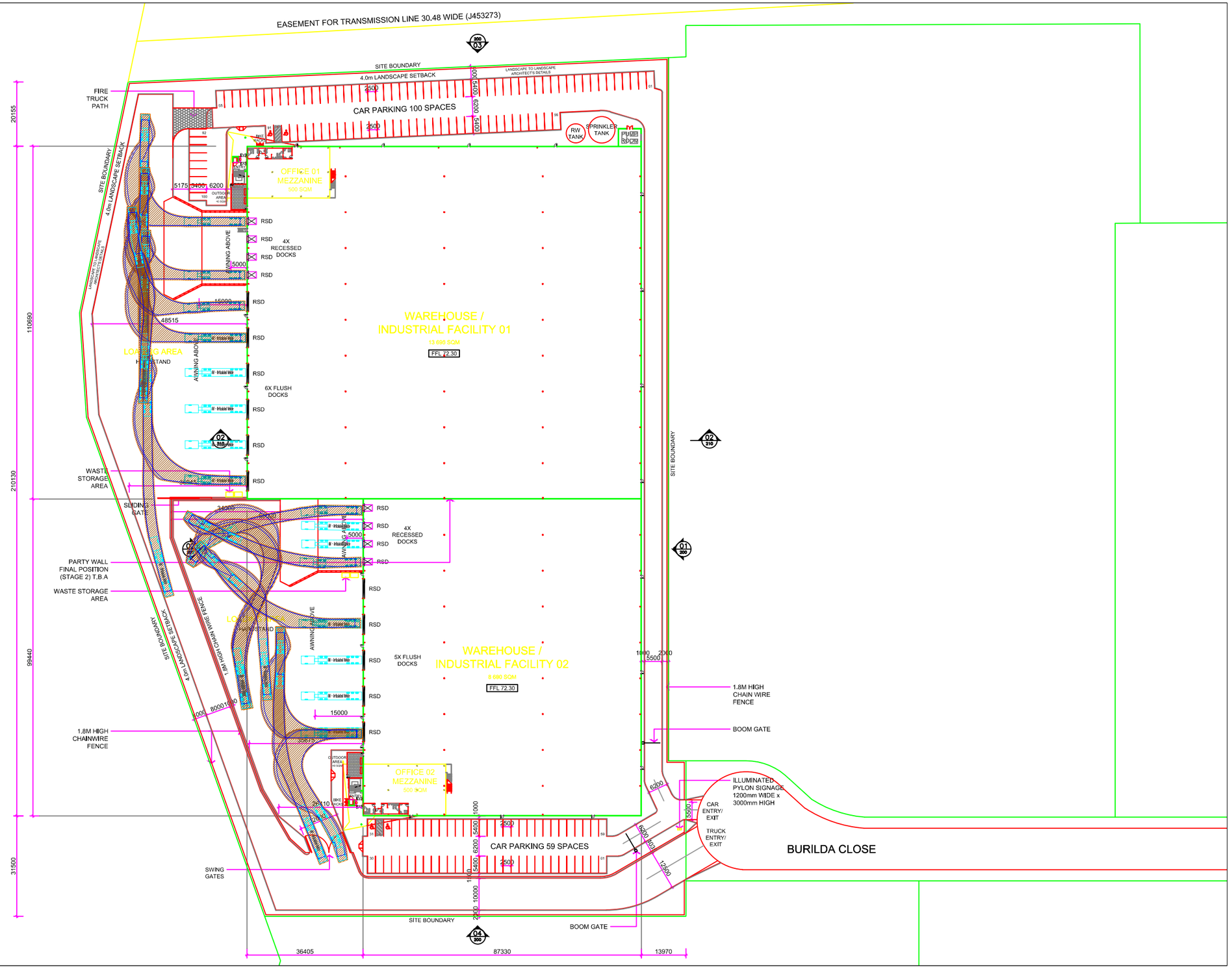
Swept Path Analysis



Revision notes:		
Rev:	Date:	Notes:

Drawn By:	AJ
Client:	Frasers Property Australia
Project:	0315 Lot 3 - Horsley Drive Business park
Drawing Title:	B-double Movements
Date:	28/09/2016
Scale @ A3:	1:1250
Drawing Number:	-

asongroup
Suite 1202, Level 12, 220 George Street
Sydney NSW 2000
info@asongroup.com.au



Revision notes:

Rev:	Date:	Notes:

Drawn By: AJ

Client: Frasers Property Australia

Project: 0315 Lot 3 - Horsley Drive Business park

Drawing Title: 19m Articulate Vehicle Movements

Date: 28/09/2016

Scale @ A3: 1:1250

Drawing Number: -

asongroup
Suite 1202, Level 12, 220 George Street
Sydney NSW 2000
info@asongroup.com.au

Appendix D

Secretary's Environmental Assessment Requirements

Industry Assessments
Contact: Lawrence Huang
Phone: (02) 9228 6236
Fax: (02) 9228 6555
Email: Lawrence.Huang@planning.nsw.gov.au

Mr Paul Solomon
Frasers Property Industrial Constructions Pty Ltd
Level 13, 1C Homebush Bay Drive
RHODES NSW 2138

Our Ref: SSD 7651
File:16/06919

Dear Mr Solomon

State Significant Development - Secretary's Environmental Assessment Requirements
Frasers Property Proposed Warehouse and Distribution Facility (Nick Scali),
Horsley Drive Business Park (SSD 7651)

Please find attached the Secretary's Environmental Assessment Requirements (SEARs) for the proposed warehouse/distribution and industrial facility at Lot 32A in DP 13961, Part Lots 30, 30A and 32 in DP 13961 and Part Lot C in DP 103755, Horsley Drive Business Park in the Fairfield LGA.

The SEARs have been prepared in consultation with the relevant government agencies and Fairfield City Council (see **Attachment 2**), and are based on the information you have provided to date. Unfortunately, the Department of Primary Industries, Endeavour Energy and Fairfield City Council were unable to respond in time. The Department will provide you with a copy of these submissions as soon as they are received.

Please note that the Department may alter the SEARs at any time. You must consult further with the Department if you do not lodge a Development Application (DA) and Environmental Impact Statement (EIS) for the development within two years of the date of issue of these SEARs.

I wish to emphasise the importance of effective and genuine community consultation and the need for the proposal to proactively respond to the community's concerns. Accordingly, you must undertake a comprehensive, detailed and genuine community consultation and engagement process during the preparation of the EIS. This process must ensure the community is informed of the development and engaged with issues of concern to it. Sufficient information must be provided to the community to enable a good understanding of the development and any potential impacts.

Your development may require a separate approval under Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). If EPBC Act approval is required, please advise the Department accordingly, as the Commonwealth approval process may be integrated into the NSW approval process, and supplementary SEARs may need to be issued.

Please contact the Department at least two weeks before you lodge the EIS and any associated documentation for the development. This will enable the Department to determine the:

- applicable fee (under Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000)*; and
- consultation and public exhibition arrangements, including copies and format requirements of the EIS.

If you have any enquiries about these SEARs, please contact Lawrence Huang on the above details.

Yours sincerely

C. Ritchie 10/6/16.

Chris Ritchie
Director
Industry Assessments
As the delegate of the Secretary

Secretary's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

State Significant Development

Application Number	SSD 7651
Development	Construction of two warehouse/industrial facilities with a gross floor area of 19,940 m^2 and 114 car parking spaces.
Location	Lot 32A in DP 13961, Part Lots 30, 30A and 32 in DP 13961 and Part Lot C in DP 103755, Horsley Drive Business Park, corner of The Horsley Drive and Cowpasture Road, Wetherill Park, Fairfield Local Government Area
Applicant	Frasers Property Industrial Constructions
Date of Issue	June 2016
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. In addition, the EIS must include: • a detailed description of the development, including: – the need for the proposed development; – justification for the proposed development; – likely staging of the development; – likely interactions between the development and existing, approved and proposed operations in the vicinity of the site; and – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise, mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage significant risks to the environment; and • a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. The EIS must also be accompanied by a report from a qualified quantity surveyor providing: • a detailed calculation of the capital investment value (CIV) of the proposal as defined in clause 3 of the *Environmental Planning and Assessment Regulation 2000*, including details of all components of the CIV; • an estimate of the jobs that will be created by the development during the construction and operational phases of the development; and • certification that the information provided is accurate at the date of preparation.
Key issues	The EIS must address the following specific matters: • **Strategic and Statutory Context** – including: – detailed justification for the proposal and the suitability of the site; and – demonstration that the proposal is generally consistent with all relevant

planning strategies, environmental planning instruments, development control plans (DCPs), adopted management plans including the *Parklands Plan of Management* 2020 and the *Parklands Plan of Management 2020* Supplement, and the Horsley Drive Business Park Conceptual Proposal (SSD 5169) and justification for any inconsistencies.

- **Traffic and Transport** – including:
  - a Traffic Impact Assessment detailing all daily and peak traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, including a description of vehicle access routes and the impacts on nearby intersections, including The Horsley Drive/Cowpasture Road and the Cowpasture Road/Newton Road intersections;
  - details of access to the site from the road network including intersection location, design and sight distance;
  - an assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development;
  - plans of any road upgrades or new roads required to service the development, if necessary;
  - detailed plans of the proposed layout of the internal road network and parking provision on-site in accordance with the relevant Australian Standards; and
  - details of the likely dangerous goods to be transported on arterial and local roads to/from the site, if any, and the preparation of an incident management strategy, if relevant.
- **Urban Design and Visual** – including:
  - layout of the development including staging, site coverage, setbacks, proposed open space and landscaped areas;
  - suitable landscaping incorporating endemic species;
  - the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks;
  - a detailed description (including photomontages and perspectives) of the facility (buildings and storage areas) including height, colour, scale, bulk, building materials and architectural treatments and finishes, signage, lighting and any retaining walls, particularly from nearby public receivers and significant vantage points within the broader public domain;
  - provision of a report that assesses compliance with the requirements of *AS4282-1997 – Control of the obtrusive effects of outdoor lighting*; and
  - proposed cut and fill works associated with the development, if relevant.
- **Noise and Vibration** – including:
  - a description of all potential noise and vibration sources during the construction and operational phases of the development, including on and off-site traffic noise;
  - a noise impact assessment that considers the cumulative noise impact of the proposed development in accordance with the relevant Environment Protection Authority guidelines; and
  - details of noise mitigation, management and monitoring measures.
- **Soils and Water** – including:
  - a description of the water demands and a breakdown of water supplies;
  - a description of the measures to minimise water use;
  - a detailed water balance;
  - a description of all wastewater generated on-site;
  - a description of the proposed erosion and sediment controls during construction and operational phases of the development;
  - a description of the surface and stormwater management system, including on-site detention, and measures to treat or re-use water;
  - an assessment of potential surface and groundwater impacts associated with the development; and
  - details of impact mitigation, management and monitoring measures.

	• **Air Quality** – including: – an assessment of the air quality impacts at private properties during construction and operation of the development, in accordance with the relevant Environment Protection Authority guidelines; and – details of any mitigation, management and monitoring measures required to prevent and/or minimise emissions. • **Hazards and Risk** – including: – If the storage of dangerous goods is proposed on-site, the Environmental Impact Statement must include a preliminary risk screening completed in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* and *Applying SEPP 33* (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a preliminary hazard analysis (PHA) must be prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011). • **Infrastructure Requirements** – including – a detailed written and/or geographical description of the infrastructure required on-site; – identification of any infrastructure upgrades required off-site to facilitate the development, and describe any arrangements to ensure the upgrades will be implemented in a timely manner and maintained; – a description of how infrastructure on and off-site will be co-ordinated and funded to ensure it is in place prior to commencement of operation; and – a detailed description of cooling/heating systems to be installed on-site. • **Greenhouse Gas and Energy Efficiency** – including an assessment of the energy use on site, and demonstrate what measures would be implemented to ensure the proposal is energy efficient. • **Ecologically Sustainable Development** – including an assessment of how the development will incorporate ecologically sustainable development principles in all phases of the development. • **Waste** – including: – details of the quantities and classification of all waste streams to be generated on-site; – details of waste storage, handling and disposal; and – details of the measures that would be implemented to ensure the development is consistent with the aims, objectives and guidance in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*. • **Contributions** – including: – Consideration of Council's Section 94/94A Contribution Plan and/or details of any Voluntary Planning Agreement.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. You should provide these as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: • Fairfield City Council; • Western Sydney Parklands Trust; • Department of Primary Industries; • Transport for NSW; • Roads and Maritime Services; • Sydney Water; • WaterNSW; and • local residents and stakeholders. The EIS must describe the consultation process and the issues raised, and

	identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these SEARs, you must consult with the Secretary in relation to any further requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.