311 South Street, Marsden Park, Green Travel Plan DRAFT4

Prepared for Positive Traffic/Dexus
21-594

PREPARED BY HIGH RANGE ANALYTICS PTY LTD

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THIS REPORT HAS BEEN PREPARED BY:

HIGH RANGE ANALYTICS PTY LTD (ABN 69 134 924 637)
TRAFFIC AND TRANSPORT CONSULTANTS
PO BOX 1220
MITTAGONG NSW 2575
WWW.HIGHRANGEANALYTICS.COM.AU

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311 South Street, Marsden Park – GTP DRAFT4

Prepared for Positive Traffic/DEXUS Pty Ltd

1.0 Introduction

Positive Traffic on behalf of Dexus Pty Ltd commissioned High Range Analytics Pty Ltd (HRA) to prepare a Green Travel Plan (GTP) for a proposed warehouse development at 311 South Street, Marsden Park (SSD-29668067).

The SSDA submission (SSD-29668067) is a State Significant Development Application under Section 4.12(8) of the Environmental Planning and Assessment Act & Schedule 2 of the Environmental Planning and Assessment Regulation 200083B of the EP&A Act, and addresses the SEARs issued by the Department of Planning on 15 October 2021. The relevant SEARs requirement for the GTP was:

> ***6 Traffic, Transport and Accessibility***
>
> *Documentation dot point 3: Green Travel Plan or equivalent*

This draft GTP is intended to accompany the SSDA for the proposal, detailing the various elements of the GTP.

This report provides a draft GTP, with supporting information, in the following chapters:

- existing conditions around the site in Chapter 2
- describes future conditions around the site in Chapter 3
- describes the proposal in Chapter 4
- summarises aspects of the transport investigation and formulates targets in Chapter 5
- the green travel plan is described in Chapter 6
- Appendices contain supporting information:
    - A – site drawings
    - B – bicycle facility provision
    - C – electric vehicle charging estimates
    - D – provides TfNSW's initial comments in relation to the draft GTP and responses discussing how the comments are to be addressed

This report draws on transport-related information contained in *Traffic and Parking Assessment Report, State Significant Development Application, Proposed Warehouse Development – 311 South St, Marsden Park*, November 2021, prepared by Positive Traffic Pty Ltd. It also draws on information about the site and transport conditions from:

- State and local government websites regarding transport services and land use projections
- Census of population and households conducted by the Australian Bureau of Statistics
- Site visit to the surrounding area (not on site) and professional experience.

Version

This draft4 GTP version (21-594r01_GTP_DRAFT4) is provided to the client representatives for DA submission subject to their concurrence. It has been amended to reflect:

- The changes incorporated in draft2:
  - Initial discussions with TfNSW and some of their feedback in regard to the first draft version of the GTP. Appendix D provides a summary of TfNSW feedback, along with our comments as to how the points raised are to be addressed as the GTP is finalised after the development application has been considered and determined. TfNSW have advised that the GTP elements that require building work (for example, showers in DDA amenities) should be addressed prior to construction certificate, whereas the finalisation of the overall GTP is required prior to occupation of the development. TfNSW's willingness to engage on this project and the breadth of their response is acknowledged and appreciated.
  - Amended design to include showers in all DDA amenities to provide trip end facilities for site users who choose to ride to work by bicycle.
- Plus draft3 changes:
  - references to amended site access on page 10 and
  - amended drawings in Appendix A.
- Plus draft4 changes:
  - clarification of employment generation of the proposed development.

COVID-19 Statement: implications for this study and forward-looking statements

This GTP, as a plan, is a forward-looking document, seeking to influence travel behavior to and from the proposed development. It is based largely on travel systems and information describing travel behaviour from prior to the start of the pandemic.

There is a degree of uncertainty regarding conditions once the broader community is living with COVID-19 in a relatively stable manner. Therefore, our working assumption in this study has been that once the community is living with COVID-19 there would be a return to a situation within the urban fabric and transport system of Sydney that largely, but not completely, reflects the situation prior to the onset of the pandemic. As at late 2021, this may take another one to two years, or possibly longer.

The implementation of the GTP, with its ongoing monitoring and updating element should assist to ensure that it retains its relevance over time, being inherently flexible to deal with shocks and issues as they arise.

2.0 Existing Conditions

2.1 Site location

The subject site is located at 311 South Street, Marsden Park, approximately 1.3km west of Richmond Road. It is located in Blacktown LGA, in Sydney's west, some 50km northwest of the Sydney CBD. The site location is shown in Figure 1.

FIGURE 1 – 311 SOUTH STREET, MARSDEN PARK – SITE LOCATION

Source: NearMap

2.2 Site general description

The site is currently occupied by what appears to be a separate dwelling with some outbuildings. It has rural fencing with some short pasture and might be used for grazing, although no stock was observed during our site visit.

Marsden Park, including the surrounds of the site, are currently experiencing rapid urban development. The proposal for the site is part of this ongoing transformation process. When considering the site and its transport demands, the focus should primarily be on the emerging urban fabric and transport conditions in which site would be located.

The site environs are generally flat or near flat, with land dipping gently to the west form further along South Street from Richmond Road.

2.3 Road network

The key roads around the site are discussed below, with information largely drawn from Positive Traffic's report, referenced in the introduction.

> South Street – is currently a local street under the care and control of Blacktown City Council. It connects directly to Richmond Road via a signal controlled four-way intersection. South Street across the site frontage is currently a single lane in each direction with signposted speed limit of 60 km/hr. It has no pedestrian or bicycle facilities.

It is noted that South Street would be transferred from Blacktown Council to the ownership of TfNSW at the time when it would be upgraded.

Richmond Road – is an arterial road which runs south-east to north-west, connecting Marsden Park with the M7 and Blacktown to the south-east and Richmond to the north-west. Richmond Road in the vicinity of South Street is three-lanes each way with a median, and major intersections are signal controlled with substantial flaring of the intersections to accommodate different turning movements. Richmond Road has a sign posted speed limit of 80km/hr. An off-road shared path currently runs along the western side of Richmond Road.

2.4 Transit

2.4.1 Rail & Metro

The site is located between:

- the Western Line, with closest stations of Mt Druitt and Rooty Hill, some nine kilometres south of the site, via South Street, Richmond Road, Rooty Hill Road North, and
- the Richmond Line, with Schofields the closest station, some five kilometres east of the site via South Street and Schofields Road.

The nearest Metro Station is Tallawong Road, located just west of Rouse Hill Town Centre, approximately eight and a half kilometres east of the site, with access via South Street, Schofields Road and Cudgegong Road.

2.4.2 Buses

As the land use and road networks in Marsden Park develops, it is expected that the bus network would similarly be expanded to provide typical levels of accessibility. Currently, the following two bus services operate in the vicinity of the site.

Rt 747 Mt Druitt to Rouse Hill via Marsden Park[1]

This route operates along Richmond Road in the vicinity of South Street and connects the established centres of Mt Druitt (with rail) and Rouse Hill Town centre (with metro) with parts of their catchment, as well as the emerging centres of Marsden Park. Between Marsden Park and Rouse Hill, this service also serves Riverstone Station on the Richmond Line. This bus service runs 7 days per week, with a half hour service during the day on weekdays.

Rt 751 Blacktown Station to Marsden Park via Colebee

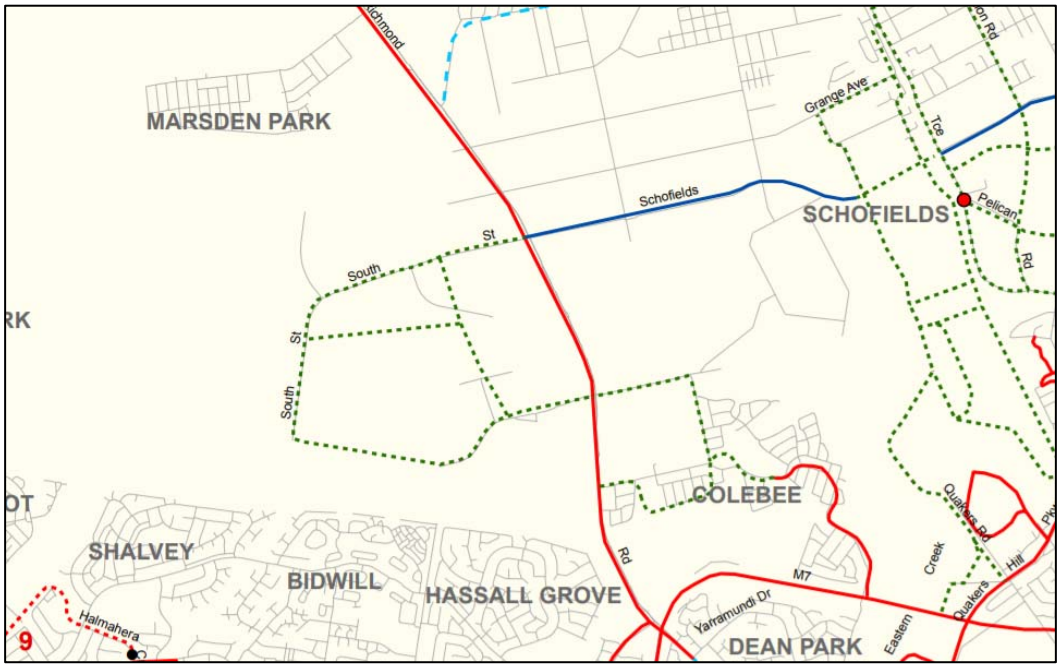
This route operates along Richmond Road in the vicinity of South Street and is anchored on the retail and employment centre of Blacktown, where it also connects with rail. It runs 7 days per week.

2.5 Bicycles

An extract of the Blacktown Bike Plan for the area around the site is shown in the following figure.

[1] Based on TfNSW bus information https://transportnsw.info/routes/details/sydney-buses-network

FIGURE 2 – EXISTING BICYCLE FACILITIES – SOLID LINES; FUTURE FACILITIES – DASHED LINES



Source: 2016 Bike Plan, Existing and Future Proposed Routes, Blacktown City Council

The above plan indicates a facility on Richmond Road past South Street and a facility along South Street/Schofields Road, east of Richmond Road. Of note is that the Richmond Road cycle facility connects to the M7 Cycleway, which provides a trunk facility with direct connections along the 40km length of the M7 corridor through western Sydney.

2.6 Pedestrians

As noted above there are currently no formal pedestrian facilities along either side of South Street.

Generally, the signal-controlled intersections along Richmond Road have formal pedestrian crossing facilities on each approach.

2.7 Travel choices – Journey to Work Census 2016

The Census of Population and Housing, conducted by the Australian Bureau of Statistics (ABS), collects information about commuters' mode of travel to work, which is then processed and presented as part of the Census reporting[2]. Whilst this information relates to commuters it can provide an indication of the broader relative accessibility of an area. In the table below we summarise the journey to work mode shares for commuters traveling out of:

- The area of Marsden Park Industrial Precinct which broadly coincides with work place destination zone (DZN) 113120002
- The local government area of Blacktown for sub-regional context
- The greater Sydney area for regional context.

[2] As a note for readers expecting travel zone level JTW data – unlike the previous five censuses, the 2016 JTW data was not post-processed by the NSW agency responsible for travel data (currently TfNSW) due to privacy considerations.

TABLE 1 – JOURNEY TO WORK FOR WORKERS TRAVELLING TO SELECTED AREAS, 2016 (COUNT & % OF THOSE WHO TRAVELLED)

Area	Train	Bus	Tram/ Ferry	Vehicle	Other Mode	Bicycle	Walked Only
Marsden Park Industrial	17	17	0	781	4	3	9
Blacktown LGA	3,864	1,950	43	84,722	928	244	1,538
Greater Sydney	369,360	136,737	12,109	1,266,882	25,369	16,346	90,854
Mode shares of those who travelled to work on census day 2016…							
Area	Train	Bus	Tram/ Ferry	Vehicle	Other Mode	Bicycle	Walked Only
Marsden Park Industrial	2.0%	2.0%	0.0%	94.0%	0.5%	0.4%	1.1%
Blacktown LGA	4.1%	2.1%	0.0%	90.8%	1.0%	0.3%	1.6%
Greater Sydney	19.3%	7.1%	0.6%	66.1%	1.3%	0.9%	4.7%

Source: 2016 Census - ABS Tablebuilder; for DZN 113120002 approximating Marsden Park Industrial, Blacktown LGA, Greater Sydney

The above analysis indicates that commuters to Blacktown LGA and to Marsden Park Industrial Precinct were around 50% more likely to use vehicles than the average across the whole of Sydney; and these commuters were four to six times less likely to use transit. The use of bicycle for commuting is low across the Sydney region, at less 0.9%, with Blacktown LGA and Marsden Park Industrial Precinct lower than that, at about a third of the Sydney-wide average.

2.8 Local land use

Based on Census information and sophisticated demographic models, TfNSW produces projections of population and employment for small areas (which are called travel zones). This information was extracted for the zones around the site, to provide a demographic baseline for this area, which is in Table 2.

TABLE 2 – POPULATION AND EMPLOYMENT IN TRAVEL ZONES AROUND SITE, 2011 AND 2016 (COUNT)

Travel Zone	ERP 2011	ERP 2016	Jobs 2011	Jobs 2016
3968	99	275	83	994
Blacktown LGA	314,875	350,795	109,283	127,253

Note: ERP is estimated resident population; Source: TfNSW 2016v1.51 small area land use; travel zone 3968 approximates the Marsden Park Industrial

Between 2011 and 2016 there was population increase in Marsden Park Industrial Precinct of around 200 people, whereas Blacktown LGA saw an increase of some 35,000 people. Jobs increased more strongly over the same period in Marsden Park Industrial Precinct by some 900 jobs. Blacktown LGA saw an increase in jobs of about 18,000. Given that Marsden Park Industrial is just under 500 hectares in area, the population and employment densities at 2016 were very modest at half a resident per hectare and 2 jobs per hectare.

Projections of population and employment from these TfNSW projection series are presented in Chapter 3.

2.9 Summary

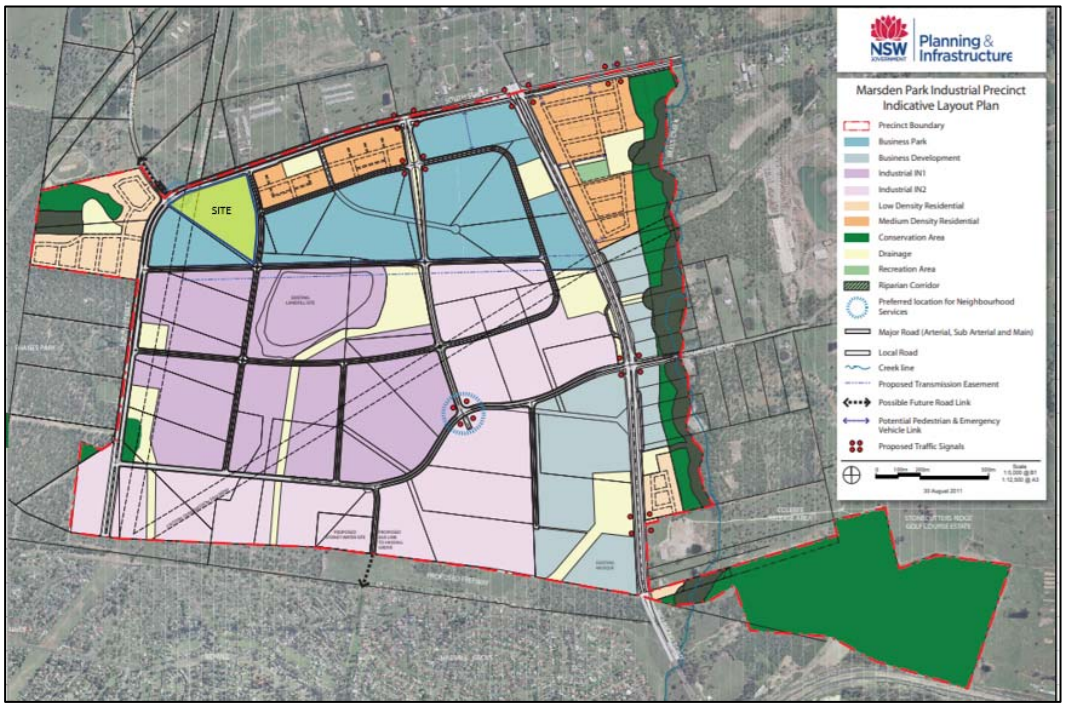
The site is in an area of emerging urban development and rapidly developing road network with currently high levels of vehicle use for the commute.

3.0 Future Conditions

3.1 Marsden Park Industrial Precinct Indicative Layout Plan (ILP)

The following figure presents the emerging road network and land use in Marsden Park Industrial Precinct, with the site marked in yellow (underlying colour of the site is blue).

FIGURE 3 – MARSDEN PARK INDUSTRIAL PRECINCT ILP



Source: https://www.planning.nsw.gov.au/-/media/Images/DPE/Maps/Marden-Park-Industrial-Precinct-Indicative-Layout-Plan.PDF?la=en

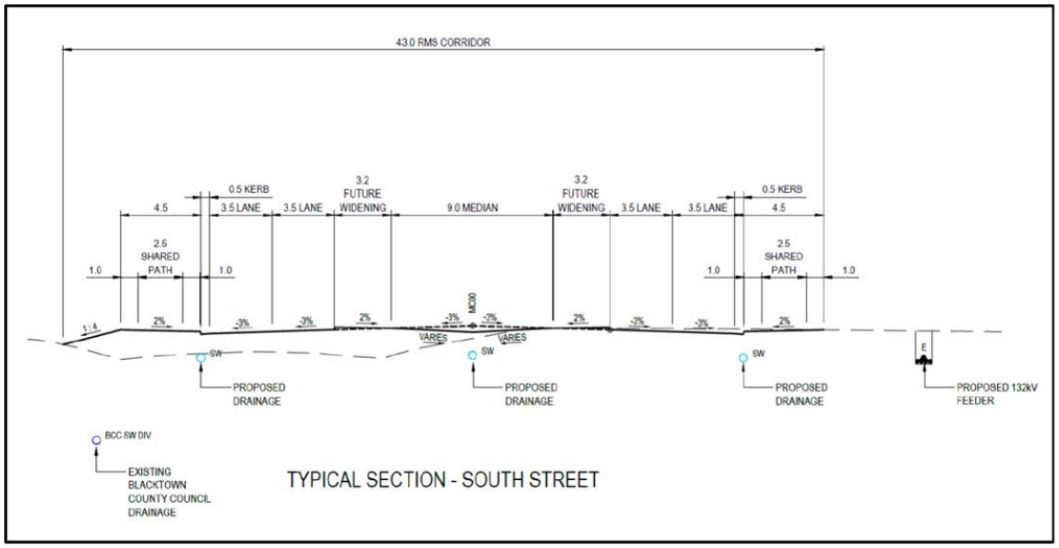
Of note is the indication on the above ILP of the proximity to the site of residential uses within the precinct. In terms of the site, the following residential areas, are important:

- the medium density residential to the east from the site along South Street;
- the low density residential, which is largely constructed and some is occupied, to the west of the site;
- the medium density residential shown south of South Street and east of Richmond Road; and
- the residential lands to the north of South Street, in Marsden Park (just north of Marsden Park Industrial Precinct).

These residential areas provide a realistic walk-in and cycle-in catchment to the site as a result of their proximity, the flat terrain and the emerging movement networks.

Positive Traffic, in their report, have indicated that their expectation of the future cross section of South Street, in the vicinity of the site, is substantially different from today's semi-rural one lane each way road. The following figure is taken from Positive Traffic's report.

FIGURE 4 – INDICATIVE PROPOSED CROSS-SECTION OF SOUTH STREET, IN VICINITY OF THE SITE



Source: Figure 7, Positive Traffic report.

A key feature of the above cross section for the GTP is the 2.5m shared path shown on both sides of South Street. This proposed provision agrees with the indication on Figure 2 of future bicycle facilities along South Street (as put forward by Blacktown City Council), and it would also facilitate pedestrian and bicycle access to the site.

3.2 Land use projections

Small area land use projections over the twenty-year planning horizon, from 2016, produced by TfNSW for the local area surrounding the site are summarised in the two tables below.

TABLE 3 – PROJECTED POPULATION IN TRAVEL ZONES AROUND SITE, 2016 TO 2036 (COUNT)

Travel Zone	ERP 2016	ERP 2021	ERP 2026	ERP 2031	ERP 2036
3968	275	1,013	1,553	1,703	1,922
Blacktown LGA	350,795	389,513	436,455	478,011	525,544

Note: ERP is estimated resident population Source: TfNSW 2016v1.51 small area land use projections

TABLE 4 – PROJECTED EMPLOYMENT IN TRAVEL ZONES AROUND SITE, 2016 TO 2036 (COUNT)

Travel Zone	Jobs 2016	Jobs 2021	Jobs 2026	Jobs 2031	Jobs 2036
3968	994	1,298	1,805	2,177	2,569
Blacktown LGA	127,253	139,643	154,450	168,337	184,619

Source: TfNSW 2016v1.51 small area land use projections

Over the period 2021 to 2036, these projections indicate very substantial population and employment increases are expected in Blacktown LGA of some 136,000 ERP and 45,000 jobs. Marsden Park Industrial Precinct is not a major contributor to Blacktown's population growth, accounting for around 1,000 ERP (less than 1% of Blacktown's projected growth) and its projected employment growth between 2021 to 2036 of some 1,200 jobs is just under 3% of the projected employment growth for the whole of Blacktown.

By 2036 employment density in Marsden Park Industrial would be around 5 jobs per hectare (gross), which is relatively low density.

A broader feature of the land use projection series is the potential imbalance between Blacktown LGA's incremental population from 2021 to 2036 of 136,000 and the incremental employment of 45,000 jobs. This suggests that there would be around 3 ERP per job compared with Sydney's average ratio of 1.88 ERP per job in 2021 – the implication is that incremental growth in Blacktown LGA will continue to generate solid numbers of

out-commuting due to an ongoing jobs deficit in Blacktown LGA. This brings with it the need for state government investment in transport infrastructure to support this underlying driver of travel demand.

3.3 Transit changes

3.3.1 Ongoing rail and light rail development

In addition to ongoing improvements to rail services, such as additional rolling stock, upgrades to stations and additional capacity, such as duplications, third tracks and crossovers, very large rail projects have opened in recent years and more are in the pipeline[3].

Sydney Metro has opened in the north west, connecting the Rouse Hill area from Tallawong Road, through Norwest Business Park, Castle Hill, Macquarie University and Macquarie Park to Chatswood, with heavy rail connections at Epping and Chatswood. While still in its 'COVID-interrupted' ramp-up stage (as at November 2021), indications are that it has had a substantial beneficial impact on travel in that part of Sydney.

The Sydney Metro City & South West is a project currently under construction to provide substantial increases in passenger capacity and service levels, with the alignment running from Rouse Hill to Bankstown via the CBD – as mentioned above, the section from Rouse Hill to Chatswood is complete and in operation. In the broader area around the subject site this Metro will provide an additional station at Crows Nest. The project's indicative timeline has completion by 2024[4].

The Sydney Metro West project is in planning and would provide additional capacity between the CBD and Parramatta[5].

Recently completed CBD & South East Light Rail commenced operations in December 2019, and serves corridors out to Kingsford (including UNSW) and to Randwick. Further light rail projects are in the pipeline, such as at Parramatta, and these are likely to have similar network effects.

There is the potential for the Metro to extend from Tallawong Road, through Marsden Park, across the main western line, possibly at Mt Druitt or at St Marys, to then extend to the currently being built Western Sydney Airport. If such an extension were to occur it would be beneficial for transit access to and from Marsden Park and Marsden Park Industrial Precinct, with potential benefits for travel to and from the site. It is difficult to ascertain the realistic likelihood of this Metro extension being built and its potential timing; it could, however, be part of the solution to supporting the on-going growth in out-commuting from Blacktown LGA, discussed above in Section 3.2.

These projects would all contribute to an improvement in transit accessibility for Sydney as a whole, thereby reducing overall car dependence in their broader corridors, further transitioning Greater Sydney to a 'transit city'.

3.3.2 Bus networks and services

Bus networks are amended and service levels adjusted in response to changes in demand and land use, as part of normal bus network operation, under operators' contracts with TfNSW. We would expect that the bus network supporting Marsden Park and Marsden Park Industrial Precinct to be amended over time to support the further development of the area.

[3] It should be noted that these rail and light rail projects are very costly – in the multiple billions of dollars – it is unclear whether, due to COVID, these projects will be accelerated to boost aggregate demand to support recovery from the economic impacts of the pandemic, or whether they will be slowed to repair the state government's fiscal position.

[4] https://www.sydneymetro.info/citysouthwest/project-overview
[5] https://www.sydneymetro.info/west/project-overview

4.0 Proposed Development

4.1 Proposal description

This material was extracted from Positive Traffic's Traffic and Access Assessment Report (pg 19, November 2021 and from an updated version of the Economic Assessment Report):

The key components of the proposed are described below.

- Construction of an industrial warehouse development with a total site area of 102,445m2 and developable area of 81,039m2.
- Six (6) x large floorplate warehouse units with potential building area of 41,100m2 warehouse space and 2,100m2 ancillary office space (overall total of 43,200m2 GFA).
- Proposed construction commencement in Quarter 2 2022 with occupation of the development proposed for Quarter 3 2023
- Separation of light and heavy vehicle access to the site to maximise safety and efficiency of access.
- Light vehicle access from two (2) driveways within eastern frontage collector road (labelled "Duckworth Street" on site analysis): the first driveway south of South Street; the second driveway is located between Goodwin Street and Delarue Street.
- Heavy/large vehicle and service vehicle access via driveway access at southern end of collector road (labelled "Duckworth Street" on site analysis).
- As stated in the Economic Assessment Report, the site has the potential to provide a total employment of 315 jobs, 113 office jobs and 202 warehouse jobs. The economic study indicates that the proposed development would be expected to generate (during the ongoing operations) a further 237 jobs elsewhere (i.e., not at this site) in the economy.

Plans of the proposed development can be found in Appendix A of this report.

5.0 GTP Objectives and Mode Share Target Formulation

5.1 General

This chapter sets out objectives for the GTP and then formulates mode share targets.

The bulk of travel amenable to a GTP for the site is the commute by workers at the site to and from work. Other travel demands generated by the site would not be amenable to a GTP's measures, including:

- The movement of freight to and from the site would be undertaken by heavy vehicle
- Servicing travel demand associated with maintenance of plant and equipment associated with the offices and warehouses, would necessarily be undertaken by trades and technicians in light (and some larger) commercial vehicles, in order to carry equipment, tools, parts etc
- And other servicing travel demand, such as the smoko van or lunch truck, would rely on their use of a vehicle.

Generally, GTP's establish targets to boost non-car travel as useful to provide a benchmark against which outcomes can be compared. This would provide a starting point for diagnostic action should the outcomes not meet expectations embodied in the targets.

In addition, with the adoption of newer technologies, there is the opportunity for the project's design to incorporate capacity to facilitate the implementation of some of these technologies whilst minimising disruption at the time of adoption. This is discussed further in the next section, with further details in Chapter 6 and Appendix C.

5.2 Objectives

The key objectives of this GTP relate to travel demand management and are to:

- reduce reliance on the car within the site's workforce for the commute by encouraging walking, cycling and use of transit
- raise awareness of travel alternatives to ensure that, as a far as practical, workers and visitors make the most of the transport options available at this site
- use incentives to encourage the use of car-pooling as a method to reduce single car use at the site
- reduce overall vehicle trips for journeys to and from the site
- reduce impacts of motorised transport on the environment.

The first four objectives relate directly to travel demand management, the fourth objective is more directly related to being able to support transport technologies which are currently emerging and being adopted, some of which may also work as travel demand management measures. These include e-bikes, electric vehicles (EV), electric scooters (electric step through scooters similar to the old Honda 90s or Lambretta scooters, not stand on scooters).

5.3 Mode Share Target Formulation

5.3.1 Approach and considerations

Previous mode share targets

Mode share targets for Marsden Park Industrial Precinct were previously developed by Arup in their *Marsden Park Industrial (Employment) Precinct Transport and Access Study* (2009). These are tabulated below, along with 2016 journey to work mode shares for Marsden Park Industrial Precinct and Blacktown LGA.

TABLE 5 – MODE SHARES, ARUP 2001, ABS CENSUS 2016, ARUP 2036 TARGETS

Mode	ARUP	ARUP	ABS Census	ABS Census
	2001	2036	2016	2016
	All purposes	All purposes	Commuter	Commuter
Geography	Blacktown LGA*	Marsden Park Industrial	Blacktown LGA	Marsden Park Industrial
Car driver	60.57%	52.09%	84.5%	85.4%
Car passenger	24.44%	24.44%	6.4%	8.5%
Train	3.74%	5.46%	4.1%	2.0%
Bus	2.66%	3.88%	2.1%	2.0%
Bicycle	0.41%	2.00%	0.3%	0.4%
Walk	7.91%	11.55%	1.6%	1.1%
Other	0.27%	0.39%	1.0%	0.5%
Total	100%	100%	100%	100%

Of note, is that the Arup targets were based on TfNSW's Household Travel Survey (HTS), which means that it included all purposes of travel, and that the information used was drawn from the larger area of Blacktown LGA, most likely in order to achieve a meaningful sample size from the HTS, and not specifically Marsden Park Industrial Precinct. The non-commute travel purposes in the HTS data set tend to have shorter trip lengths than commuter travel and are therefore more amenable to non-car modes, such as walking and bus. Also, commuter travel is generally restricted to persons over 15 years of age who are employed, whereas non-commute purpose travel includes a lot more children, who by virtue of their age, cannot drive. This partly explains why the car passenger market share in Arup's work at 24.44% is so much higher than the car passenger mode share in the commuter travel data of 6.4% and slightly higher bus and train mode shares due to travel to and from school, than for commuter travel.

The approach to target setting by Arups, of increasing the mode shares of some of the sustainable modes, such as bicycle, walking and transit, makes good sense. These increases are accounting for the substantial change envisaged for the area's land use and transport network, some of which is described in the above sections of this report.

As we have noted above, commuter travel is the travel over which this GTP will have the most influence and that is why our targets are set around commuter travel, based on the latest ABS journey to work information.

The commuter mode shares at surrounding industrial/warehouse/distribution areas within Blacktown were examined for comparison purposes, as these areas are long established and provide further information on potential mode share outcomes at the site. These areas are:

- Glendenning
- Wonderland/Erskine Park
- Arndell Park
- Huntingwood.

The table below compares 2016 Census journey to work mode shares in each of these areas with Marsden Park Industrial.

TABLE 6 – MODE SHARES, INDUSTRIAL, WAREHOUSE, DISTRIBUTION AREAS IN BLACKTOWN LGA, ABS CENSUS 2016

Mode	Marsden Park	Wonderland	Huntingwood	Arndell Park	Glendenning
DZN	**113120002**	**113185651**	**11318562**	**113185653**	**113145613 113145614 113195636**
Train	2.0%	5.6%	3.0%	1.6%	1.5%
Bus	2.0%	3.6%	1.5%	0.8%	1.2%
Tram/Ferry	0.0%	0.1%	0.0%	0.0%	0.0%
Vehicle	85.4%	83.1%	86.6%	91.2%	90.6%
Veh Pax	8.5%	4.2%	4.8%	5.3%	4.3%
Other mode	0.5%	2.9%	3.1%	0.6%	1.2%
Bicycle	0.4%	0.3%	0.7%	0.2%	0.6%
Walked only	1.1%	0.2%	0.2%	0.3%	0.7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Key features of commuter travel to these areas are:

- Low vehicle passenger mode shares of 4% to 5% for comparison areas
- Wonderland has relatively high transit at 9.2%, other comparison areas are less than half of that
- Bicycle mode share is very low in all the areas in the above table, as per Arup's 2001 data and 2016 Census for Blacktown LGA, this is despite the M7 cycleway being in use for a decade prior to the 2016 Census, and Glendenning and Wonderland being situated relatively close to that trunk facility
- Walked only is very low – Wonderland and Huntingwood are the lowest, possibly because of separation from potential walk in catchment, Glendenning is highest as it sits within an established movement network and there is housing around its margins.

5.3.2 Mode share targets

Bus mode share target

For the foreseeable future bus is the most important transit access mode for the site. As Marsden Park Industrial Precinct and Marsden Park develop, there are expected to be areas of residential development along South Street and to its north, in Marsden Park, which are too far from the current bus services on Richmond Road to meet expected coverage requirements. In order to meet community expectations about bus route coverage, it is likely that bus routes would be extended into Marsden Park Industrial Precinct, probably along South Street (given its role in the proposed movement hierarchy and the identified cross section shown above). This is likely to provide bus services within a reasonable walking distance of the site.

The analysis of other industrial areas in Blacktown indicated that Wonderland had a mode share of 3.6% to bus.

It is proposed to set a target of increased bus mode share by three and a half percentage points from 2.0% to 5.5%.

Bicycle mode share target

Whilst we acknowledge there are challenges faced by cyclists in Sydney, based on topography and a heavily loaded main road network, the existing and emerging networks of cycle facilities, as well as the increasing popularity of the mode, suggests that an underlying increase in bicycle use is not implausible.

The analysis of journey to work information in this report has identified low levels of bicycle use

It is proposed to set a target mode share of 3% by bicycle.

Walk mode share

This mode is relevant for workers who live relatively close to the site. As previously identified, there is an emerging residential catchment within and around Marsden Park Industrial Precinct, some of which is certainly within walkable distance of the site. With the emerging movement networks around the site which would effectively support and facilitate walking to work, it is realistic to assume that some workers would walk to the site.

It is proposed to set the walk mode share target as 6%.

Train mode share

From a passenger perspective, the usefulness of Sydney' rail system (train, metro and light rail) has improved considerably over the past ten or so years. However, the current distance from Marsden Park Industrial Precinct to the nearest train stations is likely to result in only modest use of this mode.

When rail is brought closer to the site, such as the potential Metro extension from Tallawong Road to Marsden Park and then to St Marys or Mt Druitt, the attractiveness of this mode would increase considerably – as a result of shorter station access and better local catchment coverage. At such time as an extension opened, a revision of this GTP's targets would be warranted.

It is proposed to set a target mode share of 3.5% by train.

Vehicle passenger mode share

The mode shares of industrial areas in Blacktown analysed in Table 6 above, suggested that Marsden Park Industrial Precinct already had vehicle passenger mode shares of about twice those of most of the other industrial areas. Leaving the current mode share of 8.5% is considered an appropriate target for the site[6].

Implications for car mode shares

These above increases in non-car mode shares are 'taken from' the car mode shares.

- Bus from 2% to 5.5%
- Bicycle from 0.4% to 3%
- Walk 1.1% to 5%
- Train 2.0% to 3.5%
- Car passenger 8.5% no change

For sustainable modes this represents an increase from 5.5% mode share in the 2016 Census for Marsden Park Industrial Precinct to 18.0% mode share, and increase of 12.5 percentage points. This is a substantial increase. This indicates that the car driver mode share would decline from 85.4% to 73.0%, a considerable drop in car use.

Timeframe

The aim of the GTP would be to see these targets met within five years of the occupation of the site and implementation of the plan. Beyond that timeframe, a review of these targets would be appropriate. This would

[6] The relationship between 'car passenger' mode in the Census and car-pooling is not direct – the car passenger could be dropped at the site by the driver who also happens to work at the same site (direct car-pooling equivalence) or it could be that the driver is a friend or family member heading off on a trip for some other purpose who drops the worker 'car passenger' at the site on the way. Before this target is amended, further thought is required about how this might be implemented. This would be undertaken as the GTP is finalised.

be especially the case if the emerging bus network provided high quality, readily accessible routes that related well to the site's catchment and/or the extension of a metro line through Marsden Park.

5.3.3 Summary of Mode Share Targets

The following table summarises the mode share targets as a percentage of commuter travel.

TABLE 7 – MODE SHARE TARGETS

Mode	Current	Target
	2016 census	Target
Train	2.0%	3.5%
Bus	2.0%	5.5%
Vehicle driver	85.4%	73.0%
Vehicle passenger	8.5%	8.5%
Other mode	0.5%	0.5%
Bicycle	0.4%	3.0%
Walked only	1.1%	6.0%
Total	100%	100%

*Note * that car mode share is not so much a 'target' as the 'result' of meeting non-car mode share targets.*

6.0 Green Travel Plan

6.1 General

The above sections have collated information about existing and likely future travel and transport conditions around the site.

This analysis has indicated:

- Relatively high existing use of car for the commute in the Marsden Park Industrial Precinct (local) and Blacktown LGA (broader area)
- An emerging movement network that would be supportive of non-car modes, such as cycle facilities along South Street, linking to existing facilities along Richmond Road and beyond; similar provision and expansion of facilities for pedestrians; and potential for improved bus services
- Recently developed and emerging residential use close to the site, providing the potential for a walk-in/cycle-in catchment for the site's workers
- The ongoing development of the Marsden Park Industrial Precinct's land use and movement networks which would facilitate and provide a justification for a progressive increase in bus service coverage and frequency
- The longer-term potential for greater rail use, should the Metro be extended from Tallawong Road.

The proposal's design, as noted by Positive Traffic, does not include changes which would increase the traffic and transport loads placed on services and infrastructure, over and above that which was included in the planning stages of Marsden Park Industrial Precinct.

The key areas which could benefit from attention, based on this analysis, are:

- Ensuring that site users are aware of travel choices available to them
- Provision of trip end measures for bicycles which would facilitate cycling as a mode
- That there is a process to monitor travel behaviour and identify issues, as they arise, and work to resolve/improve them
- Setting mode share targets, which are then subject to review and update for the site.

6.2 Objectives

The key objectives of this GTP, as stated in Chapter 5, are to:

- reduce reliance on the car within the site's workforce for the commute by encouraging walking, cycling and use of transit
- raise awareness of travel alternatives to ensure that, as a far as practical, workers and visitors make the most of the transport options available at this site
- use incentives to encourage the use of car-pooling as a method to reduce single car use at the site
- reduce overall vehicle trips for journeys to and from the site
- reduce impacts of motorised transport on the environment.

6.3 Targets

In summary the targets set in the previous chapter for this GTP are tabulated below.

TABLE 8 – MODE SHARE TARGETS

Mode	Current	Target
	2016 census	Target
Train	2.0%	3.5%
Bus	2.0%	5.5%
Vehicle driver	85.4%	73.0%
Vehicle passenger	8.5%	8.5%
Other mode	0.5%	0.5%
Bicycle	0.4%	3.0%
Walked only	1.1%	6.0%
Total	100%	100%

*Note * that car mode share is not so much a 'target' as the 'result' of meeting non-car mode share targets.*

6.4 Actions

6.4.1 Information about available travel choices

Even with the improved availability of travel information, including real-time apps, and interactive online multi-modal travel planners, there is still a need to make site users aware of the specific services and infrastructure available and their relative benefits to themselves and, more generally, to society and the environment. This would be through:

- Transport Access Guide to be prepared and made available on the website for site occupiers[7]. The Transport Access Guide would provide specifics about bus, rail access, pedestrian links and bicycle facilities available around the site. It would also provide links to sources of information about travel choices, including various Apps and journey planners[8]. It should be consistent for all site occupiers (not a different one for each occupier of the various warehouse units)
- The Transport Access Guide would need to be updated from time to time as services and networks are amended. It could also be updated to reflect targets and results of travel surveys. These are opportunities to further promote the Transport Access Guide.

6.4.2 Review provision for bicycles

Appendix B sets out a first-principles based assessment of likely demand for bicycle facilities at the site, based on likely site worker numbers and Census numbers and the GTP's mode share targets for bicycle.

It recommends:

Bicycle parking

Bicycle parking provision for approximately 5% of site workers in order to accommodate the GTP's 3% mode share target with spare capacity:

[7] This might be owner occupiers, or tenants

[8] It is not envisaged that paper versions of the transport access guide would be produced, with a pdf version to be provided online.

- 6 cycle parking spaces at Unit 1
- 4 cycle parking spaces at each of Unit 2A and Unit 2B
- 3 cycle parking spaces at each of the other units (2C, 2D and 2E)

This is a total of 23 bicycle spaces. Suitable locations for secure cycle parking facilities would need to be identified.

Trip end facilities

There would need to be showers in each warehouse unit in the office (first floor) and in the warehouse (ground floor). Currently the ground floor amenities in each unit have a shower in the DDA toilet for units 1, unit 2A, 2B, and 2E; they are absent from units 2C and 2D. Also, there are no showers shown in the first-floor amenities of each unit – these should include a shower in the DDA toilet.

Trip end facilities are now shown on the scheme drawings for version Draft2.

6.4.3 Set mode share targets and monitor progress

We see the process of setting mode share targets, and monitoring progress towards the targets, as a key action of the plan in terms of achieving these targets. Mode share targets are set in Chapter 5.

It is proposed that an annual survey of how workers travel to the site is undertaken, and that the overall results are provided as part of the transport information for the site.

6.4.4 Reducing transport's environmental impacts by facilitating the adoption of emerging technologies

These measures are recommended to ensure that the proposal can readily support these elements with minimal disruption, should substantial demand emerge for these transport facilities.

Charging points for e-bikes – this might be considered as part of cycle parking facilities. Basically, the e-bikes need a GPO for charging and a charger. If this could be included safely within the secure bicycle parking, then this would be suitable. The e-bikes are becoming increasingly popular and cheap; they provide an easier commute than bicycles without their motor-assist. These may provide the impetus required to substantially increase bicycle use in Sydney.

EV charging support – consideration should be given to ensuring that there is sufficient capacity in the electrical design of the site to provide charging points for EVs at a proportion of car parking spaces. This means that there would be adequate capacity at the site's mains connection(s), within the distribution boards for circuit breakers, and that conduit would be installed with draw wires from the relevant distribution boards to sub-boards/charging points. Obviously, the detail of this would be within the electrical design consultant's remit[9]. This would facilitate the installation of charging points at a later date; that installation would entail: install of circuit breakers in distribution boards/sub-boards; install of conductors; install and commission of charging points. The rationale for this is that some EV chargers will be required/expected by site users in the next 3 to 5 years and that it is cheaper/easier for the electrical design to be forward-looking to accommodate this outcome from the outset, making installation and commissioning of charging points relatively straight forward at that time when the chargers are required.

[9] This is an emerging area with, in Australia, a weak policy environment – our view is that EVs are a real substitute for light vehicles with internal combustion engines, that will slowly proliferate through the vehicle fleet, with meaningful levels of take up over the next five years; this is especially the case with lower cost models progressively becoming more available. Could other technologies supplant EVs as the replacement for internal combustion engines? Possibly. We anticipate that site users will be asking for EV charging facilities in the near future.

The rate of provision of charging points, is considered in more detail in Appendix C. It recommends making provision to support charging points at around 10% of car parking spaces. It is also suggested that 7kW charging points should be considered, as part of this.

Electric scooter charging points. These scooters are not common here, but are common in Asia, for example, in China. They are not stand on scooters, rather they are step-through Honda 90/Lambretta-style scooters. For short commute journeys these vehicles are cheap and convenient and have little local pollution impact. Charging is a matter plugging the charger into a GPO; and would probably require some additional GPO circuits in the design for each unit. As an initial estimate about 5% of site users might take up these scooters over the next 5 to 10 years, so a similar number of charging points as bicycle parking points at each unit would be required:

- 6 scooter charging points at Unit 1
- 4 scooter charging points at each of Unit 2A and Unit 2B
- 3 scooter charging points at each of the other units (2C, 2D and 2E)

Making provision for this in the electrical design should be considered.

6.5 Plan mechanics

For the GTP to be effective there is a need to:

Implement the plan

In order to achieve the objectives of the GTP and its target mode share, there needs to be strong support from the occupiers of the site. As the site comprises some 6 units, potentially all with separate owners and/or tenants some central point of contact would certainly facilitate the implementation of the plan. This might be a managing agent engaging someone to maintain and implement the plan, in a similar manner to the process of engaging contractors to maintain other elements of the site, such as common area landscaping.

Resources should be provided to develop and maintain a comprehensive Transport Access Guide.

Monitor priority areas and progress of the plan

Periodically (every year) surveying the site users to estimate mode shares for the journey to work and comparing this against the mode share target. The annual survey should consider the following:

- Cover all staff
- All analysis and reporting should be anonymous
- Consider including unit number as part of the survey, its analysis and reporting, as this might identify issues with uneven distribution of supporting facilities
- Single day snapshot survey on a weekday, capturing how workers at the site travel, using web-based survey administration methods through the administration contact in each unit, most likely all employees have a work email, but paper-based survey options would need to be available, where staff don't have direct access to a computer at work
- The survey should be conducted during a 'normal' time of the year: it should avoid the start and end of year, but should be generally consistent from year to year (to avoid seasonal factors introducing additional variance in comparisons of surveys over the years). It is suggested that sometime during Autumn, such as during May would be appropriate. Unusual/infrequent events should be avoided (e.g., wet weather, train strikes, parliamentary elections, etc;).

If GTP targets are not being met, then diagnostic actions would be required. The starting point for this would be undertaking additional analysis of how and why site workers travel the way they do. The use of small focus groups would be a good place to start, to explore reasons for car-based travel and possibly areas of concern in the transit, pedestrian and bicycle networks. This may assist to identify why use of car is higher than expected, such as timing of shifts, transit reliability, the need to bring tools and equipment on-site, and so forth. In conjunction with feedback from the workers, this information could provide evidence to engage with TfNSW and possibly Blacktown City Council about the need for specific measures, such as bus service adjustments, or some other practical measures.

Identify impediments to meeting the plan's mode share targets

On-going feedback from the site workers and occupiers in relation to concerns about relevant transport infrastructure and services and, where appropriate, relaying this to the appropriate agency.

Update the plan for relevance and focus

As transit services change and new parts of the bicycle network open, there is a need to update the Transport Access Guide.

As travel behaviour changes more generally, there is a need to consider modifications to the GTP to ensure it retains relevance. This type of deep review would be appropriate at intervals of five years.

6.6 GTP Summary

6.6.1 Key roles

Travel Plan Champion

This would be a representative of the site owner or manager

Travel Plan Co-ordinator

This would be appointed by the Travel Plan Champion

This person is likely to be a contractor who would conduct travel plan actions across the potentially six separate occupiers of the site

Role:

- Organise Transport Plan Co-ordination Committee meetings, including preparation of agenda items and minutes, with representatives of the different occupancy entities on site
- Act as a focal point for:
    - Feedback from workers regarding issues such as capacity, reliability, etc;
    - Information about forthcoming changes to transport services and or infrastructure from TfNSW, or Blacktown City Council
- Co-ordinate and drive the conduct of an annual travel survey and collation of results.

6.6.2 Administration mechanism

A committee, with representatives from the site occupiers, would provide a useful mechanism to administer the GTP. It is described below:

Travel Plan Co-ordination Committee

Constituted by:

- Travel Plan Champion - chair
- Travel Plan Co-ordinator
- Travel plan representative from each of the six units of the site – or if only a single occupier, from that occupier
- When it is considered appropriate by the Travel; Plan Champion, representatives could be invited from[10]:
    - Blacktown City Council
    - TfNSW (as transport regulator and funder of service providers, as well as roles in road safety and operations)

Role of the committee would be to focus on implementation of the GTP, including:

- on-going monitoring
- acting as a clearinghouse for further ideas and opportunities to promote sustainable transport
- connection with changing and emerging government policies and strategies
- in addition to these ongoing actions, the committee would also be responsible for re-examining the applicability and appropriateness of the GTP and its targets. In the event that the operation of the site changed markedly or there was some paradigm shift in transport, then re-consideration of the GTP would make sense, and the Transport Plan Co-ordination Committee would be the appropriate body to guide this change in an advisory capacity.

Suggested meeting schedule:

- After the conduct and reporting of the annual travel survey (suggested this was held in May, so meeting to review would be possibly in June); if required, as a result of anomalous travel survey results, this meeting would review potential diagnostic actions
- As required, in advance of major changes, if the Travel Plan Champion considers it necessary.

6.6.3 Implementation Strategy

The following table draws together actions outlined in the GTP and specifies operational features of these actions.

TABLE 9 – GTP ACTIONS SUMMARY

GTP Action	*Responsible*	*Timeframe*	*Indicative resourcing*
Information about travel choices			
Prepare transport access guide: To include information about local activities	Site developer/ occupiers		Budget estimate $8k to $12k Travel Plan Co-ordinator
Update transport access guide	Site developer/ occupiers	When there are major changes to transport	

[10] Inviting representatives from Blacktown City Council and TfNSW may occur in advance of major changes to aspects of the local transport system directly relevant to the site – such as a bus network review; or possibly Metro extension. The mode of engagement (via the Travel Plan Co-ordination Committee or otherwise) would be determined by the Travel Plan Champion, as appropriate.

GTP Action	*Responsible*	*Timeframe*	*Indicative resourcing*
		operations around the site – should keep to no more than one update per year	
Provision for bicycle parking			
Investigate of inclusion of secure bicycle parking in design as per GTP recommendations	Site developer	As part of completion of design; provision prior to occupation	As part of the site design and construction
Investigation of inclusion of trip end showers in site design as GTP recommendations	Site developer	As part of completion of design; provision prior to occupation	As part of the site design and construction
Provision of measures to facilitate implementation of emerging transport technology			
Investigate provision of: • E-bike charging points • Elements of electrical design/provision to support potential electric vehicle charging points • Elements of electrical design/provision to support potential electric scooter charging points	Site developer	As part of completion of design; provision prior to occupation	As part of the site design and construction
Monitor plan progress			
Conduct an annual travel survey of site workers to ascertain their mode of travel to the site. The survey would be administered via internet, using a simple and standard wording and format. Survey analysis would be undertaken by Travel Plan Co-ordinator (possibly delegating to specialist contractor) and results reported to Transport Co-ordination Committee. Anomalous results would trigger a diagnostic process.	Site occupiers/Travel Plan Co-ordinator	Annual	Staff time: • Travel Plan Co-ordinator to prepare survey • Administrative staff to administer the survey • Travel Plan Co-ordinator to analyse survey results • Travel Plan Co-ordination Committee time to review results
Diagnostic process would be triggered if the results of the survey were poor – not moving towards the mode share targets set in the GTP.	Site occupiers/Travel Plan Co-ordinator	Triggered by adverse survey result	Definition of scope would vary with type and scale of issues identified by the survey
Role of Travel Plan co-ordinator	Travel plan champion	On-going but intermittent	Travel survey preparation, co-ordinate administration of survey, undertake analysis – around 7 to 10 days once per year Convene Travel Plan Co-ordination Committee – present results of survey and actions arising – 2 to 3 days per annum Monthly attendance at a site occupiers' meeting (property management people) – possibly half a day per month

GTP Action	*Responsible*	*Timeframe*	*Indicative resourcing*
			Ad hoc activities associated with co-ordination between occupiers and Council/ TfNSW contacts as appropriate – possibly a half day per month – but probably unevenly spread through the year

6.7 GTP Communications

The specific elements of communication identified in the GTP are summarised below.

GTP

Once finalised, this document should be made available on the site's website – if there were multiple occupiers across the six units, then the GTP would be available on each occupiers' website

Transport access guide

Purpose is to identify transport options for the site workers and visitors.

This would be available:

- on the site's website or, if there were multiple occupiers across the six units, then the GTP would be available on each occupiers' website,
- new staff would be encouraged to access the guide electronically as part of site orientation

The transport access guide would be updated regularly, but only as required.

Feedback

- Feedback regarding transport issues (e.g., lack of capacity, lack of coverage of bus services or insufficient bicycle parking) would be received from the site workers and trapped by the Travel Plan Co-ordinator
- These issues would be addressed through the Travel Plan Co-ordination Committee, or directly with transport providers/TfNSW, where relevant, if they are more pressing.

Appendix A – Design drawings

The design drawings were provided by the client.

PLANNING SHEET LIST

DA00	COVERSHEET
DA01	EXISTING CONDITIONS PLAN
DA02	DEMOLITION PLAN
DA03	SITE ANALYSIS
DA04	PROPOSED SITE PLAN
DA05	PROPOSED FLOOR PLANS - WH1
DA06	PROPOSED FLOOR PLANS - WH2
DA07	PROPOSED OFFICE PLANS - WH1
DA08	PROPOSED OFFICE PLANS - WH2
DA09	PROPOSED OFFICE PLANS - WH2
DA10	PROPOSED OVERALL ROOF PLAN
DA11	PROPOSED WAREHOUSE ELEVATIONS WH1 - SHEET 1
DA12	PROPOSED WAREHOUSE ELEVATIONS WH2 - SHEET 2
DA13	PROPOSED OFFICE ELEVATIONS - SHEET 1
DA14	PROPOSED OFFICE ELEVATIONS - SHEET 2
DA15	PROPOSED SECTIONS
DA17	PERSPECTIVES
DA18	SHADOW DIAGRAMS - AUTUMN & WINTER
DA19	SHADOW DIAGRAMS - SPRING & SUMMER
DA20	FENCE DETAILS
DA21	PROPOSED WAREHOUSE ELEVATIONS - OVERALL
DA22	FLOOR PLAN AREA
DA23	SIGNAGE PLAN

SITE LOCATION


ARTIST IMPRESSION ONLY

PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

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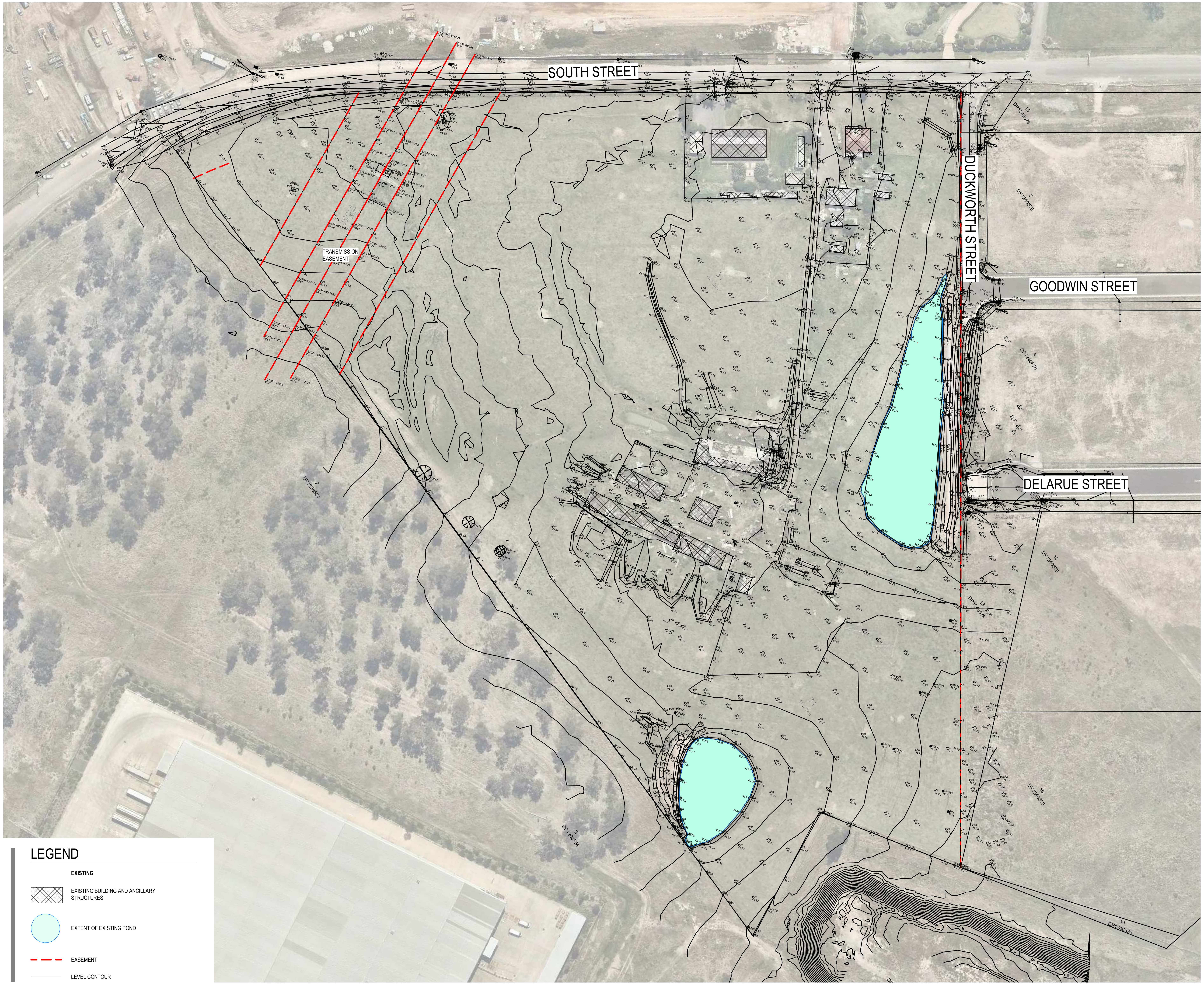

LEGEND

EXISTING

- EXISTING BUILDING AND ANCILLARY STRUCTURES
- EXTENT OF EXISTING POND
- EASEMENT
- LEVEL CONTOUR


North Aerial View looking South


South Aerial View looking North


West Aerial View looking East


East Aerial View looking West

NO:	DATE:	REVISION:	BY:	CHK:
P1	20.10.2021	PRELIMINARY ISSUE	IO	JF
P2	05.11.2021	PRELIMINARY ISSUE	IO	JF
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF

All areas indicated are indicative for design and planning purposes only and should not be used for any contractual reasons without verification by a licensed surveyor or further design development being completed.

Watson Young Architects P/L Melbourne | Perth | Sydney 03 9516 8555 ACN: 111398700
8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
EXISTING CONDITIONS PLAN

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1:1000 @A1
SCALE: 1:2000 @A3

JOB NO: 21259
DRAWING NO: DA01
REVISION: A

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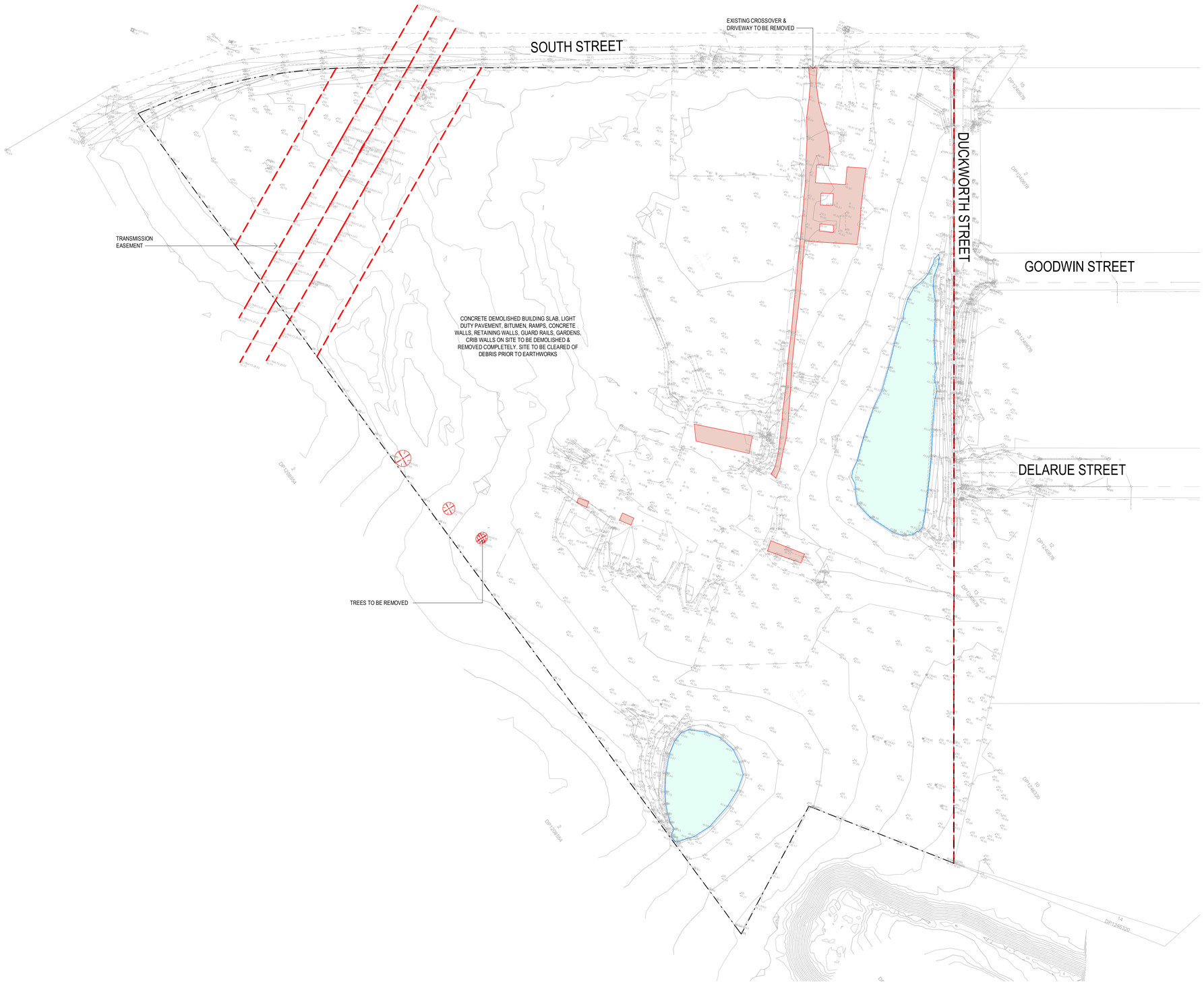

NOTES - DEMOLITION

CONTRACTOR IS TO ALLOW TO DEMOLISH ALL STRUCTURES AND TERMINATE ALL SERVICES ABOVE GROUND. ALL FOOTINGS, FOUNDATIONS AND IN GROUND SERVICES ETC., WILL BE THE RESPONSIBILITY OF BUILDING WORKS HEAD CONTRACTOR.

CONTRACTOR IS TO CONFIRM LOCATION OF ALL EXISTING IN GROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS.

CONTRACTOR IS TO VISIT THE SITE AND ASCERTAIN ALL ON SITE CONDITIONS. NO VARIATION WILL BE APPROVED CAUSED BY A MISUNDERSTANDING OF SCOPE OF WORKS.

ALL DEMOLITION WORKS ARE TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS & CONDITIONS

MAKE GOOD TO ORIGINAL CONDITION, DAMAGE TO STRUCTURES TO BE RETAINED AND TO ADJACENT PROPERTY WITH RESULTS FROM DEMOLITION OPERATIONS. ALL RESTORATION WORK IS TO BE PERFORMED WITH OUT EXPENSES TO THE PROPRIETOR.

ANY DAMAGE TO PATHS, NATURE STRIPS, GARDEN BEDS ETC. TO ADJOINING STREETS, ARE TO BE MADE GOOD AT THE CONTRACTORS EXPENSE.

PROVIDE BEFORE AND AFTER PHOTOGRAPHIC RECORD OF PROGRESS OF WORKS INCLUDING DILAPIDATION REPORT ON ADJOINING PROPERTIES.

DEMOLISHED MATERIALS BECOME PROPERTY OF THE CONTRACTOR AND ARE TO BE REMOVED FROM SITE.

DEMOLITION WORKS WILL BE DEEMED COMPLETE WHEN CONTRACTOR LEAVES SITE IN CLEAN AND LEVELED STATE.

CONTRACTOR IS TO PROVIDE SOLID HOARDING TO ENTIRE SITE BOUNDARY DURING ALL DEMOLITION WORKS.

REMOVAL OF TREES IS TO INCLUDE GRUBBING OF ROOTS.

CONTRACTOR IS TO ALLOW FOR AN INSPECTION TO ASCERTAIN WHETHER ANY ASBESTOS IS PRESENT ON SITE AND MAKE PROVISION FOR ITS REMOVAL IN STRICT ACCORDANCE WITH AUSTRALIAN STANDARDS.

LEGEND - DEMOLITION

DEMO

INDICATES EXTENT OF CONCRETE DEMOLISHED BUILDING SLAB, LIGHT DUTY PAVEMENT, BITUMEN, RAMPS, CONCRETE WALLS, RETAINING WALLS, GUARD RAILS, GARDENS, CRIB WALLS ON SITE TO BE DEMOLISHED & REMOVED COMPLETELY

EXTENT OF EXISTING POND TO BE REMOVED

TREE REMOVAL

TREES TO BE REMOVED FOR CONSTRUCTION AND SITE WORKS

NO:	DATE:	REVISION:	BY:	CHK:
P1	20.10.2021	PRELIMINARY ISSUE	IO	JF
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8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
DEMOLITION PLAN

CLIENT: dexus

DATE:	APRIL, 2022
DRAWN BY:	IO
SCALE:	1:1000 @A1
SCALE:	1:2000 @A3

JOB NO: 21259
DRAWING NO: DA02
REVISION: A

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NOTES: SITE ANALYSIS

1. NEIGHBORHOOD / LOCALITY CONTEXT
THE SITE CONTAINS AN EXISTINGTRANSMISSION TOWER & EASEMENT THAT CANNOT BE DEVELOPED UNDER.

2. TOPOGRAPHY
THE SITE CONTAINS 2 EXISTING WATER POND THAT WILL BE REMOVED.

3. BUILT FORM RHYTHM
THE DEVELOPMENT IS BROKEN UP INTO 2 PRIMARY BUILDING MASSES, TO WORK WITH THE SURROUNDING EXISTING TOPOGRAPHY.

4. FORMS, BUILDING ARTICULATION & MATERIALS
THE DEVELOPMENT AIMS TO PROVIDE AN ARTICULATED STREET FRONTAGE TO SOUTH STREET AND IT'S FUTURE TRAFFIC VOLUME WITH 2 MAIN BUILDINGS WITH OFFICES AND LANDSCAPING ADJACENT TO THE MAIN ROAD, WHICH OPENS UP A CENTRAL LOADING ZONE THAT KEEPS HEAVY DUTY AND LIGHT TRAFFIC SEPARATED TO MAXIMISE SAFETY WITHIN THE SITE. THE FACADE CLADDING MATERIALS AND COLOURS HAVE BEEN TREATED WITH A DYNAMIC BREAK-UP THAT ENHANCES IT'S PRESENCE AND ARTICULATION WITH THE STREET FRONTAGE.


EXISTING SOUTH STREET VIEW TOWARDS RICHMOND RD


EXISTING SOUTH STREET VIEW TOWARDS GLENGARRIE RD


EXISTING SOUTH STREET VIEW TOWARDS GLENGARRIE RD

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P2	05.11.2021	PRELIMINARY ISSUE	IO	JF
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D	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
SITE ANALYSIS

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1:1000 @A1
SCALE: 1:2000 @A3

JOB NO: 21259
DRAWING NO: DA03
REVISION: D

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NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL PARKING SPACES IN ACCORDANCE WITH VICTORIAN PLANNING SCHEME

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum)
RELATIVE LEVELS SHOWN INDICATIVELY ONLY.
REFER TO CIVIL DRAWINGS.

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- PERMEABLE / CRUSHED ROCK FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- 7.5M LANDSCAPE SETBACK (5M SETBACK REQUIRED)
- LOT BOUNDARY
- DEVELOPABLE AREA BOUNDARY
- ASSET PROTECTION ZONE
- EASEMENT
- RETAINING WALL. REFER TO CIVIL DRAWINGS FOR DETAILS.
- 4.2m HIGH ACOUSTIC WALL

DEVELOPMENT ANALYSIS

BUILDING	GFA
WAREHOUSE	
UNIT 1	15,950 m²
UNIT 2A	4,450 m²
UNIT 2B	5,100 m²
UNIT 2C	5,000 m²
UNIT 2D	5,000 m²
UNIT 2E	5,400 m²
TOTAL	40,900 m²

OFFICE SPACE (Including Mezzanines)	
UNIT 1	390 m²
UNIT 2A	370 m²
UNIT 2B	470 m²
UNIT 2C	290 m²
UNIT 2D	290 m²
UNIT 2E	290 m²
TOTAL	2,100 m²
TOTAL AREA	43,050 m²

EXTERNAL AREAS (APPROX)	
CANOPIES	4,193 m²
HARDSTAND	16,987 m²
LIGHT DUTY	10,351 m²
PAVING	1,494 m²
LANDSCAPING	7,690 m²
COMMUNAL AREA (5.5% OF TOTAL DEVELOPABLE AREA)	4,080 m²

PARKING

RATE REQUIRED - (Not Including 15M Loading)
WAREHOUSE
(1 PER 75m² GFA <7,500m²)
(1 PER 200m² GFA >7,500m²)
OFFICE
(1 PER 40m² GFA)

BAYS REQUIRED	315
BAYS PROVIDED	327

SITE COVERAGE	
TOTAL SITE AREA	102,445 m²
TOTAL DEVELOPABLE AREA *(WITHIN BLUE BOUNDARY)*	73,236 m²
TOTAL BUILDING FOOTPRINT	41,480 m²
SITE COVERAGE	40.49%

METHOD OF MEASUREMENT FOR GROSS FLOOR AREA: THE SUM OF THE FLOOR AREA OF EACH FLOOR OF A BUILDING MEASURED FROM THE INTERNAL FACE OF THE EXTERNAL WALLS. EXCLUDES STAIRS, LIFT SHAFTS, AND SERVICE SPACES.

NO:	DATE:	REVISION:	BY:	CHK:
E	21.03.2022	ISSUED FOR APPROVAL	IO	JF
F	28.03.2022	ISSUED FOR APPROVAL	IO	JF
G	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
H	21.04.2022	ISSUED FOR APPROVAL	IO	JF
I	27.04.2022	ISSUED FOR APPROVAL	IO	JF

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8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED SITE PLAN

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH
SCALE: 1 : 1000 @A1
SCALE: 1 : 2000 @A3

JOB NO: 21259
DRAWING NO: DA04
REVISION: I

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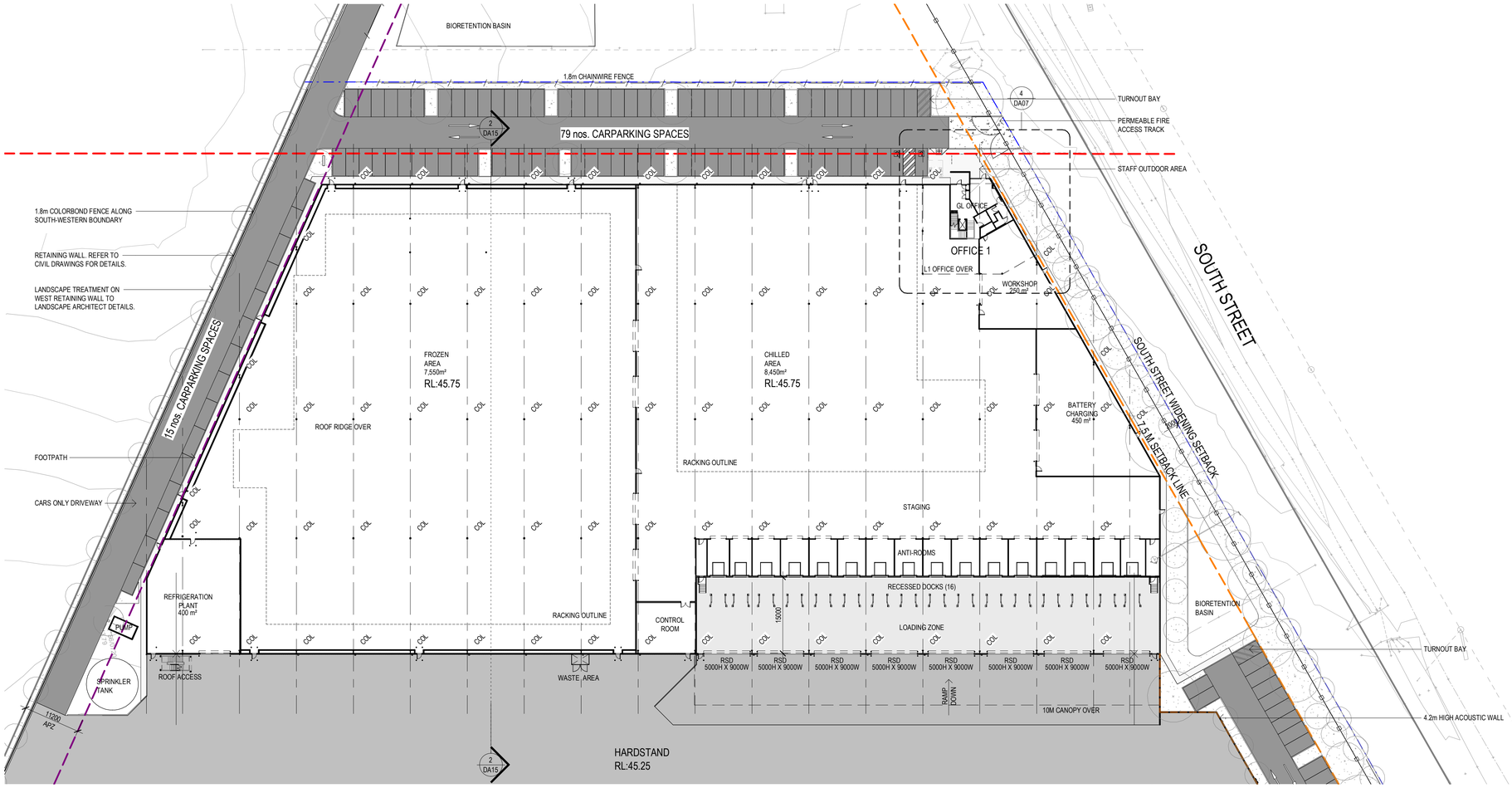

NOTES

ALL NEW CROSSOVERS TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS AND AUSTRALIAN STANDARDS AS2890.2.

ALL PARKING SPACES & WHEELSTOPS TO COMPLY WITH AUSTRALIAN STANDARDS AS2890.1.

ALL DISABLED PARKING SPACES IN ACOORDANCE WITH AUSTRALIAN STANDARD AS2890 (5.4m x 2.4m).

SITE STORMWATER DRAINAGE IN ACCORANCE TO LOCAL AUTHORITY & COUNCIL REQUIREMENTS.

OUTDOOR LIGHTING WILL BE PROVIDED TO ILLUMINATE THE OUTDOOR AREAS OF THE SITE OUTSIDE OF DAYLIGHT HOURS IN ACCORDANCE WITH AS-4282.

THE OUTDOOR LIGHTING WILL BE DESIGNED TO AVOID SAFETY/GLARE ISSUES FOR THE USERS OF THE ROAD RESERVE IN ACCORDANCE WITH AS-4282.

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- CRUSHED ROCK TO FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- 7.5M LANDSCAPE SETBACK (5M SETBACK REQUIRED)
- LOT BOUNDARY
- DEVELOPABLE AREA BOUNDARY
- ASSET PROTECTION ZONE
- EASEMENT
- 4.2m HIGH ACOUSTIC WALL
- COMMUNAL AREA BOUNDARY

NO:	DATE:	REVISION:	BY:	CHK:
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF
B	02.12.2021	ISSUED FOR APPROVAL	IO	JF
C	13.12.2021	ISSUED FOR APPROVAL	IO	JF
D	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
E	21.04.2022	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED FLOOR PLANS - WH1

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH
SCALE: 1:500 @A1
SCALE: 1:1000 @A3

JOB NO: 21259
DRAWING NO: DA05
REVISION: E

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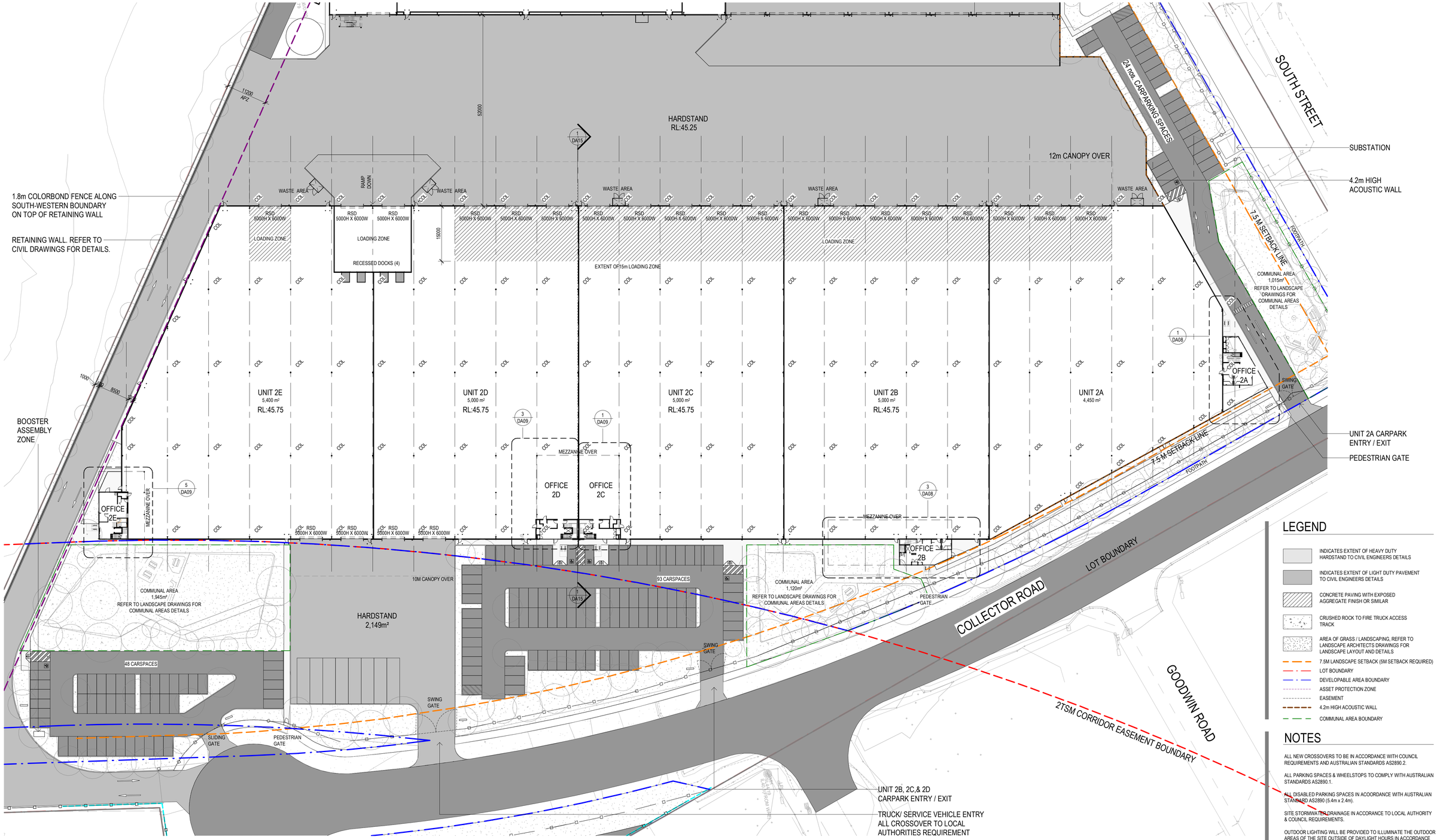

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- CRUSHED ROCK TO FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- 7.5M LANDSCAPE SETBACK (5M SETBACK REQUIRED)
- LOT BOUNDARY
- DEVELOPABLE AREA BOUNDARY
- ASSET PROTECTION ZONE
- EASEMENT
- 4.2m HIGH ACOUSTIC WALL
- COMMUNAL AREA BOUNDARY

NOTES

ALL NEW CROSSOVERS TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS AND AUSTRALIAN STANDARDS AS2890.2.

ALL PARKING SPACES & WHEELSTOPS TO COMPLY WITH AUSTRALIAN STANDARDS AS2890.1.

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890 (5.4m x 2.4m).

SITE STORMWATER DRAINAGE IN ACCORANCE TO LOCAL AUTHORITY & COUNCIL REQUIREMENTS.

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THE OUTDOOR LIGHTING WILL BE DESIGNED TO AVOID SAFETY/GLARE ISSUES FOR THE USERS OF THE ROAD RESERVE IN ACCORDANCE WITH AS-4282.

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C	13.12.2021	ISSUED FOR APPROVAL	IO	JF
D	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED FLOOR PLANS - WH2

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH
SCALE: 1:500 @A1
SCALE: 1:1000 @A3

JOB NO: 21259
DRAWING NO: DA06
REVISION: E

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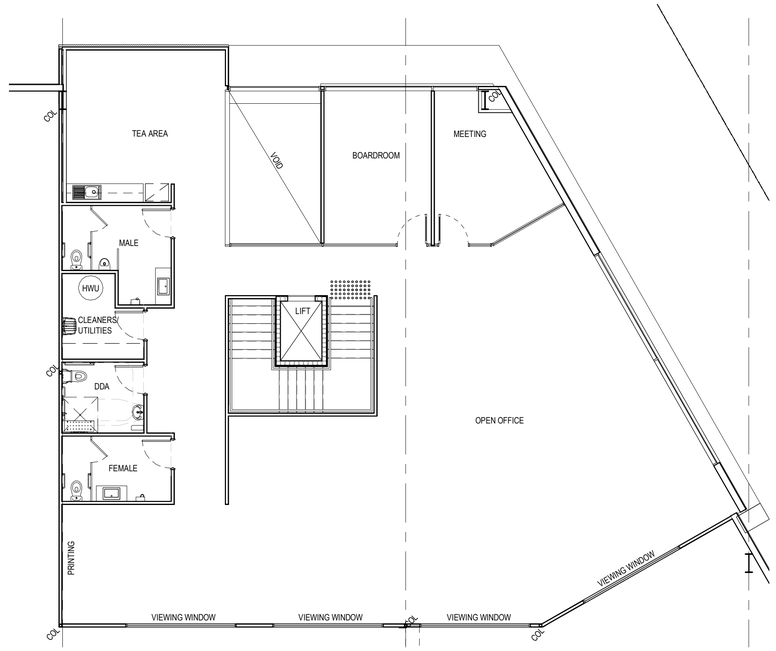
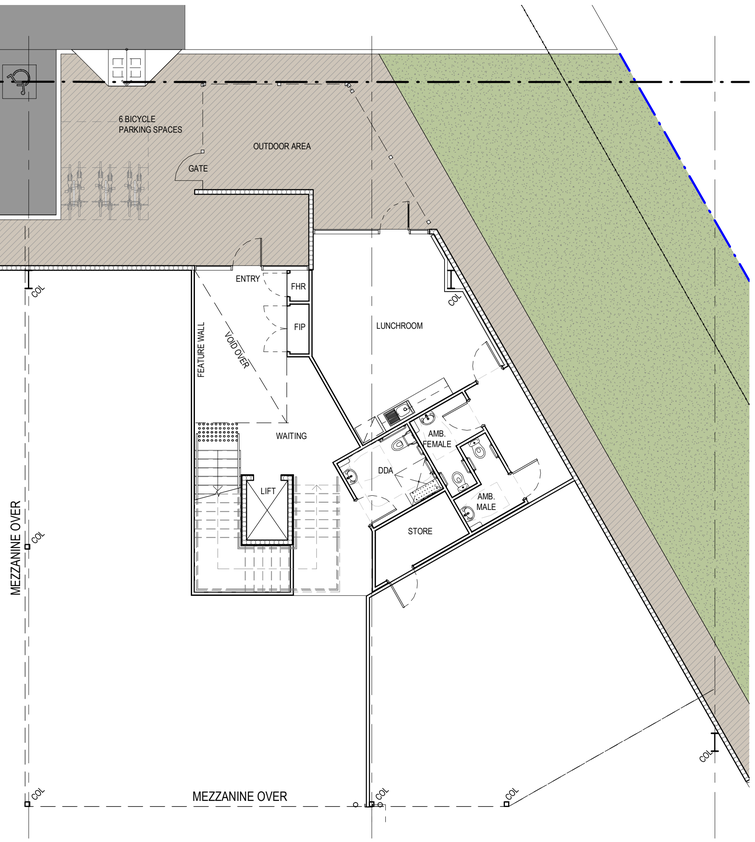


OFFICE 1 - MEZZANINE FLOOR
SCALE: 1 : 100



OFFICE 1 - GROUND FLOOR
SCALE: 1 : 100

NO:	DATE:	REVISION:	BY:	CHK:
P1	26.08.2021	PRELIMINARY ISSUE	IO	TH
P2	20.10.2021	PRELIMINARY ISSUE	IO	JF
P3	05.11.2021	PRELIMINARY ISSUE	IO	JF
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF
B	02.12.2021	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED OFFICE PLANS - WH1

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH
SCALE: 1 : 100 @A1
SCALE: 1:200 @A3

JOB NO: 21259
DRAWING NO: DA07
REVISION: B

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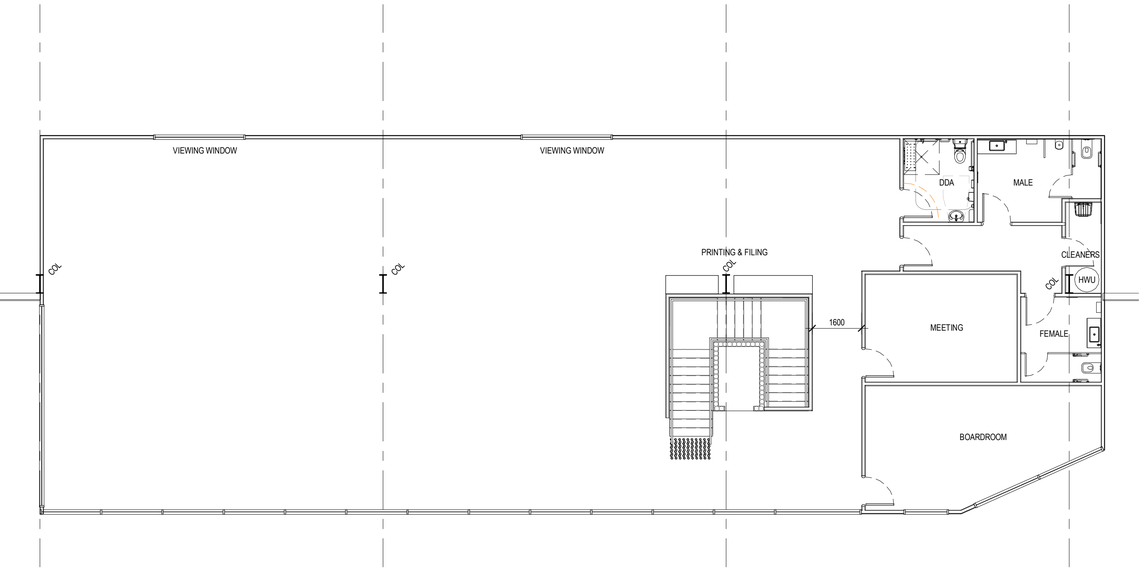
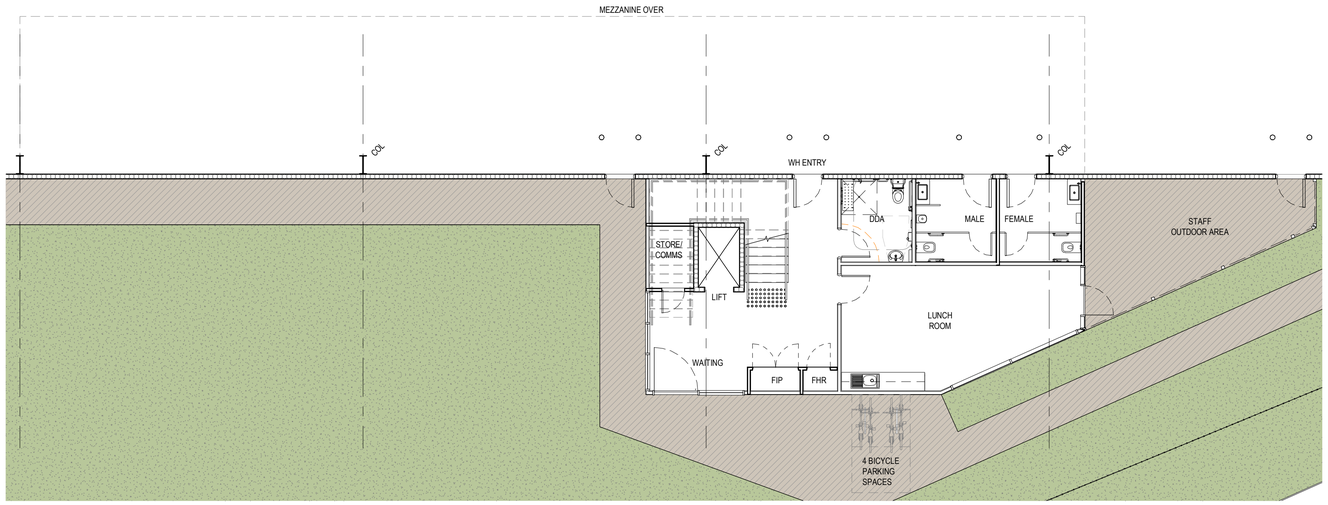


OFFICE 2B - FIRST FLOOR
SCALE: 1 : 100



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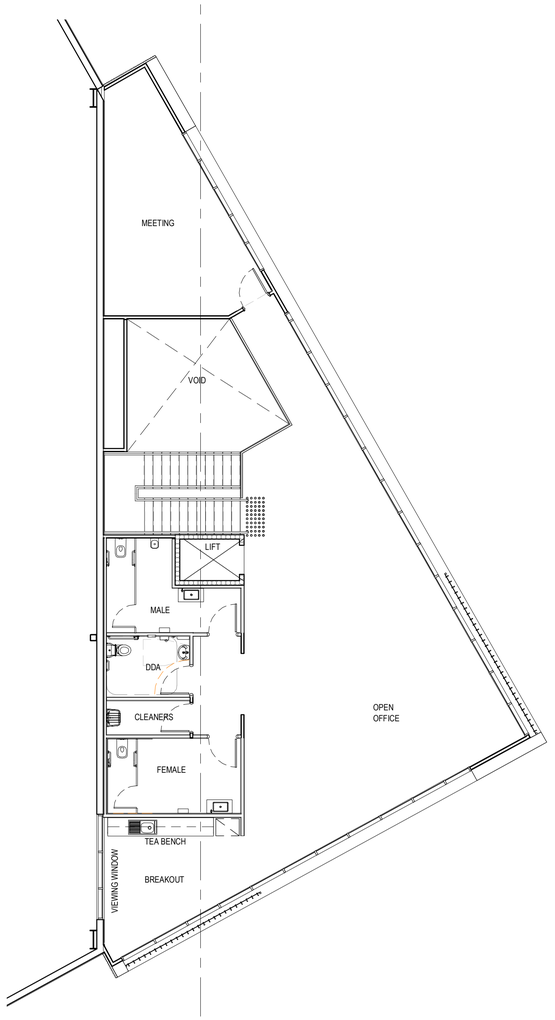

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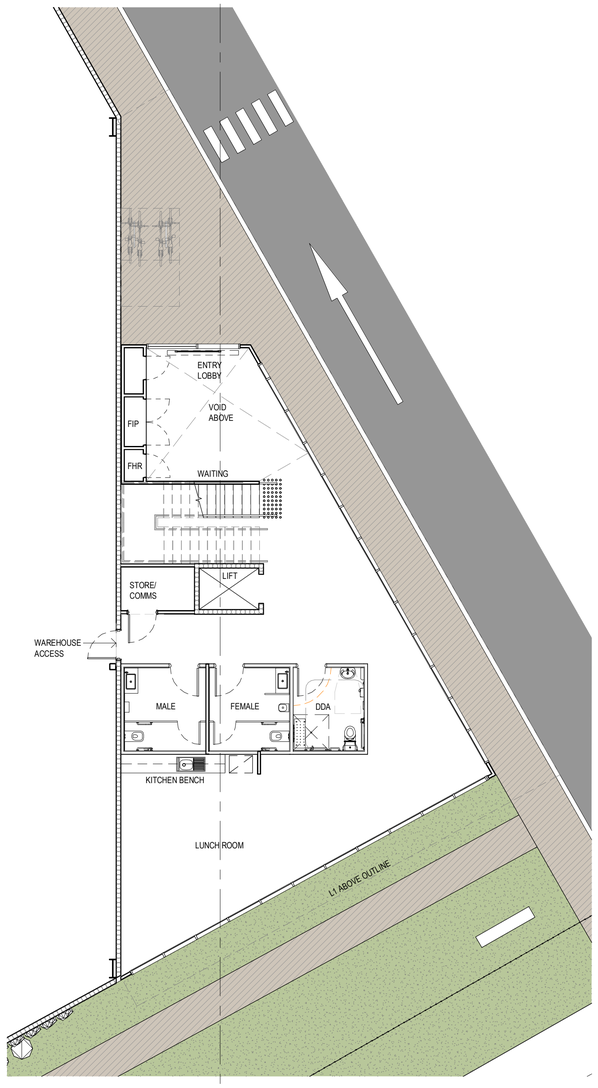

OFFICE 2A - GROUND FLOOR
SCALE: 1 : 100

NO:	DATE:	REVISION:	BY:	CHK:
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P3	05.11.2021	PRELIMINARY ISSUE	IO	JF
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF
B	02.12.2021	ISSUED FOR APPROVAL	IO	JF
C	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED OFFICE PLANS - WH2

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH
SCALE: 1 : 100 @A1
SCALE: 1:200 @A3

JOB NO: 21259
DRAWING NO: DA08
REVISION: C

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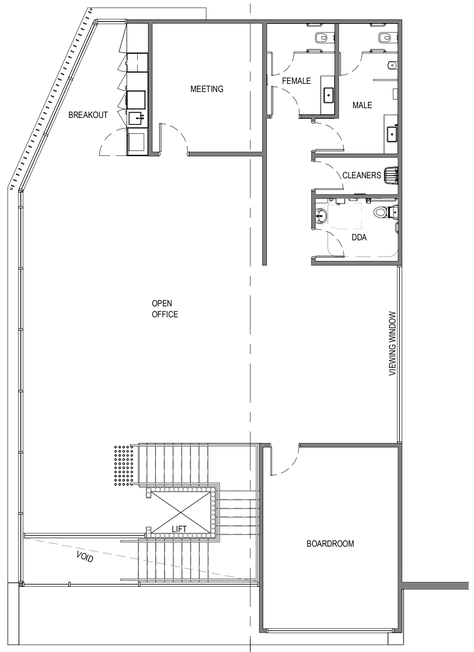

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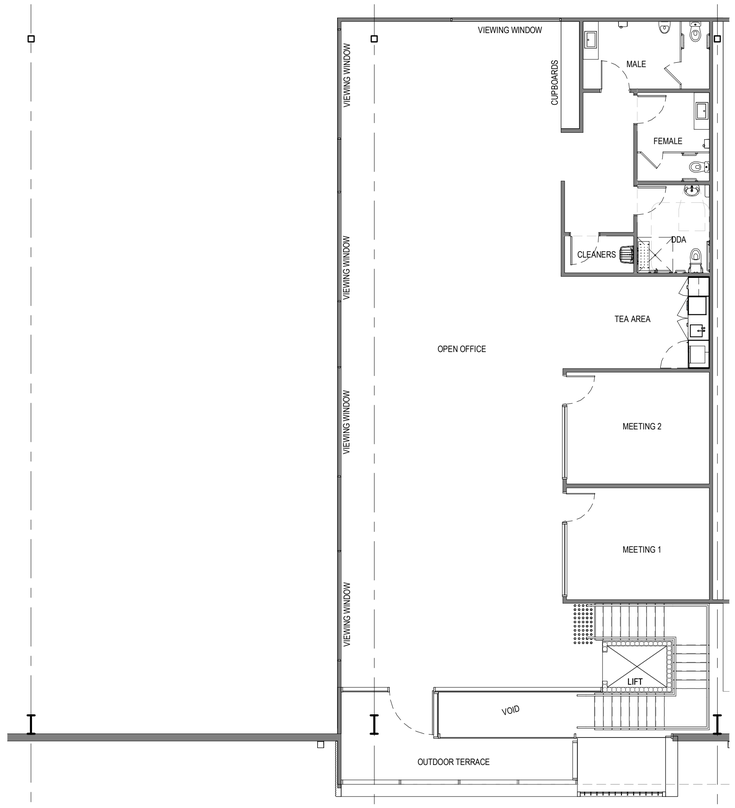
SCALE: 1 : 100



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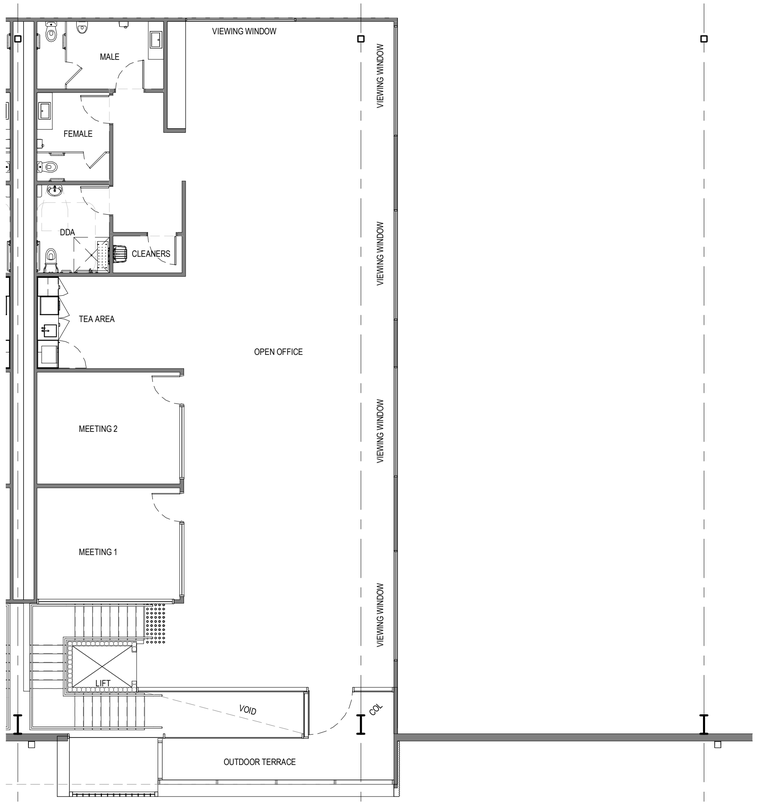
SCALE: 1 : 100



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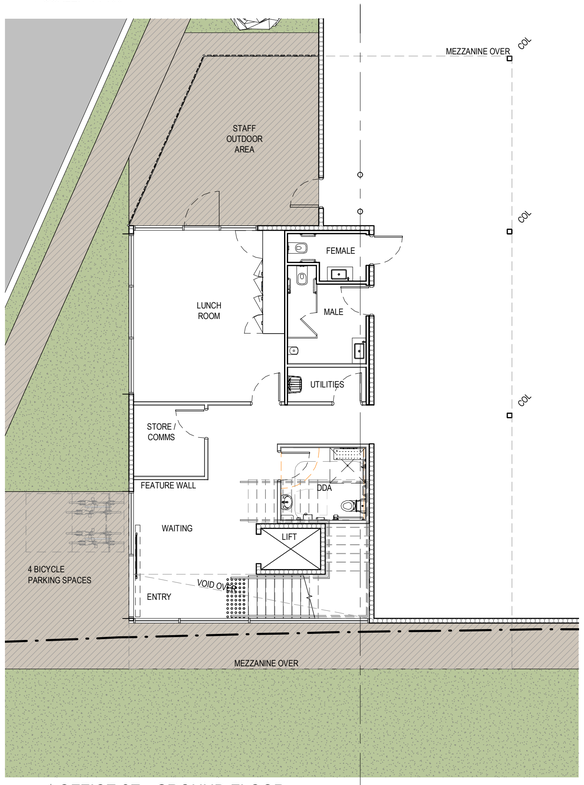
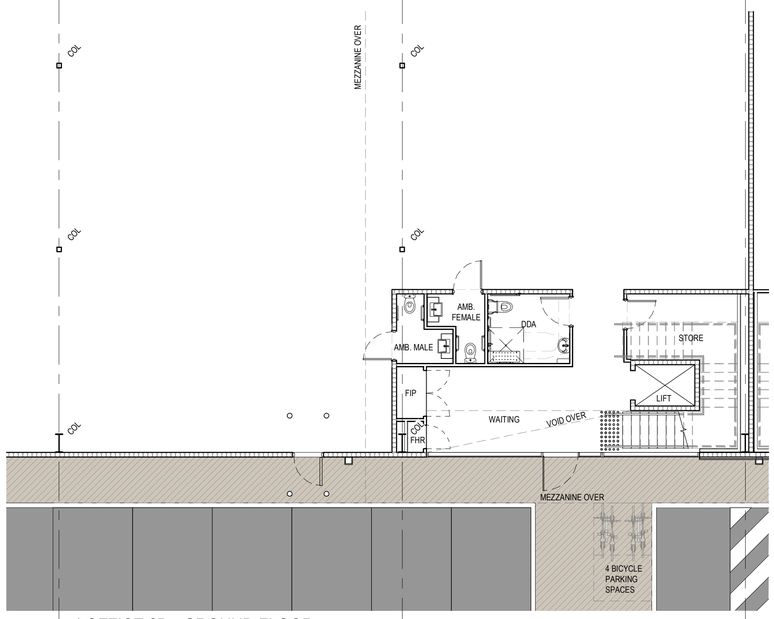
SCALE: 1 : 100



OFFICE 2E - GROUND FLOOR
SCALE: 1 : 100



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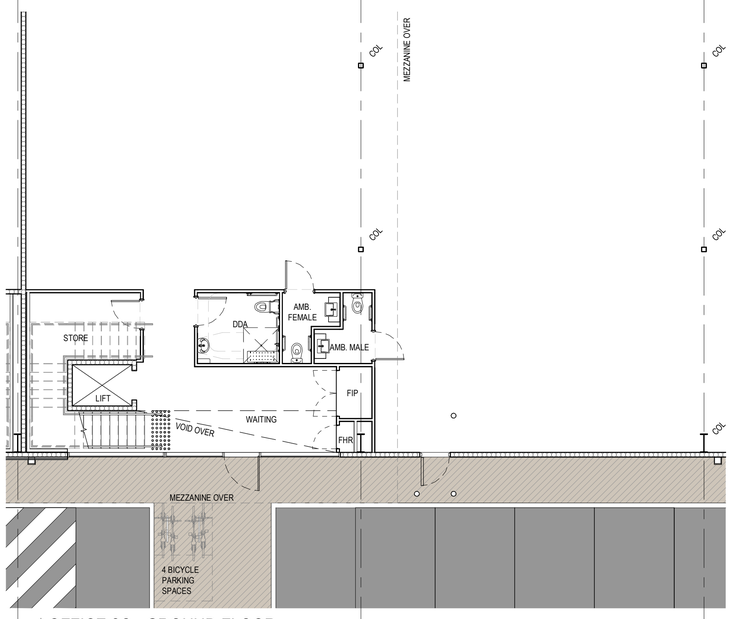
SCALE: 1 : 100



OFFICE 2C - GROUND FLOOR
SCALE: 1 : 100

NO:	DATE:	REVISION:	BY:	CHK:
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P4	05.11.2021	PRELIMINARY ISSUE	IO	JF
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF
B	02.12.2021	ISSUED FOR APPROVAL	IO	JF
C	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF

All areas indicated are indicative for design and planning purposes only and should not be used for any contractual reasons without verification by a licensed surveyor or further design development being completed.

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED OFFICE PLANS - WH2

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: TH / IO
SCALE: 1 : 100 @A1
SCALE: 1:200 @A3

JOB NO: 21259
DRAWING NO: DA09
REVISION: C

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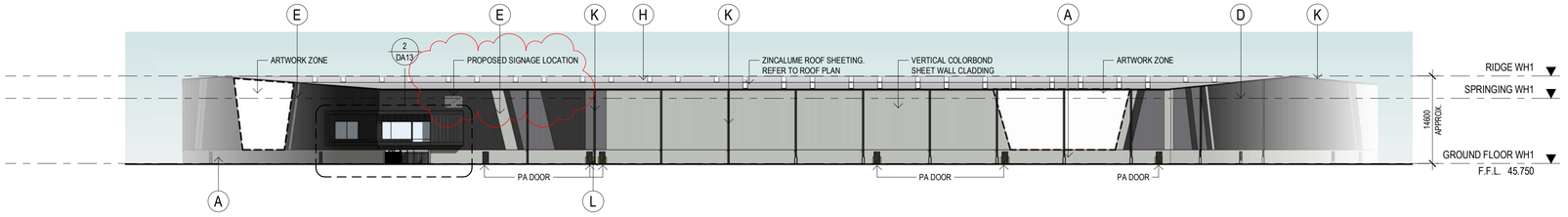
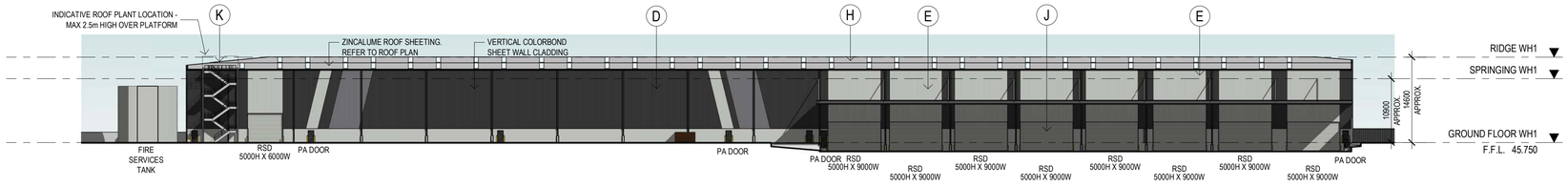


ELEVATION - WH1 WEST
SCALE: 1 : 500



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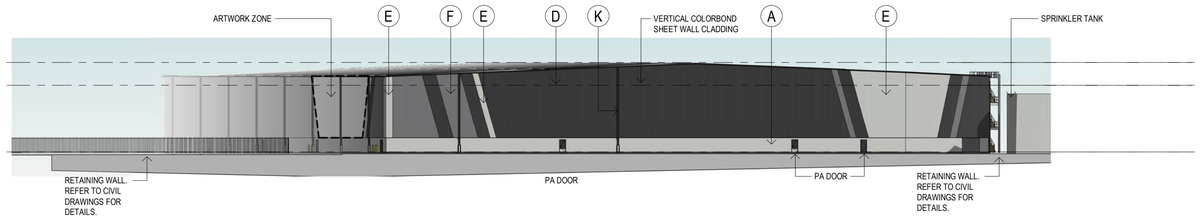
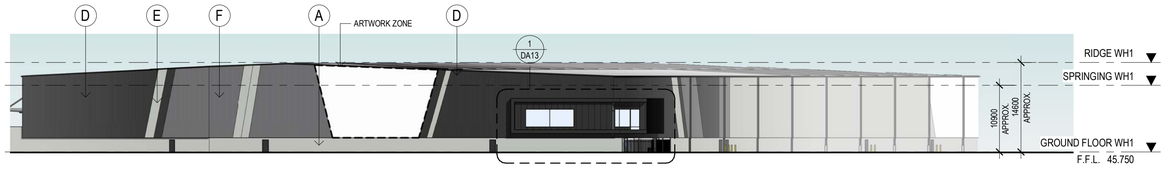


ELEVATION - WH1 SOUTH
SCALE: 1 : 500



ELEVATION - WH1 NORTH
SCALE: 1 : 500

EXTERNAL FINISHES

A	PRECAST CONCRETE PANEL, TEXTURE PAINT	COLORBOND SHALE GREY
C	LINEAR TEXTURED CEMENT WALL CLADDING	GREY
D	COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
E	COLORBOND WALL CLADDING	COLORBOND SHALE GREY
F	COLORBOND WALL CLADDING	COLORBOND BASALT
G	EXTERNAL STEEL	GALVANISED FINISH
H	ROOF CLADDING	ZINCALUME
J	ROLLER SHUTTER DOOR CLADDING	COLORBOND SHALE GREY
K	DOWNPIPES / CAPPINGS / PA DOORS	COLORBOND MONUMENT
L	BOLLARDS	SAFETY YELLOW
M	ALUMINIUM CLADDING	MONUMENT
N	ALUMINIUM CLADDING	SHALE GREY
O	ALUMINIUM FRAMED GLAZING	CLEAR
P	POWDERCOAT FINISH	COLORBOND MONUMENT
Q	SCREEN FENCE	TIMBER
R	CORRUGATED COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
S	ALUMINIUM RECTANGULAR HOLLOW BLADES	BLACK

NO:	DATE:	REVISION:	BY:	CHK:
A	11.11.2021	ISSUED FOR APPROVAL	IO	JF
B	21.03.2022	ISSUED FOR APPROVAL	IO	JF
C	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
D	21.04.2022	ISSUED FOR APPROVAL	IO	JF
E	27.04.2022	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED WAREHOUSE ELEVATIONS WH1 - SHEET 1

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO/TH
SCALE: 1 : 500 @A1
SCALE: 1 : 1000 @A3

JOB NO: 21259
DRAWING NO: DA11
REVISION: E

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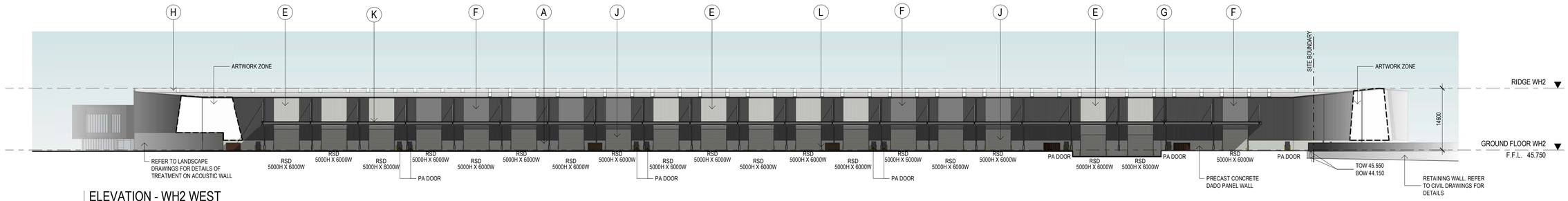

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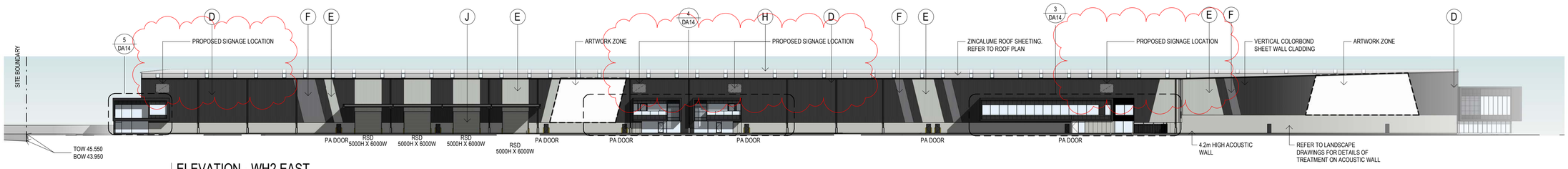
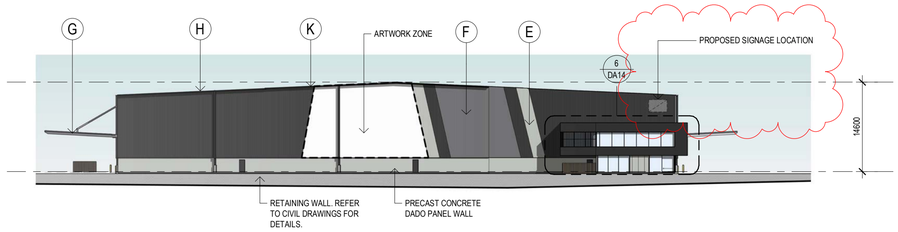
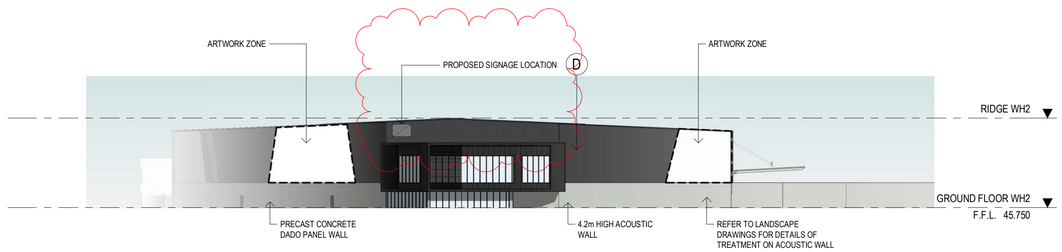
SCALE: 1 : 500



ELEVATION - WH2 EAST
SCALE: 1 : 500



ELEVATION - WH2 SOUTH
SCALE: 1 : 500



ELEVATION - WH2 NORTH
SCALE: 1 : 500

EXTERNAL FINISHES

A	PRECAST CONCRETE PANEL, TEXTURE PAINT	COLORBOND SHALE GREY
C	LINEAR TEXTURED CEMENT WALL CLADDING	GREY
D	COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
E	COLORBOND WALL CLADDING	COLORBOND SHALE GREY
F	COLORBOND WALL CLADDING	COLORBOND BASALT
G	EXTERNAL STEEL	GALVANISED FINISH
H	ROOF CLADDING	ZINCALUME
J	ROLLER SHUTTER DOOR CLADDING	COLORBOND SHALE GREY
K	DOWNPIPES / CAPPINGS / PA DOORS	COLORBOND MONUMENT
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M	ALUMINIUM CLADDING	MONUMENT
N	ALUMINIUM CLADDING	SHALE GREY
O	ALUMINIUM FRAMED GLAZING	CLEAR
P	POWDERCOAT FINISH	COLORBOND MONUMENT
Q	SCREEN FENCE	TIMBER
R	CORRUGATED COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
S	ALUMINIUM RECTANGULAR HOLLOW BLADES	BLACK

NO:	DATE:	REVISION:	BY:	CHK:
B	02.12.2021	ISSUED FOR APPROVAL	IO	JF
C	21.03.2022	ISSUED FOR APPROVAL	IO	JF
D	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
E	21.04.2022	ISSUED FOR APPROVAL	IO	JF
F	27.04.2022	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED WAREHOUSE ELEVATIONS WH2 - SHEET 2

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO/TH
SCALE: 1:500 @A1
SCALE: 1 : 1000 @A3

JOB NO: 21259
DRAWING NO: DA12
REVISION: F

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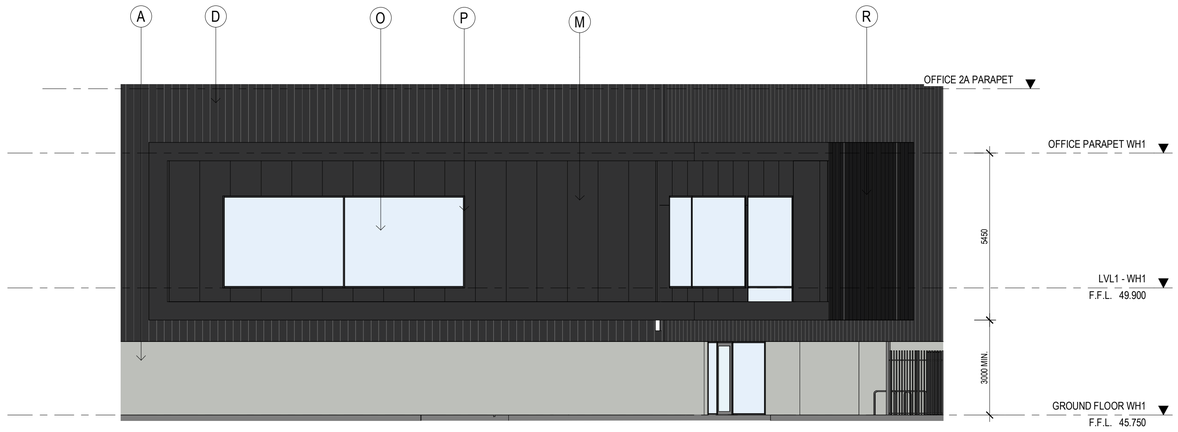

OFFICE 1 - NORTH ELEVATION
SCALE: 1 : 100

OFFICE 1 - WEST ELEVATION
SCALE: 1 : 100

EXTERNAL FINISHES

A	PRECAST CONCRETE PANEL, TEXTURE PAINT	COLORBOND SHALE GREY
C	LINEAR TEXTURED CEMENT WALL CLADDING	GREY
D	COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
E	COLORBOND WALL CLADDING	COLORBOND SHALE GREY
F	COLORBOND WALL CLADDING	COLORBOND BASALT
G	EXTERNAL STEEL	GALVANISED FINISH
H	ROOF CLADDING	ZINCALUME
J	ROLLER SHUTTER DOOR CLADDING	COLORBOND SHALE GREY
K	DOWNPIPES / CAPPINGS / PA DOORS	COLORBOND MONUMENT
L	BOLLARDS	SAFETY YELLOW
M	ALUMINIUM CLADDING	MONUMENT
N	ALUMINIUM CLADDING	SHALE GREY
O	ALUMINIUM FRAMED GLAZING	CLEAR
P	POWDERCOAT FINISH	COLORBOND MONUMENT
Q	SCREEN FENCE	TIMBER
R	CORRUGATED COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
S	ALUMINIUM RECTANGULAR HOLLOW BLADES	BLACK

NO:	DATE:	REVISION:	BY:	CHK:
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B	02.12.2021	ISSUED FOR APPROVAL	IO	JF
C	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF

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8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED OFFICE ELEVATIONS - SHEET 1

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO/TH
SCALE: 1:100 @A1
SCALE: 1 : 200 @A3

JOB NO: 21259
DRAWING NO: DA13
REVISION: C

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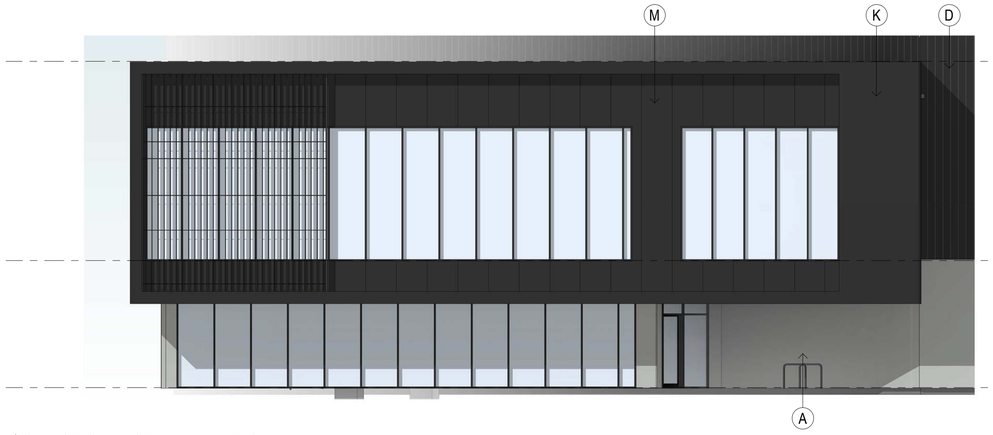

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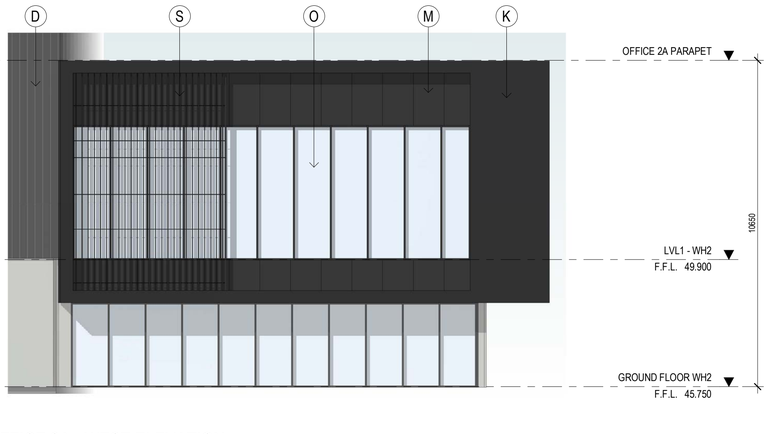

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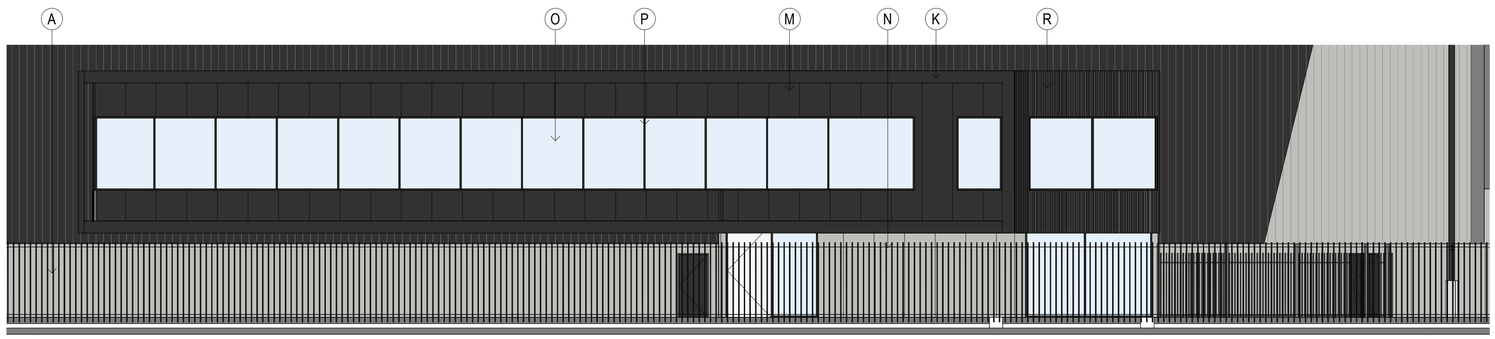
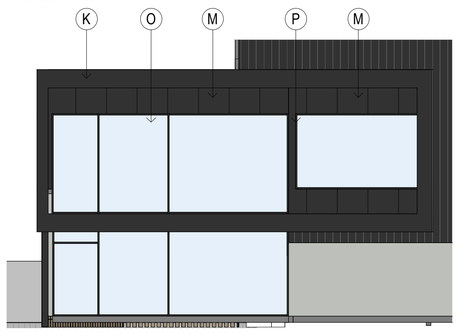
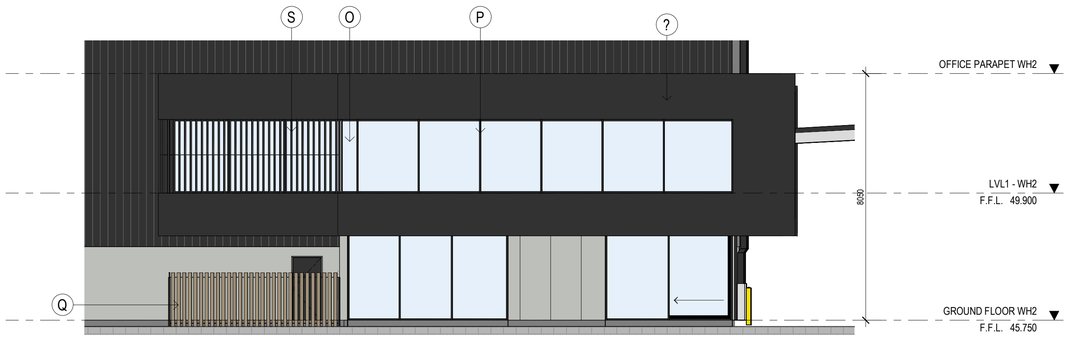


OFFICE 2B - EAST ELEVATION
SCALE: 1 : 100

OFFICE 2C & 2D - EAST ELEVATION
SCALE: 1 : 100



OFFICE 2E - EAST ELEVATION
SCALE: 1 : 100



OFFICE 2E - SOUTH ELEVATION
SCALE: 1 : 100

EXTERNAL FINISHES

A	PRECAST CONCRETE PANEL, TEXTURE PAINT	COLORBOND SHALE GREY
C	LINEAR TEXTURED CEMENT WALL CLADDING	GREY
D	COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
E	COLORBOND WALL CLADDING	COLORBOND SHALE GREY
F	COLORBOND WALL CLADDING	COLORBOND BASALT
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H	ROOF CLADDING	ZINCALUME
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K	DOWNPIPES / CAPPINGS / PA DOORS	COLORBOND MONUMENT
L	BOLLARDS	SAFETY YELLOW
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O	ALUMINIUM FRAMED GLAZING	CLEAR
P	POWDERCOAT FINISH	COLORBOND MONUMENT
Q	SCREEN FENCE	TIMBER
R	CORRUGATED COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
S	ALUMINIUM RECTANGULAR HOLLOW BLADES	BLACK

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C	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED OFFICE ELEVATIONS - SHEET 2

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO/TH
SCALE: 1:100 @A1
SCALE: 1:200 @A3

JOB NO: 21259
DRAWING NO: DA14
REVISION: C

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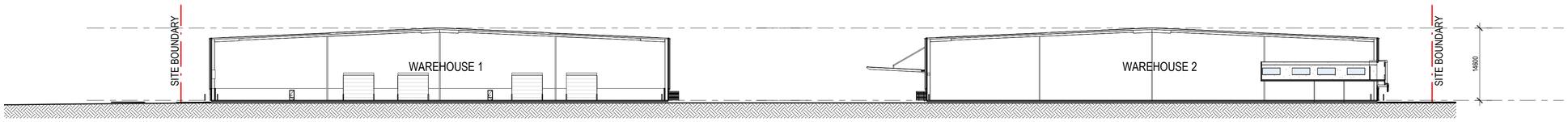
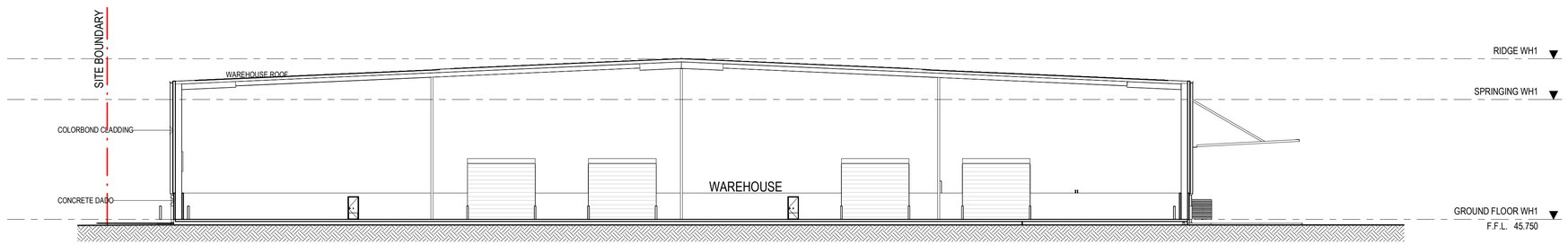
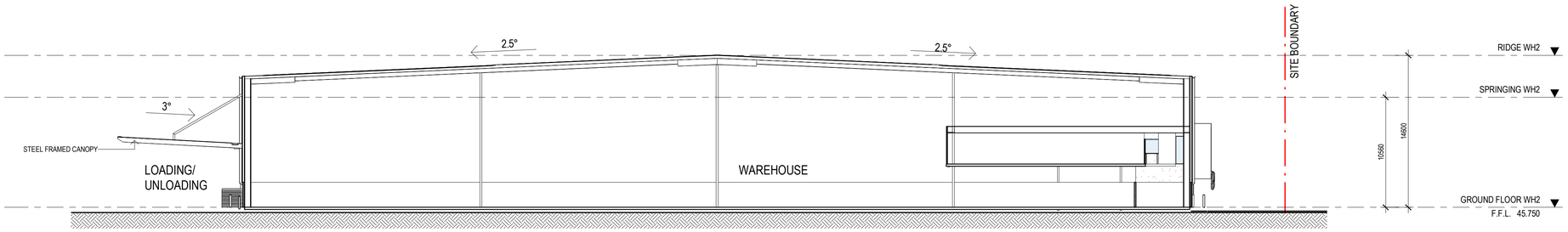


SECTION - OVERALL SITE
SCALE: 1 : 500



SECTION - WAREHOUSE 1
SCALE: 1 : 250



SECTION - WAREHOUSE 2
SCALE: 1 : 250

NO:	DATE:	REVISION:	BY:	CHK:
P1	20.10.2021	PRELIMINARY ISSUE	IO	JF
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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED SECTIONS

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO/TH
SCALE: As indicated @A1
SCALE:

JOB NO: 21259
DRAWING NO: DA15
REVISION: A

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INDICATIVE PERSPECTIVE - SOUTH STREET

INDICATIVE PERSPECTIVE - SOUTH EAST HARDSTAND

INDICATIVE PERSPECTIVE - HARDSTAND

PERSPECTIVE VIEW NOTES

- ARTIST IMPRESSION ONLY. REFER TO LANDSCAPING DRAWINGS FOR COMMUNAL OPEN AREAS AND LANDSCAPING DETAILS.

- WHITE CLADDING ZONES ON WAREHOUE DENOTE EXTENT OF ART WORK ZONES.

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PERSPECTIVES

CLIENT:
dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: NTS @A1
SCALE: NTS @A3

JOB NO: 21259
DRAWING NO. DA16
REVISION: C

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INDICATIVE PERSPECTIVE - OFFICE 2D & 2C

INDICATIVE PERSPECTIVE - OFFICE 2D & 2C

INDICATIVE PERSPECTIVE - OFFICE 2E SOUTH EAST VIEW

INDICATIVE PERSPECTIVE - OFFICE 2E NORTH WEST VIEW

PERSPECTIVE VIEW NOTES

- ARTIST IMPRESSION ONLY. REFER TO LANDSCAPING DRAWINGS FOR COMMUNAL OPEN AREAS AND LANDSCAPING DETAILS.

- WHITE CLADDING ZONES ON WAREHOUE DENOTE EXTENT OF ART WORK ZONES.

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PERSPECTIVES

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: NTS @A1
SCALE: NTS @A3

JOB NO: 21259
DRAWING NO: DA17
REVISION: C

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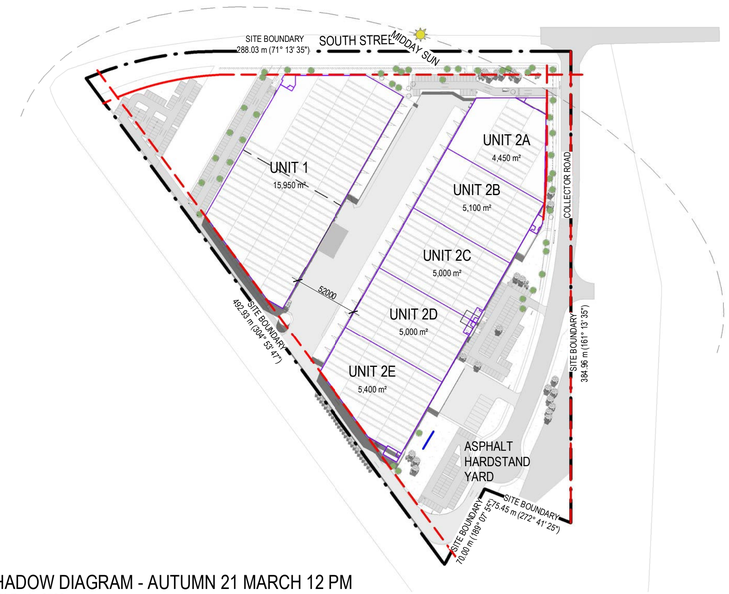
SHADOW DIAGRAM - AUTUMN 21 MARCH 9 AM
SCALE: 1 : 2500



SHADOW DIAGRAM - AUTUMN 21 MARCH 12 PM
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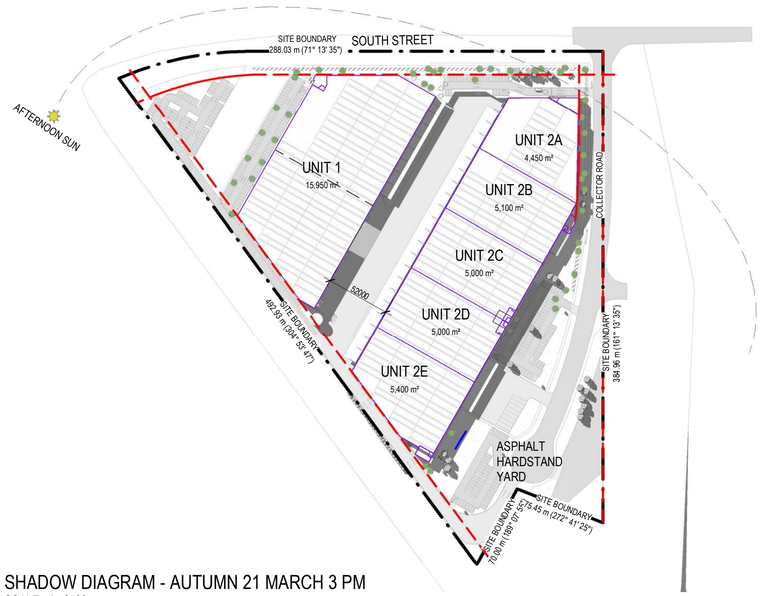

SHADOW DIAGRAM - AUTUMN 21 MARCH 3 PM
SCALE: 1 : 2500

SHADOW DIAGRAM - WINTER 21 JUNE 9 AM
SCALE: 1 : 2500

SHADOW DIAGRAM - WINTER 21 JUNE 12 PM
SCALE: 1 : 2500

SHADOW DIAGRAM - WINTER 21 JUNE 3 PM
SCALE: 1 : 2500

NO:	DATE:	REVISION:	BY:	CHK:
P1	20.10.2021	PRELIMINARY ISSUE	IO	JF
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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
SHADOW DIAGRAMS - AUTUMN & WINTER

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1 : 2500 @A1
SCALE:

JOB NO: 21259
DRAWING NO.: DA18
REVISION: B

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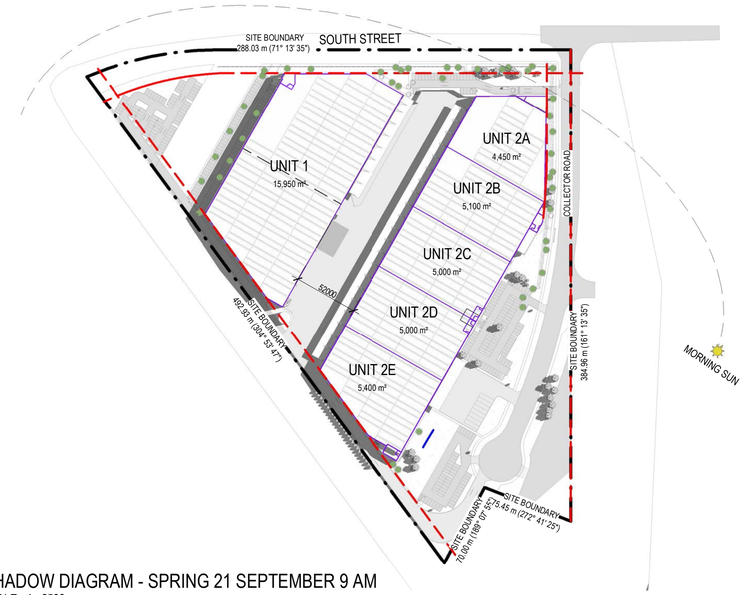
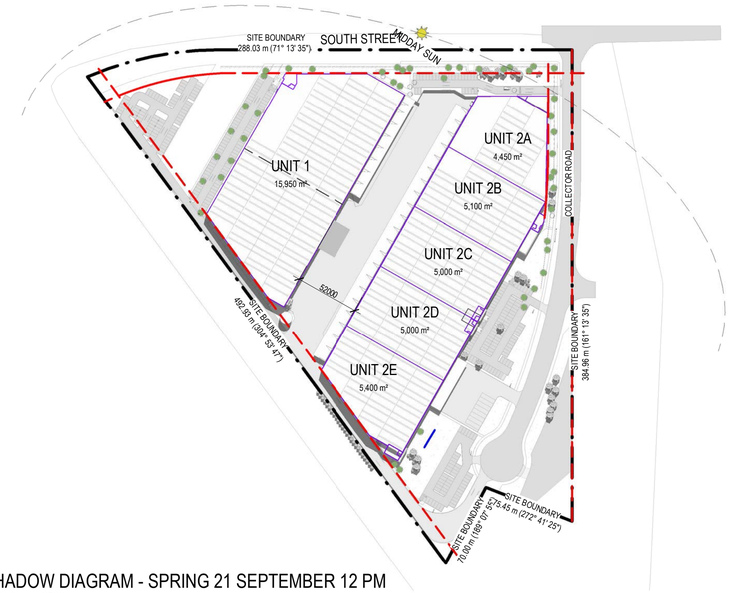


SHADOW DIAGRAM - SPRING 21 SEPTEMBER 9 AM
SCALE: 1 : 2500



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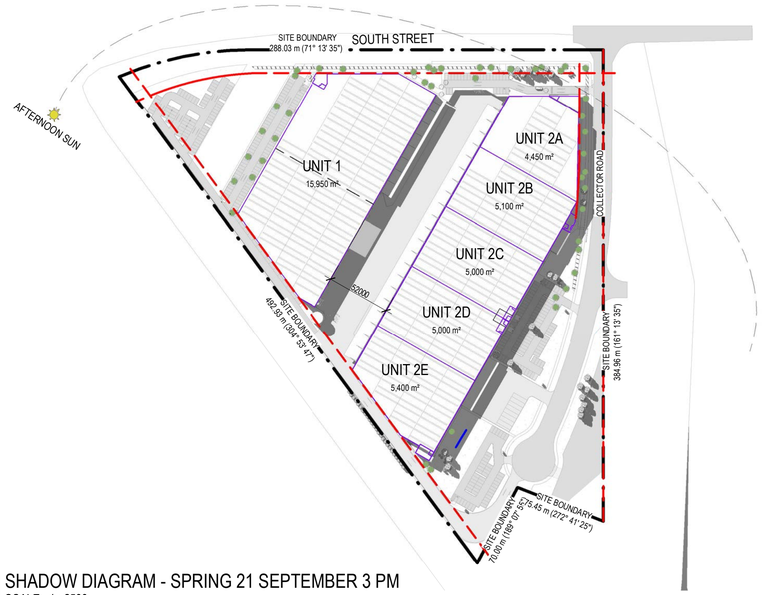

SHADOW DIAGRAM - SPRING 21 SEPTEMBER 3 PM
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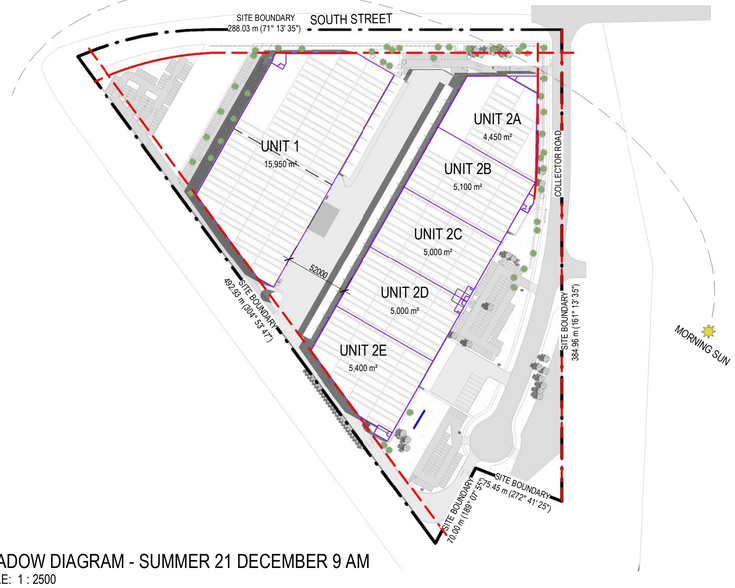
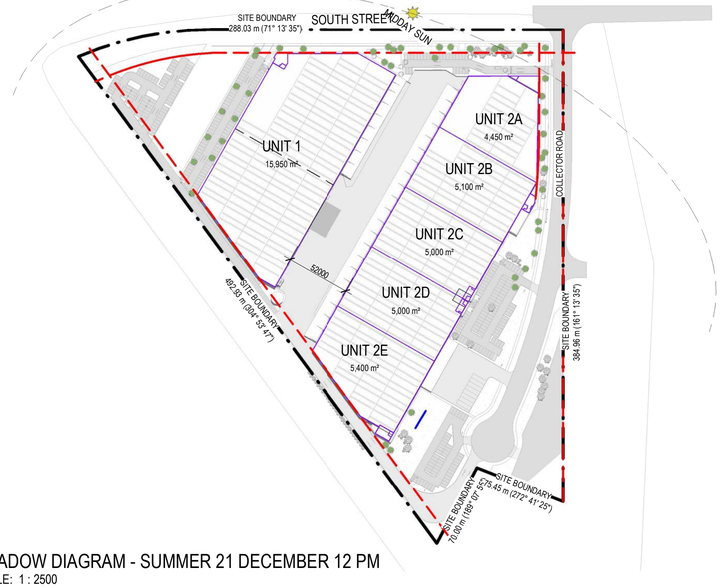


SHADOW DIAGRAM - SUMMER 21 DECEMBER 9 AM
SCALE: 1 : 2500



SHADOW DIAGRAM - SUMMER 21 DECEMBER 12 PM
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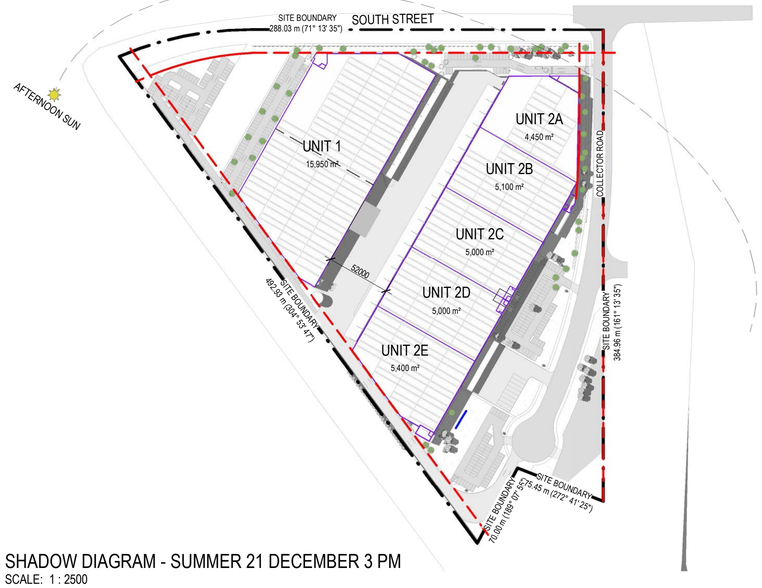

SHADOW DIAGRAM - SUMMER 21 DECEMBER 3 PM
SCALE: 1 : 2500

NO:	DATE:	REVISION:	BY:	CHK:
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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
SHADOW DIAGRAMS - SPRING & SUMMER

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1 : 2500 @A1
SCALE:

JOB NO: 21259
DRAWING NO.: DA19
REVISION: B

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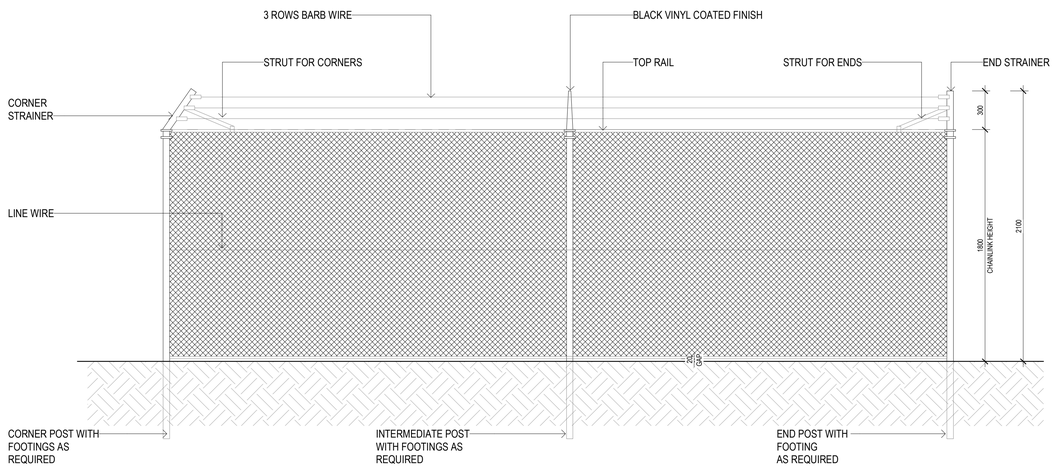
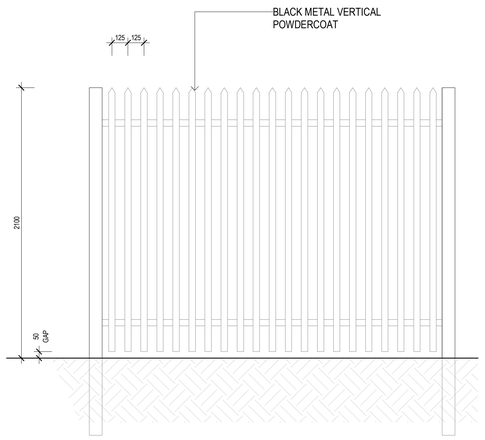
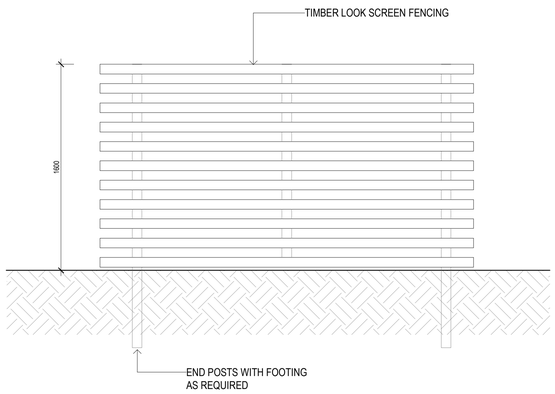


FN-01 WIRE FENCE DETAILS
SCALE: 1 : 20



FN-02 PALISADE FENCE DETAILS
SCALE: 1 : 20



FN-03 OUTDOOR AREA FENCING
SCALE: 1 : 20

DRAFT

NO:	DATE:	REVISION:	BY:	CHK:

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ACN: 111398700 T: 03 9516 8555 info@watsonyoung.com.au www.watsonyoung.com.au

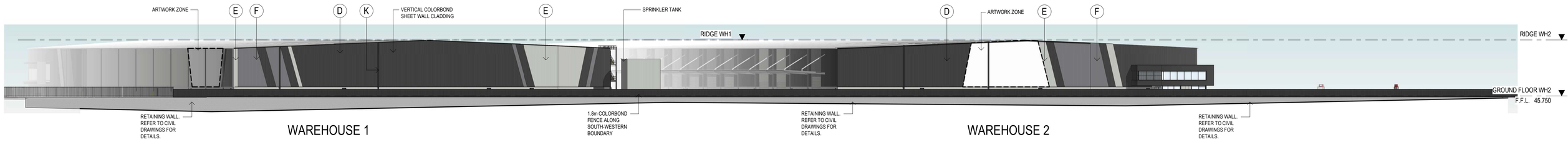
PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
FENCE DETAILS

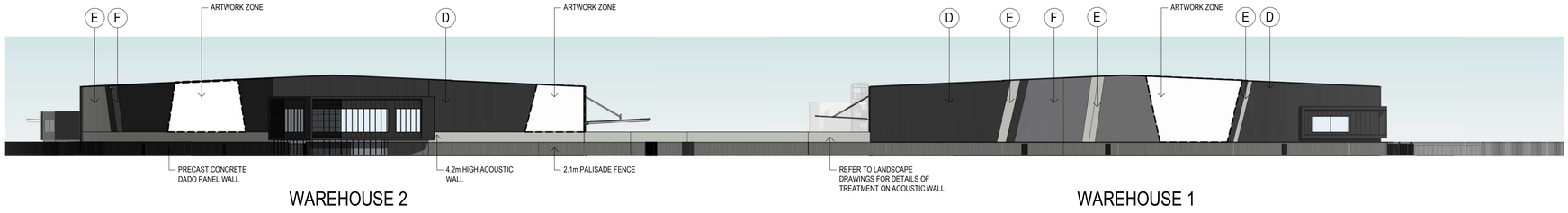
CLIENT:
-

DATE: APRIL, 2022
DRAWN BY: Author
SCALE: 1 : 20
SCALE:

JOB NO: 21259
DRAWING NO: DA20
REVISION:



OVERALL SOUTH ELEVATION
SCALE: 1 : 500



OVERALL NORTH ELEVATION
SCALE: 1 : 500

EXTERNAL FINISHES

A	PRECAST CONCRETE PANEL, TEXTURE PAINT	COLORBOND SHALE GREY
C	LINEAR TEXTURED CEMENT WALL CLADDING	GREY
D	COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
E	COLORBOND WALL CLADDING	COLORBOND SHALE GREY
F	COLORBOND WALL CLADDING	COLORBOND BASALT
G	EXTERNAL STEEL	GALVANISED FINISH
H	ROOF CLADDING	ZINCALUME
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N	ALUMINIUM CLADDING	SHALE GREY
O	ALUMINIUM FRAMED GLAZING	CLEAR
P	POWDERCOAT FINISH	COLORBOND MONUMENT
Q	SCREEN FENCE	TIMBER
R	CORRUGATED COLORBOND WALL CLADDING	COLORBOND MONUMENT 'MATTE'
S	ALUMINIUM RECTANGULAR HOLLOW BLADES	BLACK

NO:	DATE:	REVISION:	BY:	CHK:
A	21.03.2022	ISSUED FOR APPROVAL	IO	JF
B	27.04.2022	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED WAREHOUSE ELEVATIONS - OVERALL

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: @A1
SCALE:

JOB NO: 21259
DRAWING NO: DA21
REVISION: B

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DEVELOPMENT ANALYSIS

BUILDING	GFA
WAREHOUSE	
UNIT 1	15,950m²
(ANCILLARY)	*(395m²)*
UNIT 2A	4,450m²
UNIT 2B	5,100m²
UNIT 2C	5,000m²
UNIT 2D	5,400m²
UNIT 2E	5,400m²
TOTAL	40,900m²

OFFICE SPACE (Including Mezzanines)	
UNIT 1	390m²
UNIT 2A	370m²
UNIT 2B	470m²
UNIT 2C	290m²
UNIT 2D	290m²
UNIT 2E	290m²
TOTAL	2,100m²
TOTAL AREA	43,050m²

OFFICE TO WAREHOUSE AREA RATIO:
UNIT 1 - 1:40
UNIT 2A - 1:12
UNIT 2B - 1:10
UNIT 2C - 1:17
UNIT 2D - 1:17
UNIT 2E - 1:18

TOTAL OFFICE TO WAREHOUSE RATIO:
TOTAL - 1:19

NO:	DATE:	REVISION:	BY:	CHK:
A	20.04.2022	ISSUED FOR APPROVAL	IO	JF

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PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
FLOOR PLAN AREA

CLIENT:
dexus

DATE: APRIL, 2022
DRAWN BY: DM
SCALE: 1 : 1000 @A1
SCALE: 1 : 2000 @A3

JOB NO: 21259
DRAWING NO: DA22
REVISION: A

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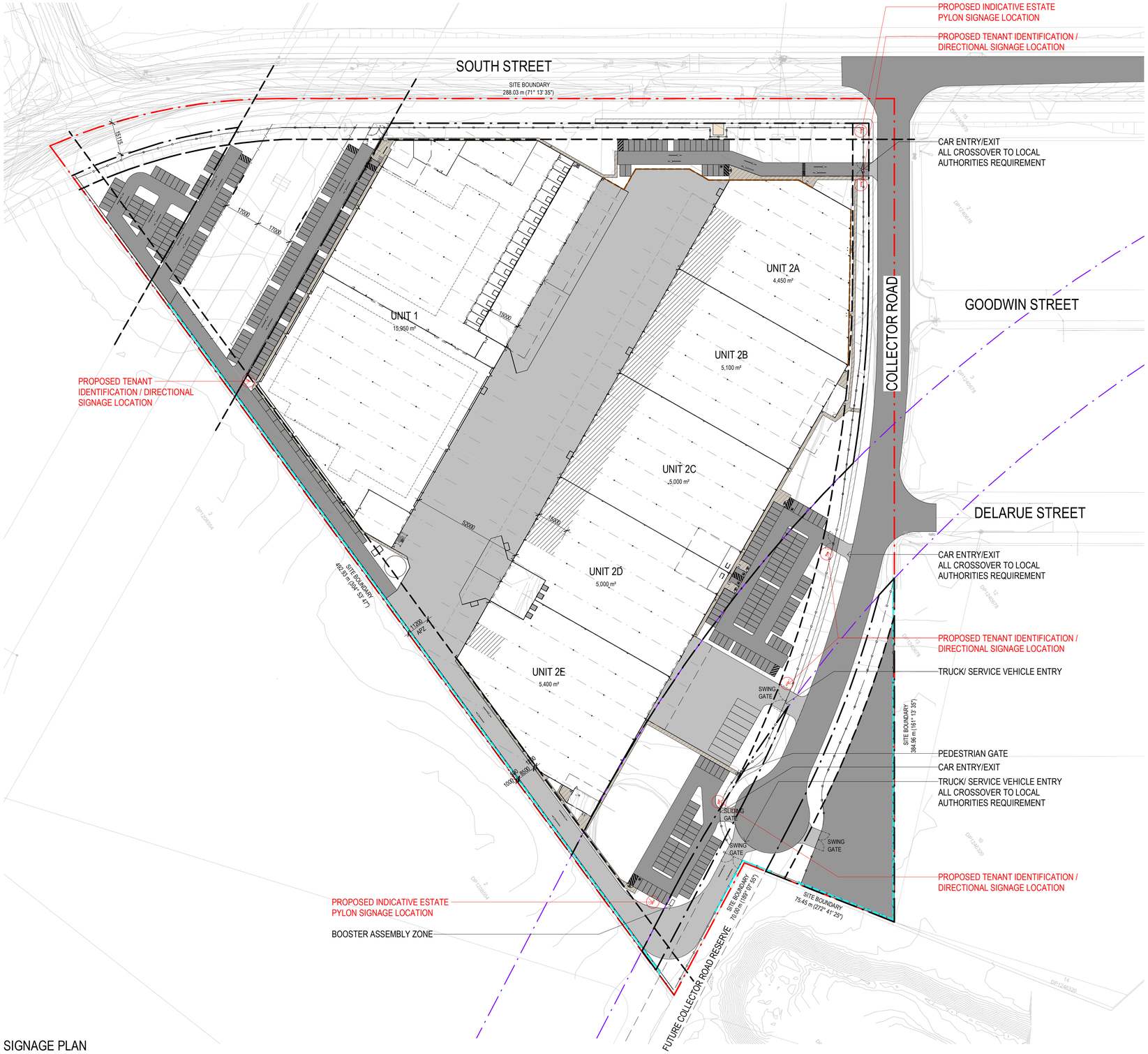
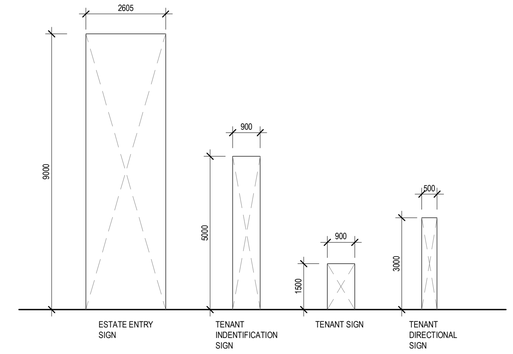


SIGNAGE PLAN
SCALE: 1 : 1000



PYLON SIGNAGE SIZES
SCALE: 1 : 100

NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL PARKING SPACES IN ACCORDANCE WITH VICTORIAN PLANNING SCHEME

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum)
RELATIVE LEVELS SHOWN INDICATIVELY ONLY.
REFER TO CIVIL DRAWINGS.

NO:	DATE:	REVISION:	BY:	CHK:
A	21.04.2022	ISSUED FOR APPROVAL	IO	JF
B	27.04.2022	ISSUED FOR APPROVAL	IO	JF

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

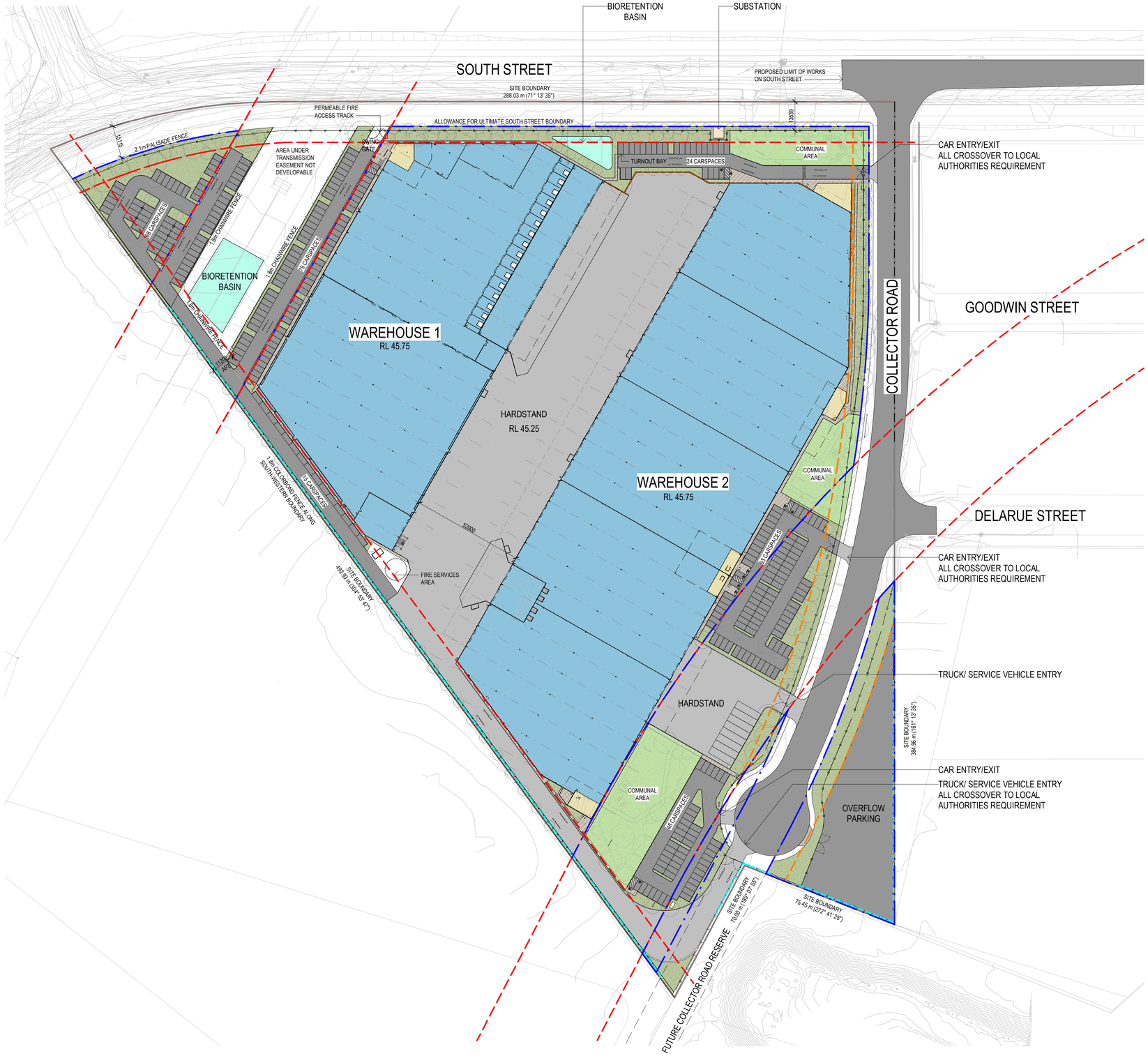
TITLE:
SIGNAGE PLAN

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: @A1
SCALE:

JOB NO: 21259
DRAWING NO.: DA23
REVISION: B

watson young



NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL PARKING SPACES IN ACCORDANCE WITH VICTORIAN PLANNING SCHEME

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum)
RELATIVE LEVELS SHOWN INDICATIVELY ONLY.
REFER TO CIVIL DRAWINGS.

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- PERMEABLE / CRUSHED ROCK FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- 7.5M LANDSCAPE SETBACK (5M SETBACK REQUIRED)
- LOT BOUNDARY
- DEVELOPABLE AREA BOUNDARY
- ASSET PROTECTION ZONE
- EASEMENT
- RETAINING WALL. REFER TO CIVIL DRAWINGS FOR DETAILS.
- 4.2m HIGH ACOUSTIC WALL

NO:	DATE:	REVISION:	BY:	CHK:
A	28.03.2022	ISSUED FOR APPROVAL	IO	JF
B	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
C	21.04.2022	ISSUED FOR APPROVAL	IO	JF

Watson Young Architects P/L Melbourne | Perth | Sydney 03 9516 8555 ACN: 111398700
8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
MASTERPLAN

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1:1000 @A1
SCALE:

JOB NO: 21259
DRAWING NO: MP01
REVISION: C

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NOTES

ALL NEW CROSSOVERS IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS

ALL PARKING SPACES IN ACCORDANCE WITH VICTORIAN PLANNING SCHEME

ALL DISABLED PARKING SPACES IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890
(5.4m x 2.4m)

SITE STORMWATER DRAINAGE IN ACCORDANCE WITH LOCAL AUTHORITY & COUNCIL REQUIREMENTS

ALL RELATIVE LEVELS ARE SHOWN TO A.H.D. (Australian Height Datum)
RELATIVE LEVELS SHOWN INDICATIVELY ONLY.
REFER TO CIVIL DRAWINGS.

LEGEND

- INDICATES EXTENT OF HEAVY DUTY HARDSTAND TO CIVIL ENGINEERS DETAILS
- INDICATES EXTENT OF LIGHT DUTY PAVEMENT TO CIVIL ENGINEERS DETAILS
- CONCRETE PAVING WITH EXPOSED AGGREGATE FINISH OR SIMILAR
- PERMEABLE / CRUSHED ROCK FIRE TRUCK ACCESS TRACK
- AREA OF GRASS / LANDSCAPING, REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR LANDSCAPE LAYOUT AND DETAILS
- 7.5M LANDSCAPE SETBACK (5M SETBACK REQUIRED)
- LOT BOUNDARY
- DEVELOPABLE AREA BOUNDARY
- ASSET PROTECTION ZONE
- EASEMENT
- RETAINING WALL. REFER TO CIVIL DRAWINGS FOR DETAILS.
- 4.2m HIGH ACOUSTIC WALL

NO:	DATE:	REVISION:	BY:	CHK:
A	28.03.2022	ISSUED FOR APPROVAL	IO	JF
B	06.04.2022	ISSUED FOR APPROVAL	DM/IO	JF
C	21.04.2022	ISSUED FOR APPROVAL	IO	JF

Watson Young Architects P/L Melbourne | Perth | Sydney 03 9516 8555 ACN: 111398700
8 Grattan Street Prahran VIC 3181 info@watsonyoung.com.au watsonyoung.com.au

PROJECT:
PROPOSED WAREHOUSE DEVELOPMENT
311 SOUTH STREET, MARSDEN PARK

TITLE:
PROPOSED SITE PLAN - ULTIMATE ROAD

CLIENT: dexus

DATE: APRIL, 2022
DRAWN BY: IO
SCALE: 1:1000 @A1
SCALE:

JOB NO: 21259
DRAWING NO: MP02
REVISION: C

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Appendix B – Bicycle facility provision

B.1 General

The mode share target for bicycle will require measures to assist to meet these targets.

The journey to work analysis in the body of this report, but also elsewhere in Sydney for commuters and other markets, indicates cycle use is low and has the potential to increase in a meaningful way (from this low base). This potential is based on supportive regulation (e.g., amendments to the road rules) as well as an emerging network of cycle facilities, with facilities gradually connecting up across Sydney. In order to tap into this to support cycling and there are some tangible measures within the site:

- Dedicated cycle parking
- Showers/lockers – trip end facilities

B.2 Level of bicycle facility provision

DCP provision

The level of provision for cycle parking in the Blacktown Council Growth Centres DCP for an industrial use recommends a provision for employees of 1 bicycle locker or other suitable form of bicycle accommodation of 1 per 200m^2 GFA. As noted in Positive Traffic's report this would mean that the site would require 216 bicycle lockers.

The Economic Study for the proposal indicates that the total employment across the site would be some 315 employees. The DCP provision of bicycle facilities implies an approximate mode share to bicycle for site employees of:

216/315 = 69%

As noted in the journey to work analysis in the body of this report, the current use of bicycle for the commute to work in industrial areas in Blacktown is no higher than 1%. The GTP has set a bicycle mode share target for the site of 3%, which is considered to be high, some ten times higher than the 2016 bicycle mode share for Marsden Park Industrial and for Blacktown LGA.

The DCP level of provision clearly contemplates a much higher employee density for industrial than is applicable to the proposed warehouses on this site.

First principles estimate of demand

The likely demand for bicycle facilities at the site was derived from the following first principles analysis.

2016 Census indicates that of the 94,221 people who work in Blacktown SA4 and who travelled to work on Census day, 242 used bicycle (0.26%). Applying this mode share to worker numbers for the proposal indicates very few cyclists, about 0.8 across the site. This is shown in the second column from the right in the two tables below.

TABLE 10 – WAREHOUSE STAFF – CYCLE FACILITY PROVISION AT 2016 CENSUS MODE SHARE AND AT HIGH MODE SHARE (5%)

Warehouse	Floorspace m^2	Employees #	Cyclists @ 2016 Mode share (0.26%) #	Cyclists @ notionally high cycle use of 5% #
Unit 1	16,032	81	0.21	4.0
Unit 2A	4,654	23	0.06	1.2

Unit 2B	5,094	26	0.07	1.3
Unit 2C	5,036	25	0.07	1.3
Unit 2D	5,030	25	0.07	1.3
Unit 2E	5,423	27	0.07	1.4
Total	**41,269**	**208**	**0.53**	**10.4**

TABLE 11 – OFFICE STAFF – CYCLE FACILITY PROVISION AT 2016 CENSUS MODE SHARE AND AT HIGH MODE SHARE (5%)

Warehouse – office	**Floorspace m^2**	**Employees #**	**Cyclists @ 2016 Mode share (0.26%) #**	**Cyclists @ notionally high cycle use of 5% #**
Unit 1	460	23	0.06	1.2
Unit 2A	450	23	0.06	1.1
Unit 2B	510	26	0.07	1.3
Unit 2C	290	15	0.04	0.7
Unit 2D	300	15	0.04	0.8
Unit 2E	320	16	0.04	0.8
Total	**2,330**	**117**	**0.30**	**5.9**

The mode share target for bicycle in the GTP is 3%. If facility provision is above this, to allow for seasonal spikes, and particular days when demand is a bit higher than normal, at 5% of site users, it would generate demand levels shown in the right-hand column of the above two tables – about 17 across the site.

To re-iterate, the GTP bicycle target is 3%, which is some ten times higher than the 2016 journey data for Marsden Park Industrial and Blacktown LGA. Making a further allowance of facilities to support another two-thirds above the GTP target – i.e., 5%, is considered to be a high but realistic level of provision. The DCP level of provision – which implies a bicycle mode share for this site of 69% (greater than 165 times the current bicycle mode share) – is not appropriate for this site.

Based on this first-principles approach the site would require:

Cycle parking provision of:

- 6 cycle parking spaces at Unit 1
- 4 cycle parking spaces at each of Unit 2A and Unit 2B
- 3 cycle parking spaces at each of the other units (2C, 2D and 2E)

Suitable places for secure cycle parking facilities would need to be identified.

Trip end facilities - there would need to be showers in each warehouse unit in the office (first floor) and in the warehouse (ground floor). Currently the ground floor amenities in each unit have a shower in the DDA toilet for units 1, unit 2A, 2B, and 2E, except they are absent from units 2C and 2D. Showers should be provided in in the first-floor amenities of each unit.

We recommend that a shower is provided in each of the units in the ground floor and in the first-floor amenities areas.

Appendix C – Electric vehicle charging

C.1 Introduction

The policy environment in Australia for electric vehicles (EV) is slowly emerging but is considered instable. This implies that the future availability of charging stations for public use is uncertain, even though EV charger networks are currently expanding.

The following information is of a general nature and to provide an indication of the likely utility of EV chargers to users of the site as well as the proportion of car parking spaces that should be considered for EV chargers.

C.2 EV chargers

At present there are a range of capacities of chargers[11] available:

- A domestic wall socket, plug in charger (10A)
- A 16A socket charger available for some vehicles
- With a wall box at home chargers of 7kW drawing are available
- Some 11kW wall boxes are also available
- Fast chargers at charging stations vary between 50kW, 100kW, 350kW; some are DC and some AC (3 phase).

C.3 Vehicle range

Vehicle range varies with type of vehicle, battery pack, style of driving and other factors, with manufacturers providing estimates based on standard conditions.

C.4 Car use

Typically, in Australia cars travel some 14,000 to 15,000 km per annum for the light vehicle fleet. Use of EVs might follow that level of light vehicle usage, or they might be used more – it's uncertain.

We have assumed that typically vehicles would be driven approximately 300 km per week.

C.5 Range and charging times

Information about range and charging times for 13 different EVs was compiled, in order to get a sense of the time taken to charge the batteries using the simple 10A charger and the 7kW wall box higher capacity charger, to support the typical 300km per week vehicle use.

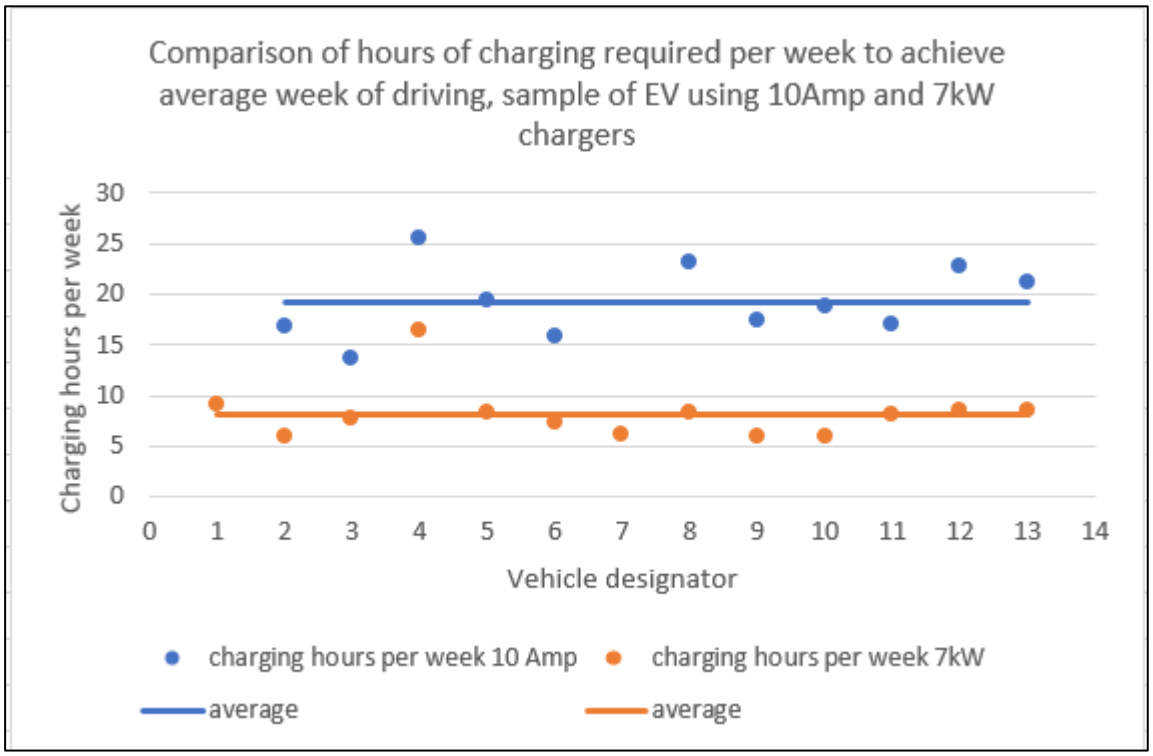
This analysis does not take account of the use of the growing network of high capacity, fast chargers.

The following chart indicates the:

- Time taken to charge the vehicle per week for 300km of range using the:
  - simple 10A charger (approximately 2.4kW) and
  - typical sized wall-box 7kW (this would need to be installed at home and cost is some $3k)
- The average charge time for the sample of LV EVs using the two charger types

[11] The information in this appendix relating to EV range, charge times for different chargers is largely drawn from https://rac.com.au/car-motoring/info/electric-cars-australia

FIGURE 5 – INDICATIVE EV CHARGE TIMES FOR A TYPICAL WEEK OF TRAVEL (300KM) BY 10A CHARGER AND 7KW CHARGER



This analysis shows that the vehicles in the sample would require some 20 hours per week of charging using the simple 10A charger, and some 8 hours using the more expensive 7kW chargers to be able to drive the typical vehicle travel distance of 300km per week.

For usage of some 300km per week, with:

- the simple 10A charger, the vehicle would require charging overnight 2 to 3 nights per week
- the more expensive 7kW charger, the vehicle would require charging overnight once per week.

If 7kW chargers were to be installed at the site for a proportion of parking spaces, this could provide sufficient range for a vehicle connected to the charger for the duration of a shift (approximately 8 hours on site) for a week in one day's (shift's) charging. The implications for 5% and 10% of car parking spaces to have EV charges:

- If 5% of spaces were to have chargers installed and people worked 5 days per week, then a quarter of workers would be able to charge their vehicles completely for the week.
- If 10% of spaces were to have chargers installed and people worked 5 days per week, then approximately half the workers would be able to charge their vehicles completely for the week.

This assumes 100% take up of EVs – 70% to 80% market penetration could be well into the future: some 15 years hence.

Making provision for EV chargers at more than 10% of car spaces is clearly not warranted as:

- charging at home can basically keep the battery charged, with little inconvenience, using small domestic type chargers (10A or the larger 7kW);

- but there are also rapid chargers available at increasing locations, such as shopping centres, which give an 80% charge for some of the vehicles in 40 to 80 minutes;
- at 10% of car spaces with EV charging points and 100% EV uptake, would mean that in one shift of charging, approximately half the vehicles used by workers would have their batteries completely charged for the whole week.

If EV uptake was sufficient for chargers to be installed, then the management and use of the chargers would be something to be considered by the site occupiers. For example, they may have sales reps based on site, who may travel considerably further than 300km per week, who might receive priority. They may decide to use the EV chargers initially only during daylight hours in order to use lower electricity tariffs and/or onsite generated solar power. They might consider to give priority to workers who don't have access to chargers at home (e.g., no off-street car parking).

C.6 Summary

For typical light vehicle users, if workers can charge their vehicle at home, there is little need to charge their EV onsite: even if they only have access to a simple charger (10A) at home.

Making provision for EV chargers at 10% of car parking spaces means that the site would be able to charge something like 50% of the site workers total vehicle use each week for all purposes (not just the commute to and from work).

Appendix D – TfNSW initial comments and interim responses

Appendix D – TfNSW Initial Comments and interim responses

<table>
<tr><th>Ref No</th><th>Comments from TfNSW</th><th>Response</th><th></th></tr>
<tr><td>1</td><td>Objectives: TfNSW recommends your GTP be updated, with additional objectives and strategies to reduce the proportion of single-occupant car travel by staff and hotel occupants to and from the site (including short term car-pooling and shuttle bus services to and from train stations), and increasing the mode share of public transport and active transport for the life of the development (once public and active transport improvements are made).</td><td>Noted.

Single occupancy car mode share objective in amended section 5.2 in body of draft GTP</td><td></td></tr>
<tr><td>2</td><td>Mode share targets: TfNSW recommends that the GTP adopt both short and long term mode shares that should be determined by a qualified traffic consultant given the lack of public transport and active transport infrastructure facilities in this area. TfNSW would recommend reducing car share using short term initiatives such as car-pooling and shuttle bus services moving staff to and from train stations like Schofields or Tallawang Metro Station to and from the site (there might be several of these running during the day and if the warehouse is 24/7 the shuttles would run through the night or around shift changeovers as well) have also been proposed here. Longer term mode shares including bus mode share and cycling mode share can be proposed once safer pedestrian infrastructure from bus stops to site and cycling infrastructure from cycle paths to the site have been upgraded. The longer term mode share must include future upgrades of transport in the area and must be reviewed at the time by TfNSW.
<table>
<tr><th>Mode type – ‘Short term’</th><th>Applicant proposed share</th><th>TfNSW proposed mode share</th></tr>
<tr><td>Car one person</td><td>85%</td><td>70%</td></tr>
<tr><td>Car-pooling</td><td>8.5%</td><td>10%</td></tr>
<tr><td>Train (with shuttle bus)</td><td>3.5%</td><td>10%</td></tr>
</table>
</td><td>Short and long term mode share targets are noted. The current draft GTP will be updated to reflect this during finalisation of GTP. The current draft GTP sets mode share targets and has a process to review these and reset under some circumstances (e.g., new Metro). Therefore, we would add some longer term targets

The suggested review of proposed amended targets by TfNSW is noted and it is envisaged this would strengthen the target reset process.

The comment in relation to bus, pedestrian and bicycle targets coming after the movement network around the site is more accommodating is reasonable. However, given proximity of existing/emerging residential uses to the site, we would be seeing some pedestrian and bicycle access primarily from these close area from early on in the occupation of the development. The distance of the site from existing bus is more problematic, and this will depend on the timeframe around occupation and how the balance of the precinct has progressed (see comment further down this cell).

Long term modes shares – this noted and will be addressed as the GTP is finalised.

Suggested methods of ‘bridging the gap’ from bus to the site are welcomed; this would be addressed as the GTP is</td><td></td></tr>
</table>

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
		finalised. This process will look at cost of various options and their potential contribution to the objectives of the GTP – shuttle buses tend to be expensive (in the hundreds of thousands of dollars per annum), especially if this 'gap' persisted for any length of time. We will investigate other potential options and compare cost and effectiveness of each. One potential option is the extension of coverage of on-demand transit – with potential to work with other employers in the area a collective solution might be reached in conjunction with the bus contract region operator and TfNSW. The comparison table of mode share targets – as an observation, for an area to move from approx. 95% car to 80% car is a big shift. This will be analysed and discussed as part of the finalisation of the GTP with TfNSW to	
3	**Future Green Travel Plans:** For the purpose of the aforementioned review, any future Green Travel Plans that are proposed for this site must be submitted to TfNSW for review.	Noted.	
4	**Governance of GTP:** TfNSW advises that often the Travel Plan Coordinator will need a team or committee to ensure all of the actions of the GTP are done. The applicant will need to determine a strategy for the owner(s) of the development to take over the ongoing responsibilities for the GTP, making it clear to the owner(s) that there are requirements to try and achieve sustainable transport mode shares for the site, as a condition of the development, for its lifecycle.	Noted. Developing a structure that will implement and run the GTP over a number of years is important; the tenure of the site/units could influence the appropriate method of achieving this. This would be developed as the GTP is finalised; an initial discussion of this is in Section 6.5 of the draft GTP.	
5	**Pedestrian infrastructure:** Pedestrian infrastructure supporting the site connecting to bus stops and cycling paths will need to be implemented into the site particularly for South Street where the site is located.	Walk paths within the site to provide linkage to the boundary in a manner that facilitates access to nearby bus stops is recognised.	

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
		The provision of pedestrian facilities off-site is problematic for a number of reasons – they would be on land that is beyond the control of the applicant; and at this stage putting a path along the existing South Street will result in work being redone as South Street is upgraded to a cross section more in keeping with Figure 4 in the draft GTP.	
6	**End of Trip facilities:** TfNSW welcomes the applicant considering electronic charging points and EV charging support for both e-bikes and scooters as well as bike spaces to be included as part of the design for the development application, given the potential for the bike paths to be extended in the future and the popularity of e-bikes. This will also be subject to pedestrian infrastructure being upgraded so that it is safe for staff and guests to use to and from the site. TfNSW welcomes the applicant considering showers, for end of trip facilities. The locations of the end-of-trip facilities should be promoted in the Travel Access Guide (TAG). These facilities should be promoted within your **Implementation Plan** listed below. Please also find a resource from our website on this link for end of trip facilities.	Noted. The use of the TAG to promote trip end facilities is supported.	
7	**Travel Access Guide:** TfNSW recommends that the Travel Access Guide or TAG includes the short term initiatives discussed earlier (shuttle and car pooling), and includes a network map and timetable for train trips to and from the site as well as shuttle time tables to and from train stations. The TAG can also include promotion of initiatives discussed below including pre-loaded opal cards when staff and patrons first occupy the site. The longer term TAG can be updated once pedestrian, public and active transport infrastructure are upgraded. For further helpful information – please check this link How to Create a Travel Access Guide doc here.	TAG is identified in draft GTP at section 6.4.1 The intention was to use an external contractor specialising in transport information (timetables, route maps and TAGs) to prepare TAG to ensure it was of a suitable standard. Expanding TAG to promote short term initiatives, opportunities arising from ongoing modifications to the transport network/services and the GTP itself are supported.	
8	**Travel Survey:** TfNSW notes there is no attachment of a travel survey tailored to this site in this document and would ask for this to be provided. TfNSW recommends that the Travel Survey to staff (3 months post occupation) promotes shuttle and car-pooling scheme short term, and the Travel Survey survey can be updated longer term to reflect changes to public and active transport. Once updated the TAG will also need to be reviewed by TfNSW. The Travel Survey should be done once a year and when future transport upgrades are completed.	A travel survey tailored to the site would be developed and included in the GTP as it is finalised. The frequency of the travel survey is suggested as annual in draft GTP at section 6.4.3. Starting the survey at 3 months post occupation is noted; it would be of interest to then	

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
		conduct a further survey, say 9 months after occupation, to see how things have settled. Making sure the travel survey identifies a broad range of modes, including car pooling and shuttle or on-demand transit is supported. Using the survey to promote modes or the GTP itself is considered problematic – could be seen to invalidate the survey. It is suggested that once the travel survey is taken, analysed and understood, there's an opportunity to do a GTP progress 'newsletter' to site users (delivered electronically) – this would canvass the results in the context of the GTP; promote the alternative modes available; and raise awareness of the GTP. This GTP newsletter also provides scope to call for site user feedback on transport. This promotional opportunity would be developed in the finalisation of the GTP.	
9	**Parking management strategy**: TfNSW asks that a parking management strategy be implemented short and long term. TfNSW also asks that this GTP implements a car parking management strategy in the GTP that prioritises use by staff and visitors on a needs basis, and actively encourages staff and visitors using sustainable transport options that are available to and from the site. This will include how car parking onsite will be limited and managed at the site.	Noted. The use of car park allocation as a potential method of encouragement toward the goals of the GTP would be developed as the GTP is finalised.	
10	**Funding the GTP:** TfNSW notes that your GTP document will be made available on the site's website – if there were multiple occupiers across the six units, then the GTP would be available on each occupiers' website. The GTP will need to be appropriately funded and otherwise resourced, by the applicant, for a period of at least 5 years, or via an appropriate appointed entity, such as a body corporate. This will include ongoing travel demand initiatives that will require resourcing. This is in recognition that any travel demand management interventions will need to be significant in scale to be effective. This should be covered in the updated **Implementation Plan**.	Noted. Inclusion of GTP on each occupants' website is agreed (as per TAG). The resourcing will be included in the updated implementation plan, along with the framework for its implementation.	

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
11	**Data** – The GTP must be updated to include available data that identifies the travel behaviours of site users to measure and monitor the effectiveness of the objectives and mode share targets of the GTP. • **Data short term includes**: o Weekly rates of car pooling o Weekly car park usage rates o Shuttle trips to and from the site • **Data longer term includes:** o An additional weekly report of patronage be included in the GTP using Opal data to and from the site. o Traffic volumes can also be assessed on the road network within the site area, before and after work. These could be monitored to assess whether: ➢ Staff and patrons are re-moding private vehicles to public transport. ➢ Parking and pedestrian counts	Ongoing updating of the GTP is supported. This would reflect availability of data, such as from site users, and background information such as journey to work and household travel surveys. High frequency data collection can be problematic as it starts to look to site users like surveillance as opposed to transport survey work. Car park usage rates, gauged from a beat survey once per week at the same time, could work without issue beyond resourcing it; collecting rates of car pooling might work if it correlated with occupancy of car parking spaces designated to car pooling and this designation was respected by site users. If a shuttle bus were introduced, it is usual practice to have a run sheet recording trips; adding boardings and alightings at site/station could work – other shuttle buses where we have analysed this run sheet data can provide useful insights, but usually there are a few trips where the numbers tend to look 'odd', possibly due to data entry issues or the driver forgetting to record boardings/alightings for a short period. Opal data – this would rely on tying a trip end to the site, whereas opal data ties it to a boarding/alighting location, such as a bus stop, train station etc; If the site were the only major development in the area when transit was introduced close to the site, transit use by site users might be able to be inferred. Analysis of individual Opal card use records is not supported; aggregated/anonymised data provided by TfNSW to the GTP team is supported. We would explore this further as part of finalisation of the GTP. Using traffic counts on the public road network to monitor sites' traffic generation and how this changes over time is appealing; however, due to day to day fluctuations in background traffic demand and assignment, as well as other	

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
		site generated traffic (e.g., heavy vehicles), the results of these monitoring comparisons can be disappointing (i.e., no discernible trend). What could be beneficial and would be considered is to place tubes (ATCs) on the site access points before and during the first 2 or 3 travel survey periods, to explore potential correlations between survey results and site traffic generation, and potentially the impact of weather on the use of car and other modes. This would add to the cost of the GTP implementation.	
12	**Implementation Strategy:** TfNSW recommends that you re-name your **GTP Actions Summary** to be called an **Implementation Strategy**, which has an **Implementation Plan** of tasks and actions, including all of your initiatives and incentives, timing and completion dates, your communications tasks, and a confirmed person(s) who will do the tasks; this will ensure the overall effectiveness of the GTP. The **Implementation Strategy** should: o Identify the party or parties responsible for delivery and implementation of each element of the updated GTP throughout various stages of the development lifecycle, including for its ongoing implementation, monitoring and review, for a period of at least 5 years post-OC; o Be updated both on an annual basis, and when future transport services and pathways eventuate. Your stakeholder engagement strategy will be included in this (including all of your stakeholders, key messages and the channels you will use to engage your stakeholders) – please find our link for **Potential engagement techniques** that may be useful to you.	GTP Action Summary is renamed Implementation Strategy at section 6.6.3. The further detailing of the Implementation Strategy will be undertaken as the GTP is finalised.	
13	**Strategies and initiatives**: The updated GTP will need to identify and implement planned strategies and initiatives that reduce the proportion of single occupant car travel to/from the site (including public and active transport) and increasing the use of public and active transport travel to the site. Some additional **incentives (both long and short term) are provided here:** o Pre-loaded opal cards when staff and patrons first occupy the site. o Staff that are committed to active travel receive subsidised panniers or backpacks.	Noted. These strategies and initiatives would be developed further as part of the finalisation of the GTP.	

Appendix D – TfNSW Initial Comments and interim responses

Ref No	Comments from TfNSW	Response	
	o Wayfinding at the site for End of Trip facilities. o Incorporating a role for a GTP sustainable travel champion that focuses on modelling the desired behaviours and positive communication around active and public transport. o Implementing a car-pooling scheme with guaranteed ride home. Online car sharing systems for staff, operating across an entire precinct to maximise access to possible rides and build community spirit. This could include discounted membership of car share clubs.		
14	**Travel Survey**: TfNSW notes there is no attachment of a travel survey tailored to this site in this document and would ask for this to be provided. TfNSW recommends that the Travel Survey to staff promotes these options of the shuttle and the car pooling scheme short term, and that the survey is updated longer term to reflect changes to public and active transport. Staff travel surveys are conducted to obtain workforce data analysis (including staff and guest residential postcodes) to identify the actual staff/guest travel origin and destination patterns, to inform strategies that help to reduce car parking demand for staff and guests to get to and from the site; please find our online travel survey here.	As noted previously the draft GTP nominates the use of a travel survey, but does not contain a survey instrument. This would be developed as the GTP is finalised. As noted above we do not see the survey as an opportunity to promote the GTP, its objectives and measures (see discussion above at Ref No 8). Although it will raise awareness of it. The nature of the data collected by the travel survey – usually as simple as possible, such as mode, could be expanded to collect further variables, such as origin/destination and party size; maybe home postcode. Minimising respondent burden of data collection and avoiding identifying/personal information is important to a successful survey. The draft GTP nominates a diagnostic process if targets are not met; this process includes the use of social research which could be used to 'tease out' the detail of trip making patterns from site users and why they believe they are not amenable to change – getting this detail from a travel survey is not recommended. The use of this information to identify impediments to achieving the objectives of the GTP is supported.	

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Ref No	Comments from TfNSW	Response	
15	**Submission:** TfNSW recommends that the applicant submit a copy of the updated GTP for TfNSW endorsement, prior to the issue of the Construction Certificate.	Noted – clarification sought – see next item.	
16	**Submission:** Clarification was sought from TfNSW in relation to the submission sequencing for the finalisation of the GTP. The response from TfNSW to the clarification was provided in an email dated Monday 13 December 2021, with the following extract provided: '…it would be advisable for you to finalise the GTP prior to the Occupation Certificate, as long as the elements relating to the provision of physical infrastructure (e.g. end of trip facilities) that depend on certain construction activities are agreed to be delivered, prior to issue of the Construction Certificate.'	Noted.	

Note: all comments from TfNSW except for Ref No 16 were via email from TfNSW to High Range Analytics Pty Ltd on 8 December 2021.