WOOLWORTHS

TRAFFIC AND ACCESS REPORT FOR PROPOSED WAREHOUSE, DISTRIBUTION CENTRE AND OFFICE DEVELOPMENT, 74 EDINBURGH ROAD, MARRICKVILLE

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1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by Woolworths to prepare a report examining the traffic and access implications of a proposed warehouse, distribution centre and office development at 74 Edinburgh Road, Marrickville. The site location is shown in Figure 1.

1.2 The site has development consent for a Masters Home Improvement Centre of some 13,337m^2 and industrial units of 4,267m^2, with vehicular access from Edinburgh Road via a fourth signalised approach to the existing traffic signals at Smidmore Street. Access is also approved from Sydney Steel Road, including for service vehicles.

1.3 The proposed customer fulfilment centre comprises 21,558m^2 warehouse, 70m^2 customer pick-up plus 8,383m^2 office. The speculative warehouse provides 8,578m^2 industrial plus 596m^2 offices. Car parking is proposed adjacent to Edinburgh Road, with loading and delivery areas adjacent to Sydney Steel Road. Vehicle access is proposed from Edinburgh Road in two locations and from Sydney Steel Road in four locations. 24 hour, seven day operation of the development is proposed. Online grocery orders would be completed at and distributed from the facility to customers' homes.

1.4 The Secretary's Environmental Assessment Requirements for the project, dated 30 June 2020, include a number of traffic and parking matters. Table 1.1 includes the SEARs and the relevant section of the report in which they are addressed.

Table 1.1: SEARs	
SEARs requirement	**Section of report**
Traffic and access *– including:* - *details of all types and volumes likely to be generated during construction and operation (light and heavy vehicles, public transport, pedestrian and cycle trips), including a description of key access routes for each transport mode*	Traffic generation is discussed in paragraphs 3.23 and 3.25 and 3.30. Key access routes are discussed in paragraphs 2.3 to 2.8, 2.20 to 2.23, 3.5 to 3.6 and 3.17 to 3.18.
- *an assessment of the predicted impacts of this traffic on the safety and capacity of the surrounding road network (including the Bedwin Road bridge), and consideration of cumulative traffic impacts at key intersections using SIDRA or similar modelling*	Paragraphs 2.14 to 2.19 and 3.24 to 3.35.
- *details of any new roads or access points required for the development*	Paragraph 3.6, 3.16 to 3.19.
- *details of the largest vehicle anticipated to access and move within the site, including swept path analysis*	Paragraph 3.20, Figures 4 to 11.
- *detailed plans of the proposed site access point/s, parking arrangements and proposed pedestrian and cyclist facilities (including end of trip facilities), in accordance with the relevant Australian Standards*	Paragraphs 3.15 to 3.17, architect's plans.
- *identification of any dangerous goods*	This matter is being addressed by Riskcon

	likely to be transported on arterial and local roads to/ from the site and, if necessary, the preparation of an incident management strategy	Engineering.
-	*details of any proposed impact mitigation, management and monitoring measures.*	Paragraphs 3.6, 3.16 and 3.17.

1.5 This report assesses the traffic and access implications of the proposed development, including addressing the SEARs, through the following chapters:

- Chapter 2 - describing the existing conditions; and
- Chapter 3 - assessing the traffic and access implications of the proposed development.

2. EXISTING CONDITIONS

Site Location and Road Network

2.1 The site is on the south-western corner of the intersection of Edinburgh Road/ Sydney Steel Road at Marrickville, as shown in Figure 1. It is occupied by industrial development, including distribution and warehouse uses. Vehicular access to the site is provided from Edinburgh Road and Sydney Steel Road.

2.2 Surrounding development includes industrial, with residential development west of the site on Edinburgh Road. Marrickville Metro shopping centre is north of the site on Smidmore Street. The Marrickville dive site, associated with the construction of the Sydney Metro City and Southwest project, is east of the site on Edinburgh Road and Sydney Steel Road.

2.3 Adjacent the site, Edinburgh Road provides one traffic lane and one parking lane in each direction, clear of intersections. It has a shared pedestrian and cycle path along the site frontage. It provides access to industrial and residential properties. There are bus stops on both sides of the road, close to the site.

2.4 Sydney Steel Road runs south from Edinburgh Road at an unsignalised t-intersection controlled by give way signs, with Edinburgh Road having priority. Sydney Steel Road is a dead end south of Edinburgh Road. It provides access to industrial properties, including the subject site and the Marrickville dive site. It provides for two-way traffic with parking permitted on both sides, and is signposted as a bicycle route.

2.5 Smidmore Street runs north from Edinburgh Road, opposite the site. It has a signalised intersection with Edinburgh Road, with all turns permitted and pedestrian crossings on all approaches. Smidmore Street provides access to industrial properties and Marrickville Metro shopping centre. It provides for one traffic lane in each direction with parking permitted on both sides, clear of intersections. There are bus stops and taxi zones adjacent to the shopping centre.

2.6 West of the site, Fitzroy Street runs south from Edinburgh Road at a t-intersection controlled by a roundabout. Fitzroy Street provides access to industrial development and provides for one traffic lane and one parking lane in each direction, clear of intersections.

2.7 Victoria Road is west of the site and forms part of a connection between Tempe in the south and Newtown in the north. It provides for one traffic lane and one parking lane in each direction, clear of intersections. The intersection of Victoria Road with Edinburgh Road is controlled by traffic signals.

2.8 East of the site, there are roundabouts at Murray Street and Railway Road. The southern part of Murray Street provides access to the Marrickville dive site. Railway Road connects to Edgeware Road and provides an underpass of Bedwin Road and access to the dive site. Edinburgh Road has a signalized intersection with Bedwin Road. Bedwin Road provides a connection across the railway line.

Approved Development

2.9 The site has development consent for a Masters Home Improvement Centre of some 13,337m^2 and industrial units of 4,267m^2, with vehicular access from Edinburgh Road via a fourth signalised approach to the existing traffic signals at Smidmore Street. Access is also approved from Sydney Steel Road, including for service vehicles. Some 460 on-site parking spaces are approved.

2.10 We prepared a report[1] in association with the development application for the approved development.

Traffic Flows

2.11 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with other traffic on the surrounding road network. In order to gauge traffic conditions, counts were undertaken at these times on 21 July 2020 at the following intersections:

- Edinburgh Road/Victoria Road;
- Edinburgh Road/Fitzroy Street;
- Edinburgh Road/Smidmore Street;
- Edinburgh Road/Sydney Steel Road;
- Edinburgh Road/Murray Street;
- Edinburgh Road/Railway Road; and
- Edinburgh Road/Bedwin Road.

2.12 The results of the surveys are shown in Figures 2 and 3 and summarised in Table 2.1. Table 2.1 shows that Victoria Road and Bedwin Road carried some 1,140 to 1,665 vehicles per hour two-way during the surveyed weekday morning and afternoon peak periods. Edinburgh Road, Fitzroy Street and Smidmore Street carried lower flows of some 480 to 1,035 vehicles per hour two-way. Sydney Steel Road, Murray Street and Railway Road carried some 30 to 275 vehicles per hour two-way.

[1] Traffic Report for Proposed Masters Home Improvement Centre and Industrial Development, Marrickville, April 2015.

Table 2.1: Existing two-way (sum of both directions) peak hour traffic flows			
Road	**Location**	**Weekday morning**	**Weekday afternoon**
Victoria Road	North of Edinburgh Road	1,150	1,170
	South of Edinburgh Road	1,140	1,335
Edinburgh Road	East of Victoria Road	710	855
	East of Fitzroy Street	905	1,035
	East of Smidmore Street	480	525
	East of Sydney Steel Road	480	510
	East of Murray Street	585	745
	North of Railway Road	545	735
Fitzroy Street	South of Edinburgh Road	615	670
Smidmore Street	North of Edinburgh Road	490	535
Sydney Steel Road	South of Edinburgh Road	50	65
Murray Street	North of Edinburgh Road	170	275
	South of Edinburgh Road	40	30
Railway Road	East of Edinburgh Road	140	180
Bedwin Road	North of Edinburgh Road	1,070	1,020
	South of Edinburgh Road	1,505	1,665

2.13 The observed on-road peak hours were 8:30 – 9:30 am and 4:45 – 5:45 pm. The traffic flows in Table 2.1 and Figures 2 and 3 are adjusted flows, based on previous traffic counts undertaken in the area, to take account of the temporary arrangements in Smidmore Street, which are in place during construction of the approved extensions at the Marrickville Metro shopping centre.

Intersection Operations

2.14 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The surveyed intersections have been analysed using SIDRA for the traffic flows shown in Figures 2 and 3.

2.15 SIDRA simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.16 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.17 The analysis found that the signalised intersections of Edinburgh Road with Victoria Road, Smidmore Street and Bedwin Street are operating with average delays of less than 28 seconds per vehicle or less during weekday morning and afternoon peak periods. This represents LOS B, a good level of service.

2.18 The roundabouts at the intersections of Edinburgh Road with Fitzroy Street, Murray Street and Railway Road are operating with average delays for the highest delayed movements of less than 20 seconds per vehicle during peak periods. This represents level of service B, a good level of service.

2.19 The unsignalised intersection of Edinburgh Road with Sydney Steel Road is operating with average delays for the highest delayed movement of less than 20 seconds per vehicle during peak periods. This represents level of service B, a reasonable level of service.

Public Transport

2.20 Local bus services are provided by Sydney Buses. The site is adjacent to bus services which operate along Edinburgh Road. Services also operate along Victoria Street, west of the site. Services include:

- route 308 – Marrickville Metro, to Central Eddy Avenue via Redfern;
- route 352 – Marrickville Metro to Bondi Junction via Oxford Street, Crown Street and King Street;
- route 355 – Marrickville Metro to Bondi Junction via Moore Park and Erskineville;
- route 423 – Kingsgrove to City; and
- route 426 – Dulwich Hill to City.

2.21 As previously noted, the Sydney Metro project is currently under construction, adjacent to the site. In association with the project, Sydenham station is being upgraded. Sydenham is some 10 minutes' walking distance from the site.

Pedestrians and Cyclists

2.22 There is an existing off-road pedestrian and cycle path on Edinburgh Road, adjacent to the site. A plan showing cycle routes is provided in Appendix A.

2.23 There is a pedestrian link which connects to Sydenham Station, south of Sydney Steel Road. The intersection of Smidmore Street with Edinburgh Road includes signalised crossings of Edinburgh Road and Smidmore Street.

3. TRAFFIC AND ACCESS IMPLICATIONS OF PROPOSED DEVELOPMENT

3.1 It is proposed to construct a warehouse to be used as a customer fulfilment centre by Woolworths with associated offices. Car parking is proposed adjacent to Edinburgh Road, with loading and delivery areas adjacent to Sydney Steel Road. Vehicle access is proposed from Edinburgh Road in two locations and from Sydney Steel Road in four locations.

3.2 Online grocery orders would be completed at and distributed from the facility to customers' homes. A drive through customer pick-up facility (for online orders) with four pick up bays will be provided.

3.3 The facility is proposed to operate 24 hours a day, seven days a week. The customer fulfilment centre will operate with overlapping shifts and the office will operate during normal business hours, from Monday to Friday. The number of employees per shift (excluding delivery drivers) will vary from some 20 to 60. Deliveries to replenish the customer fulfilment centre will be made by semi-trailers.

3.4 This chapter assesses the implications of the proposed development through the following sections:

- public transport;
- parking provision;
- access, servicing and internal layout;
- traffic generation and effects;
- construction traffic management;
- matters raised in SEARs; and
- summary.

Public Transport, Pedestrians and Cyclists

3.5 As discussed in Chapter 2, bus services operate along Edinburgh Road (adjacent to the site) and along Victoria Street (to the west) and provide links to surrounding areas. There are cycle routes along Edinburgh Road and connecting to Sydney Steel Road. The site is therefore readily accessible by public transport and future public transport services as discussed in Chapter 2.

3.6 The traffic signals at Edinburgh Road/Smidmore Street, approved in association with the Masters and industrial development and also proposed to provide access to the subject development, will include signalised pedestrian crossings on all approaches. To improve pedestrian and cycle access, and consistent with the approved Masters and industrial development, shared pedestrian and cycle paths will be provided along the Edinburgh Road and Sydney Steel Road frontages to the site. These paths are shown in plans prepared by Nettleton Tribe, and attached as Appendix B to this report.

3.7 The proposed development would increase employment densities close to existing public transport services. The proposal would therefore strengthen the existing demand for these services. Journey to work data indicates the following modes of travel to work in this travel zone:

- vehicle driver: 62 per cent;
- train: 19 per cent;
- vehicle passenger: nine per cent;
- bus: four per cent;
- walked: three per cent;
- other: four per cent.

3.8 The proposed development is therefore consistent with government objectives and the planning principles of:

(a) improving accessibility to employment and services by walking, cycling, and public transport;

(b) improving the choice of transport and reducing dependence solely on cars for travel purposes;

(c) moderating growth in the demand for travel and the distances travelled, especially by car; and

(d) supporting the efficient and viable operation of public transport services.

Parking Provision

3.9 Part 2.10 of the Marrickville Development Control Plan 2010 (Parking) includes the following parking requirements:

- warehouse, distribution and industrial: one space per 200m^2 for customers and staff; and
- office: one space per 60m^2 GFA for customers and staff.

3.10 The proposed development includes the following:

- fulfilment centre comprising 21,558m^2 warehouse, 70m^2 customer pick-up plus 8,383m^2 offices; and
- speculative warehouse, comprising 8,578m^2 industrial plus 596m^2 offices.

3.11 The customer fulfilment centre would therefore require 108 spaces for the warehouse plus 140 spaces for the offices. The speculative warehouse would require 43 spaces for the industrial plus 10 spaces for the offices.

3.12 With respect to the customer fulfilment centre, there will be some 60 employees for the busiest shift. The 108 spaces will readily cater for their parking demands, including shift changes.

3.13 The proposed parking provision is 371 spaces, including eight disabled parking spaces, which satisfies the DCP requirement and is therefore appropriate. The majority of car parking (324 spaces) is proposed in the two level car park adjacent to Edinburgh Road. 47 spaces are proposed at grade on the southern side of the development.

3.14 The DCP would require a bicycle parking provision of some 257 spaces, based on the following rates:

- office premises: one space per 200m^2 for staff plus one space per 750m^2 for visitors for premises over 1,000m^2; and
- warehouse and distribution centres: one space per 150m^2.

3.15 However, this is considered excessive, as it would result in an over-provision which would not be used. By comparison, the Austroads guidelines recommend bicycle parking provisions of one space per 200m^2 and one space per 500m^2 for office and industrial uses respectively. These rates are based on a 10 per cent travel mode by bicycle, which is higher than that for the subject area as noted in paragraph 3.7. Based on these rates, the development would require some 106 bicycle parking spaces. Bicycle parking is proposed for 106 bicycles in accordance with these requirements. Showers and lockers are also proposed.

Access, Servicing and Internal Layout

3.16 Access to the development is proposed from Edinburgh Road and Sydney Steel Road. As in the approved Masters and industrial development, the main access to the site is proposed via a fourth signalised approach to the Edinburgh Road/Smidmore Street intersection. Driveways are also proposed from Sydney Steel Road, for service vehicles and as secondary access to the main car park.

3.17 The main access, as a signalised approach to the Edinburgh Road/Smidmore Street intersection, would include provision for new right turn bays in both directions on Edinburgh Road, for turns into the site and Smidmore Street. Land will be provided from the subject site to accommodate the proposed intersection modifications. A copy of the traffic signal concept plan for the upgraded intersection is provided in Appendix C.

3.18 A driveway on Edinburgh Road would be provided at the western end of the site, for emergency access. Driveways will also be provided from Sydney Steel Road to the customer fulfilment centre (separate driveways for inbound goods and outbound delivery vans), plus a driveway for the separate warehouse space. A secondary driveway will be provided to the main employee car park.

3.19 The driveway widths will be provided in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 2: Off-street commercial vehicle facilities), AS 2890.1:2004 and AS 2890.2:2018, to cater for the swept paths of cars and service vehicles.

3.20 Deliveries to the customer fulfilment centre will be made by semi-trailers up to 20 metres long. Some 10 to 15 inbound deliveries are expected per day. The speculative warehouse will also provide for semi-trailers. Deliveries from the

customer fulfilment centre will be made by 6.4 metre small rigid trucks, generally outside peak times. Service vehicles will enter and exit in a forward direction. Swept paths are shown in Figures 4 to 11.

3.21 The majority of parking will be provided in a two level car park, connected by an internal ramp. Additional parking will be provided at-grade, on the southern side of the warehouse. Parking spaces will be provided with minimum dimensions of 5.4 metres long by 2.5 metres wide. Spaces with adjacent obstructions will be 0.3 metres wider to appropriately provide for doors to open. Disabled spaces will be 2.4 metres, wide, with a 2.4 metre wide adjacent area for wheelchairs. These dimensions are considered appropriate, being in accordance with AS 2890.1:2004.

3.22 A drive through customer pick-up facility (for online orders) will also be provided on the ground level, and will provide four pick-up bays. The facility will provide for customers wishing to collect their online orders, in preference to home delivery. Staff will deliver on-line orders to the waiting customer vehicles.

3.23 The drive through pick-up will have a service capacity of some 40 vehicles per hour, although the peak number of pick-ups is anticipated to be lower at some 15 to 20 customers per hour.

Traffic Generation and Effects

3.24 The development is proposed to operate 24 hours a day, seven days a week. The customer fulfilment centre will operate with overlapping shifts. The office will operate during normal business hours, from Monday to Friday. The drive through customer pick-up facility will operate Monday to Saturday. Customer home deliveries will typically occur during the morning between 5:00 am and 8:00 am, with vehicles returning later in the morning, and during the afternoon between 1:00 pm and 4:00 pm, with vehicles returning later in the evening.

3.25 Traffic generated by the operation of the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with other traffic on the surrounding road network. Based on surveys of the existing customer fulfilment facility at Mascot, the proposed customer fulfilment facility at Marrickville would have weekday morning and afternoon traffic generations of some 150 vehicles per hour two-way (100 cars plus 50 delivery vans).

3.26 For the office (to be used in association with the customer fulfilment centre) and speculative warehouse (for which a tenant is not yet known), surveys undertaken by TfNSW found the following weekday two-way (sum of both directions) peak hour generation rates:

- commercial: 0.84 and 0.6 vehicles per hour per 100m^2 during weekday morning and afternoon peak hours respectively; and
- industrial: 0.52 and 0.56 vehicles per hour per 100m^2 during weekday morning and afternoon peak hours respectively.

3.27 Based on these rates, the offices (total of 8,979m^2) would have peak period weekday generations of some 60 to 70 vehicles (all cars) and the industrial (8,578m^2) of some 50 vehicles per hour two-way (some 40 cars and 10 trucks).

3.28 The proposed development would therefore have a total traffic generation of some 270 vehicles per hour two-way during peak periods, comprising 150 vehicles for the customer fulfilment facility, some 70 vehicles for the offices and 50 vehicles for the industrial. This generation compares to that assessed for the approved Masters and industrial development of some 360 vehicles per hour two-way. The proposed development would therefore have a lower traffic generation than the approved development.

3.29 Daily traffic generation of the development would be some 1,700 vehicles per day (two-way), comprising some 1,100 vehicles for the customer fulfilment facility (including 600 cars and 500 delivery vans), 350 vehicles for the offices and 250 vehicles for the industrial (including 125 cars and 125 trucks).

3.30 Based on travel modes for this zone (paragraph 3.7), estimated numbers of people travelling to the development by public transport and walking/cycling/other modes are some 90 in the peak hours (including some 70 by train/bus and some 20 by walking/cycling/other) and some 450 over the day (including some 350 by train/bus and some 100 by walking/cycling/other). The majority of these (some 90 per cent or more) would be associated with the customer fulfilment facility.

3.31 The additional traffic has been assigned to the road network. Existing peak hour traffic flows plus the additional development traffic are shown in Figures 2 and 3, and summarized in Table 3.1. Traffic increases on Edinburgh Road and Sydney Steel Road, from where access is proposed, would be some 65 to 130 vehicles per hour two-way at peak times. Increases on Victoria Road, Fitzroy Street, Smidmore Street, Murray Street, Railway Road and Bedwin Road would be lower at some 10 to 60 vehicles per hour two-way.

3.32 The intersections previously analysed in Chapter 2 have been reanalysed with SIDRA for the additional development traffic flows shown in Figures 2 and 3. The analysis found that the intersections of Edinburgh Road with Victoria Road and Bedwin Street would continue to operate with average delays of less than 28 seconds per vehicle during weekday morning and afternoon peak periods. This represents LOS B, a good level of service. The intersection of Edinburgh Road with Smidmore Street (including the new fourth signalised approach) would operate with average delays of less than 30 seconds per vehicle during peak periods. This represents level of service C, a satisfactory level of service.

Table 3.1: Existing two-way peak hour traffic flows plus development traffic					
Road	**Location**	**Weekday morning**		**Weekday afternoon**	
		Existing	Plus development	Existing	Plus development
Victoria Road	North of Edinburgh Road	1,150	+40	1,170	+35
	South of Edinburgh Road	1,140	+50	1,335	+45
Edinburgh Road	East of Victoria Road	710	+90	855	+80
	East of Fitzroy Street	905	+130	1,035	+120
	East of Smidmore Street	480	+100	525	+120
	East of Sydney Steel Road	480	+110	510	+120
	East of Murray Street	585	+90	745	+95
	North of Railway Road	545	+65	735	+70
Fitzroy Street	South of Edinburgh Road	615	+40	670	+40
Smidmore Street	North of Edinburgh Road	490	+30	535	+30
Sydney Steel Road	South of Edinburgh Road	50	+130	65	+80
Murray Street	North of Edinburgh Road	170	+20	275	+25
	South of Edinburgh Road	40	-	30	-
Railway Road	East of Edinburgh Road	140	+25	180	+25
Bedwin Road	North of Edinburgh Road	1,070	+10	1,020	+10
	South of Edinburgh Road	1,505	+55	1,665	+60

3.33 The intersections of Edinburgh Road with Fitzroy Street, Murray Street and Railway Road would continue to operate with average delays for the highest delayed movements of less than 20 seconds per vehicle during peak periods. This represents level of service B, a good level of service.

3.34 The intersection of Edinburgh Road with Sydney Steel Road would operate with average delays for the highest delayed movement of less than 20 seconds per vehicle during peak periods. This represents level of service B, a reasonable level of service.

3.35 Therefore, with the proposed fourth leg at the Edinburgh Road/Smidmore Street signalized intersection and associated road works, the road network will be able to cater for the traffic from the proposed development.

Matters Raised in SEARs

3.36 Matters raised in the SEARs, and their discussion in this report, are provided in Chapter 1. The SEARs also include:

- *consideration of the issues identified by the relevant public authorities*

3.37 With regards to this matter, Inner West Council raised a number of matters in its submission to the SEARs, which are discussed below.

Traffic and transport

Traffic/transport reports accompanying a future application will need to:

- *Consider the traffic capacity of Bedwin Road bridge.*

3.38 This matter is discussed in paragraph 3.32. The Bedwin Road bridge provides a four lane connection over the railway line. As noted in Chapter 2, the capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. Including the additional development traffic, the intersection of Edinburgh Road with Bedwin Road will operate at a good level of service.

- *Provide detailed traffic and parking impact assessment on the surrounding road network.*

3.39 Traffic effects are discussed in paragraphs 3.24 to 3.35. The proposed development does not rely on on-street parking.

- *Confirm key routes for vehicles accessing the sites, including WestConnex.*

3.40 The traffic analysis has focused on key intersections in the vicinity of the site. The effects of development traffic beyond these key intersections will be reduced, and minor, including on WestConnex.

- *Provide a cumulative impact assessment, in relation to construction, traffic impacts and operations of other major sites in the area including Victoria Road precinct, Marrickville Metro Expansion, Metro SouthWest and Potts Hill to Alexandria Transmission Cable Project.*

3.41 As noted above, the site has development consent for a Masters Home Improvement Centre and industrial development with a higher traffic generation than now proposed. The road works approved in association with the Masters and industrial development are now proposed in association with the subject development. They are therefore appropriate to cater for the traffic from the proposed development.

3.42 These road works, including traffic signals for access to the site, widening of Edinburgh Road and right turn lanes in both directions, take into account extensions to Marrickville Metro shopping centre.

3.43 In association with the shopping centre extension, a number of other road works are being undertaken in Edinburgh Road, including amendments to bus stops and a roundabout at the intersection of Edinburgh Road with Sydney Steel Road. Our assessment recognizes these works, although it does not rely on them.

3.44 With regards to the Victoria Road precinct, this site, on the corner of Victoria Road, Sydenham Road and Faversham Street, is relatively remote from the subject

site. The traffic report[2] for this development notes relatively minor traffic increases in Fitzroy Street of some 20 to 30 vehicles per hour in association with this development. This would result in additional traffic flows in Edinburgh Road of some 10 to 15 vehicles per hour two-way at peak times. These minor increases would not have noticeable effects.

3.45 With regards to Sydney Metro City and SouthWest, which is currently under construction adjacent to the site, our traffic counts include traffic associated with these activities. Once construction of this project is completed (estimated to be in approximately 2024), construction traffic associated with these activities will cease. There is not likely to be a significant period of overlap between the operation of the proposed development and construction activities for Sydney Metro City and SouthWest. However, as noted, our traffic assessment includes traffic from construction activities for this project.

3.46 With regards to the Potts Hill to Alexandria transmission cable project, this project will run along Edgeware Road and Bedwin Road. Neither of these roads are adjacent to the site. The project is expected to be completed by November 2022 and is therefore not expected to overlap with the operation of the proposed development. Once operational, the transmission cable project would not typically generate traffic activity.

- *Provide swept path assessment for movements into the site and within the site.*

3.47 Swept paths are shown in Figures 4 to 11.

[2] 182-198 Victoria Road and 28-30 Faversham Street, Marrickville Mixed Use Development Transport Impact Assessment. Prepared for Toga Wicks Park Developments Pty Ltd by GTA Consultants (NSW) Pty Ltd, 11 November 2019.

- *Consistency with MDCP 2011 parking objectives and provisions.*

3.48 Parking provision is discussed in paragraphs 3.9 to 3.15.

- *Consider opportunities to accommodate service and delivery vehicles without jeopardising the integrity of existing and likely future active transport routes along Steel Road and Edinburgh Road.*

3.49 Improvements to pedestrian and cycle connections in Edinburgh Road and Sydney Steel Road are proposed in association with the development, as discussed in paragraph 3.6.

- *Outline loading needs including the frequency and quantity of visits by delivery/servicing vehicles as well as vehicle sizes likely to be needed.*

3.50 These matters are discussed in paragraph 3.20.

Active Transport

- *Demonstrate how pedestrians/cyclist/vehicle conflict will be managed, particularly in relation to current and future active transport links.*
- *Provide pedestrian traffic flows around the development and consider minimising pedestrian/vehicle conflict along the adjacent roads and key intersections.*
- *Details on bicycle parking and end of trip facilities.*

3.51 Appendix B provides plans showing the proposed upgrades to the pedestrian and cycle paths in Sydney Street Road and Edinburgh Road. The development includes end of trip facilities and bicycle parking.

- *Provide comprehensive travel plan for customers, business operations and staff to assist in minimising private car dependency including:*
    - *Objectives clearly prioritizing site access by public transport, walking and cycling (including combinations of) and discouraging access by single occupant cars.*
    - *Specific actions to address how the above conditions will be satisfied.*
    - *Nominate the party responsible for coordinating and implementing the travel plan.*

3.52 The site has been chosen for development of the customer fulfilment centre, taking into account public transport accessibility, including bus routes and connections to existing and future upgraded railway connections. To complement its location, the proposed development includes upgrades to the pedestrian and cycle network adjacent to the site, and connecting to nearby public transport, as well as significant bicycle parking and end of trip facilities for employees.

3.53 It should also be noted that the site is strategically located to play a key role in Woolworths distribution network for online orders in the region. Delivery vans typically make 15-20 deliveries as part of their route, and are routed to ensure efficiency and minimise vehicle kilometres travelled. In this way, online order fulfilment and delivery significantly reduces the number of vehicle kilometres travelled, compared to individual shoppers visiting a supermarket.

3.54 Prior to opening of the facility, Woolworths will advise staff of public transport availability and options for travel, particularly for employees on site during the day. A work place travel plan will be prepared, which will include the following elements:

- encourage the use of public transport, including bus services to and through Marrickville at the future Metro service;

- identify existing bus routes which stop adjacent and close to the site, including the location of bus stops and pedestrian crossings at signalised intersections;

- work with bus operators to improve services;

- encourage public transport by employees and visitors through the provision of information, maps and timetables in the site travel plan;

- raise awareness of health benefits of walking and cycling (including maps showing walking and cycling routes, including adjacent to and near the site); and

- encourage cycling by providing safe and secure bicycle parking, including the provision of bicycle parking for employees, plus showers and lockers.

3.55 Transport for NSW also raised a number of matters in its submission to the SEARs, which are discussed below.

Transport and Accessibility (Construction and Operation)

The Environmental Impact Statement (EIS) for the subject development should include a Traffic and Transport Impact Assessment that provides, but is not limited to, the following:

- *details all daily and peak traffic and transport movements likely to be generated (light and heavy vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development;*

3.56 These matters are discussed in paragraphs 3.25 to 3.30.

- *details of the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;*

3.57 These matters are discussed in paragraphs 2.11 to 2.13 and 2.20 to 2.23.

- *an assessment of the operation of existing and future transport networks including public transport, pedestrian and bicycle provisions and their ability to accommodate the forecast number of trips to and from the development;*

3.58 These matters are discussed in paragraphs 2.14 to 2.19, 3.5 to 3.6 and 3.24 to 3.35.

- *details the type of heavy vehicles likely to be used (e.g. B-doubles) during the operation of the development and the impacts of heavy vehicles on nearby intersections;*

3.59 This matter is discussed in paragraph 3.20. B-doubles are not proposed. The site is in an industrial area which carries semi-trailers.

- *details of access to, from and within the site to/from the local road and strategic (motorway) network including intersection location, design and sight distance (i.e. turning lanes, swept paths, sight distance requirements);*

3.60 As noted above, the site is in an industrial area. With the exception of the proposed signalised access to the site and road widening on Edinburgh Road, no changes to the road network are proposed. A concept traffic signal plan is provided as Appendix C.

- *Impact of the proposed development on existing and future public transport and walking and cycling infrastructure within and surrounding the site;*

3.61 These matters are discussed in paragraphs 3.5 and 3.6.

- *an assessment of the existing and future performance of key intersections providing access to the site and any upgrades (road/ intersections) required as a result of the development;*
- *an assessment of the predicted impacts on road safety and the capacity of the road network to accommodate the development;*

3.62 These matters are discussed in paragraphs 2.14 to 2.19 ad 3.24 to 3.35.

- *details of the travel demand management measures to be implemented to encourage employees of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing, including details of a location-specific Sustainable Work Travel Plan;*

3.63 These matters are discussed in paragraphs 3.51 to 3.54.

- *appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network;*

3.64 These matters are discussed in paragraphs 3.5 and 3.6.

- *details of the proposed number of car parking spaces and compliance with appropriate parking codes and justify the level of car parking provided on the site;*

3.65 These matters are discussed in paragraphs 3.9 to 3.13.

- *details of access and parking arrangements for emergency vehicles;*

3.66 Access for emergency vehicles is discussed in paragraph 3.18.

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

3.67 These matters are discussed in paragraphs 3.19 and 3.21.

- *the existing and proposed pedestrian and bicycle routes and end of trip facilities within the vicinity of and surrounding the site and to public transport facilities as well as measures to maintain road and personal safety in line with CPTED principles; and*

3.68 These matters are discussed in paragraphs 3.5 and 3.6. CPTED matters are being addressed by other study team members.

- *preparation of a draft Construction Traffic Management Plan which includes:*
  - *details of vehicle routes, number of trucks, hours of operation, access management and traffic control measures for all stages of construction;*
  - *assessment of cumulative impacts associated with other construction activities;*
  - *an assessment of road safety at key intersections;*
  - *details of anticipated peak hour and daily truck movements to and from the site;*
  - *details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements;*
  - *details of temporary cycling facilities and pedestrian access during construction, should the development require the closure of the facility, demonstrate the installation of adequate safety and diversion measures to limit time delay and detour distances;*
  - *an assessment of traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrians, cyclists and public transport operations.*

3.69 A draft construction traffic management plan is provided as Appendix D.

Summary

3.70 In summary, the main points relating to the traffic and access implications of the proposed development are as follows:

i) the proposed development will be accessible by public transport;

ii) the proposed parking provision is appropriate;

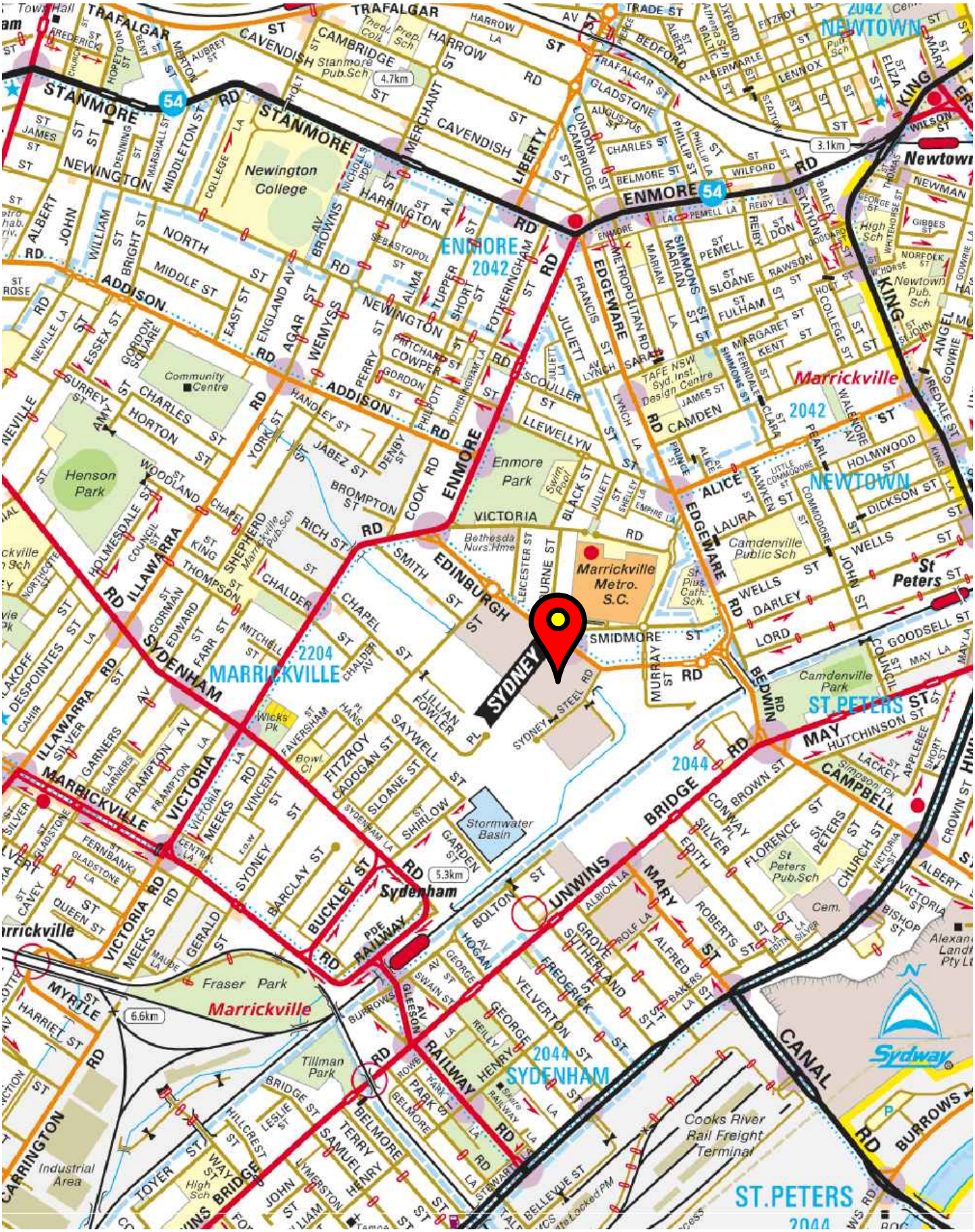
iii) access, servicing and internal layout will be provided in accordance with AS 2890.1:2004 and AS 2890.2 – 2002;

iv) traffic generation of the proposed development will be less than the approved Masters and industrial development on the site;

v) a series of road works is proposed, including:
- traffic signals for access to the site on Edinburgh Road, at Smidmore Street;
- widening of Edinburgh Road to provide two through traffic lanes and right turn bays in both directions; and
- upgrades to pedestrian and cycle paths along the site frontages;

vi) with these works, the road network will be able to cater for the traffic from the proposed development; and

vii) matters raised in the SEARs are addressed in paragraphs 3.36 to 3.69.



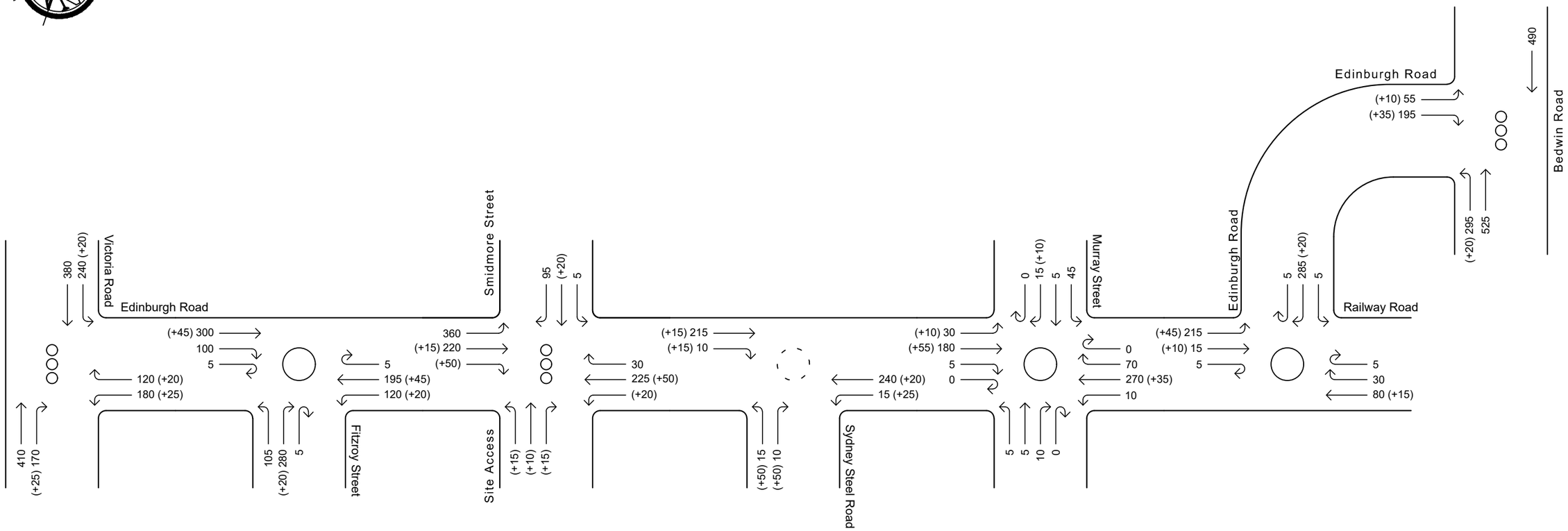
Click: https://goo.gl/maps/pxJH9dA429y2qC1b8

Location Plan

Colston Budd Rogers & Kafes Pty Ltd

Drawn By: CBRK Pty Ltd_hs Ref: 11441 28.07.2020

Figure 1



LEGEND

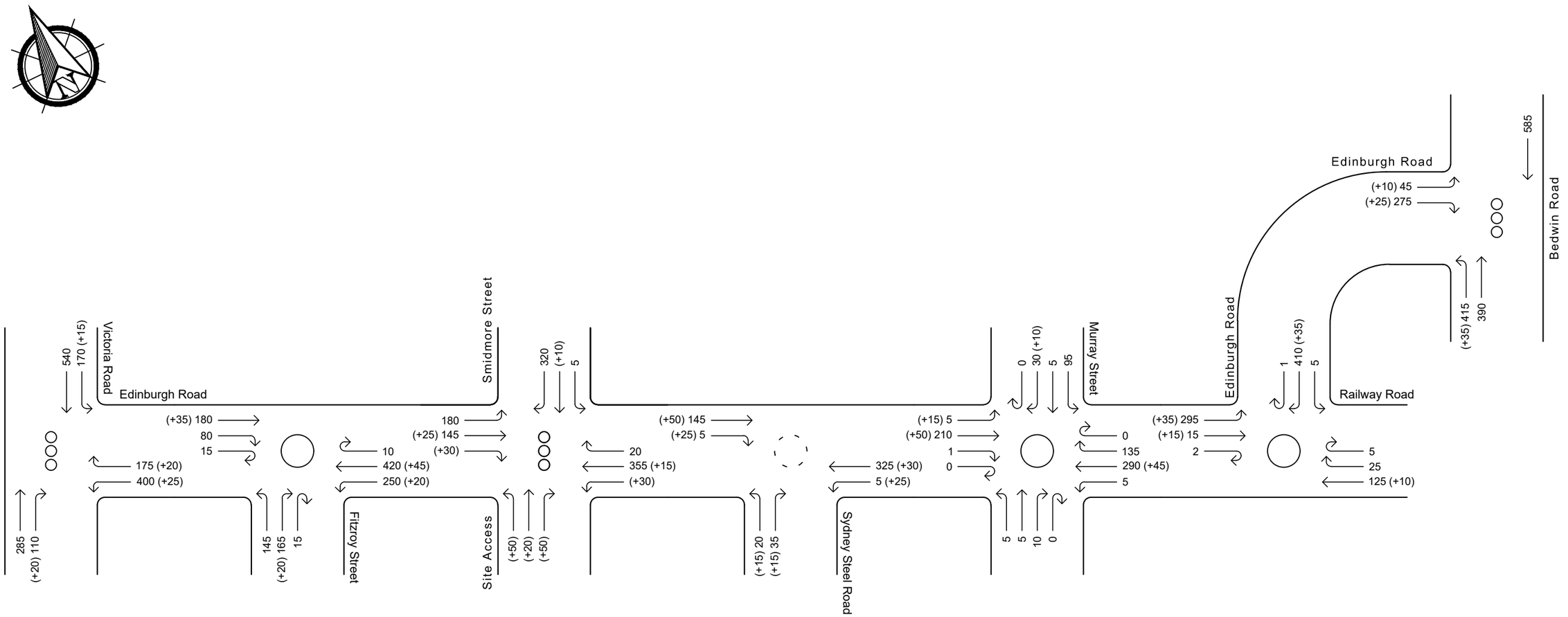
100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout
- Roundabout by Marrickville Metro

Existing weekday morning peak hour traffic flows plus development traffic

Figure 2

Colston Budd Rogers & Kafes Pty Ltd

Drawn By: CBRK Pty Ltd_hs Ref: 11441 28.07.2020 DD.MM.YYYY



LEGEND

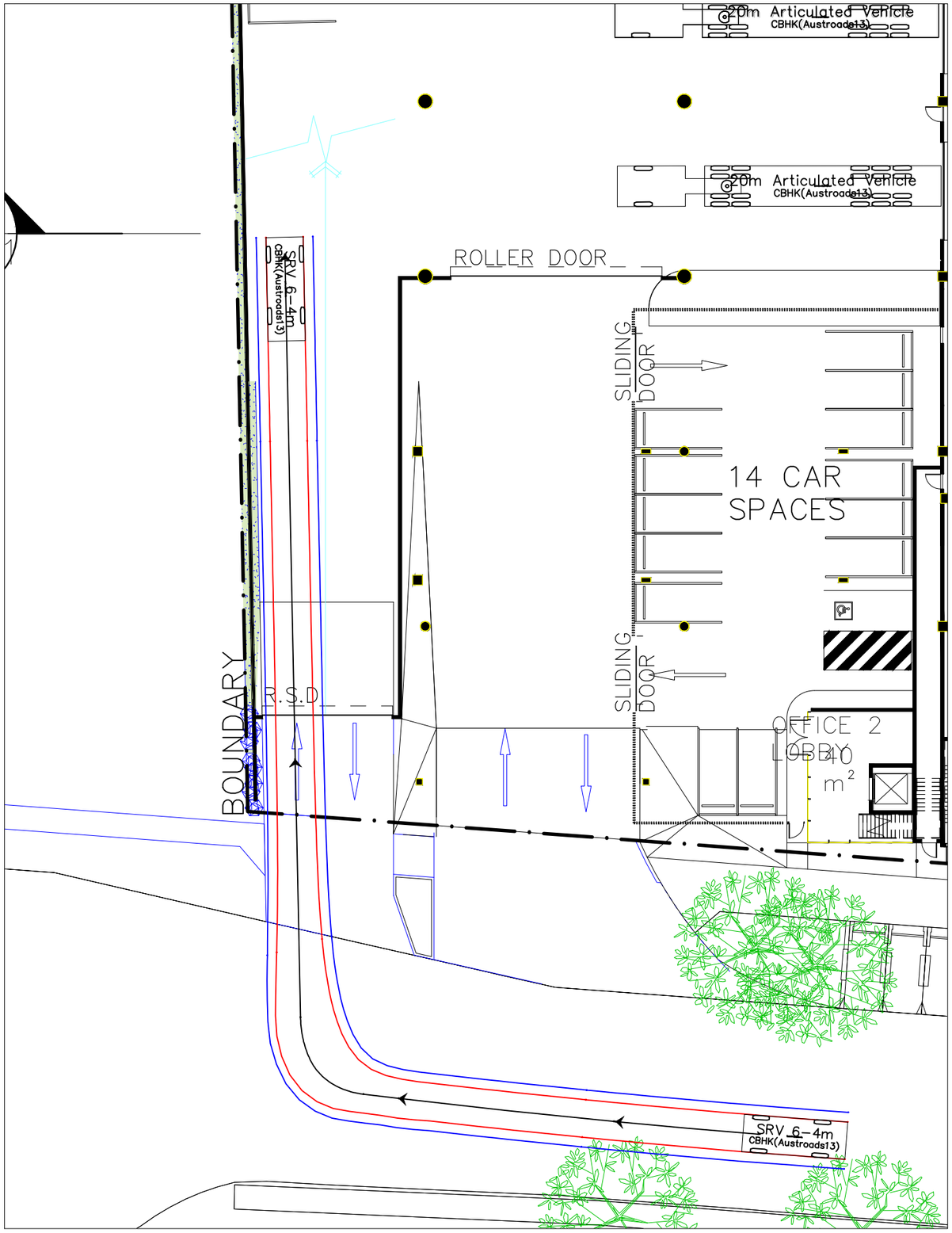
100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout
- Roundabout by Marrickville Metro

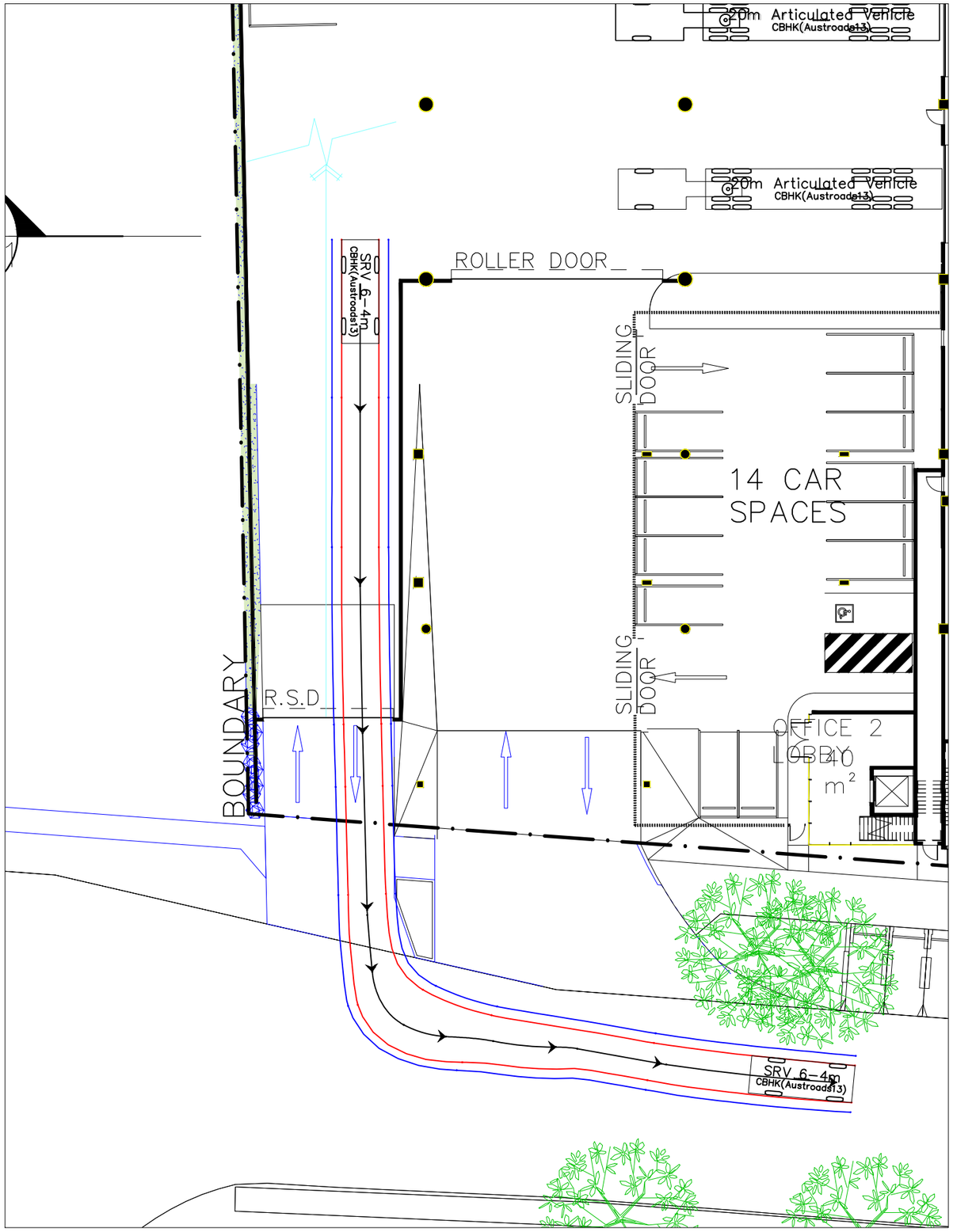
Existing weekday afternoon peak hour traffic flows plus development traffic

Figure 3

Colston Budd Rogers & Kafes Pty Ltd

Drawn By: CBRK Pty Ltd_hs Ref: 11441 28.07.2020 DD.MM.YYYY



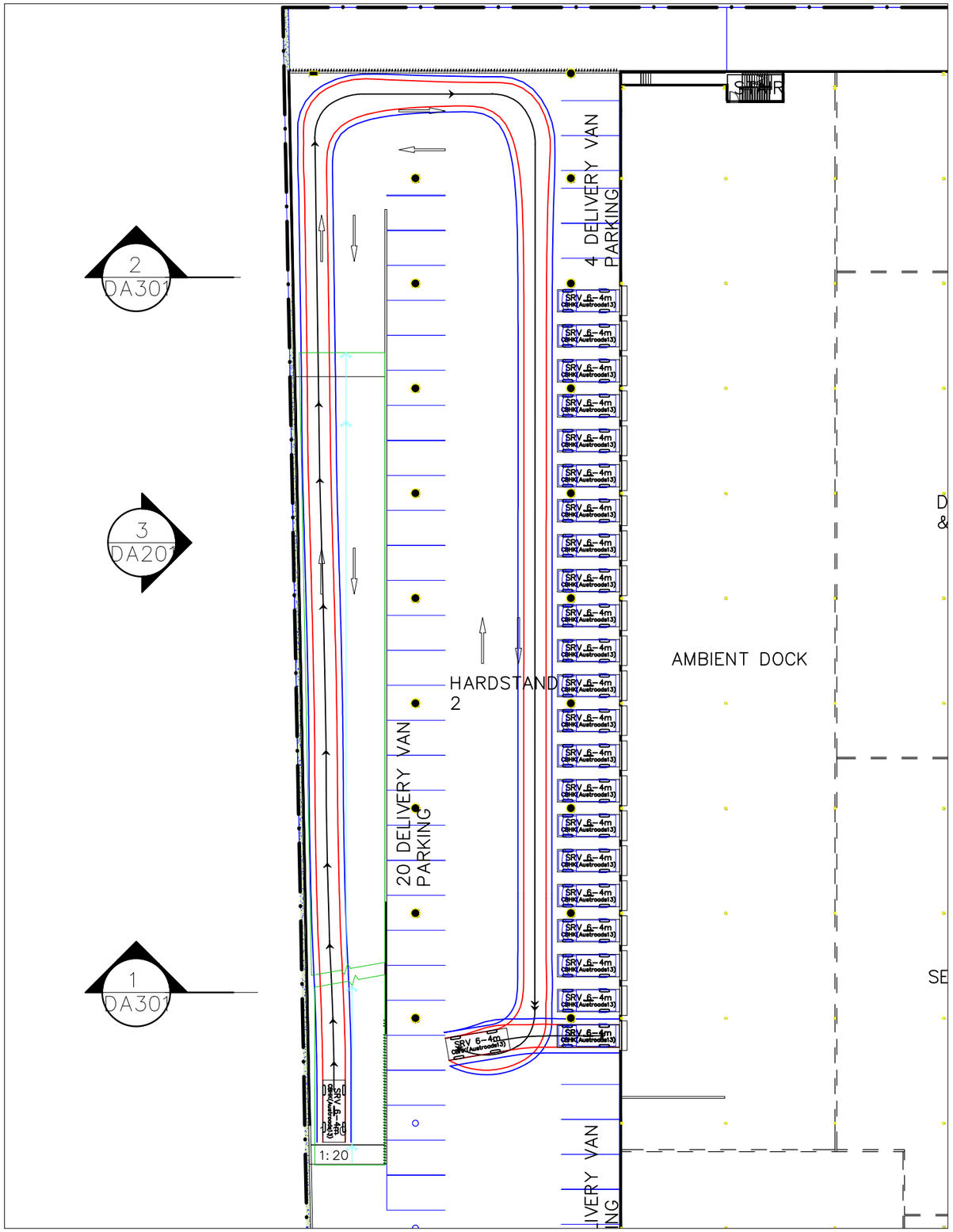


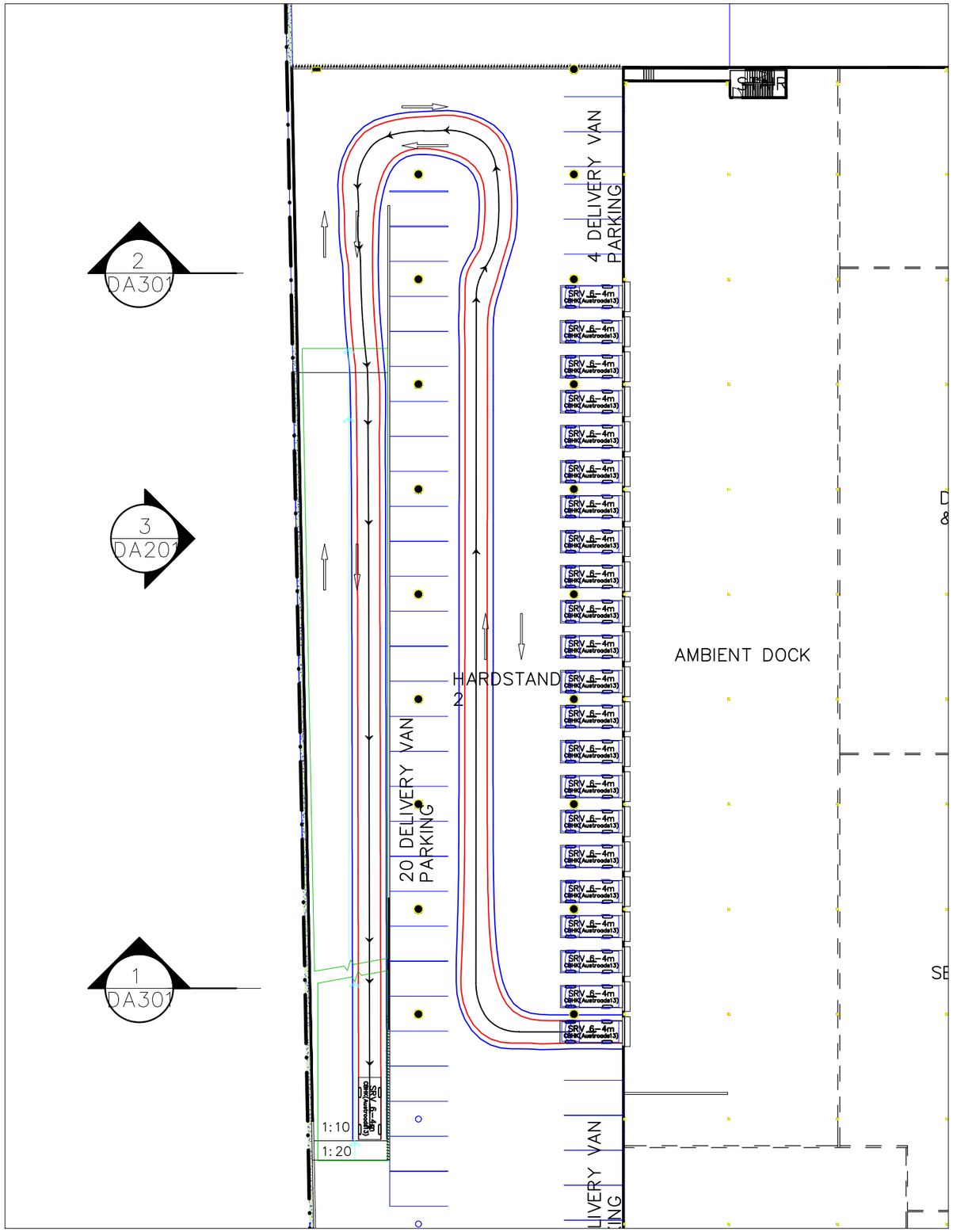
NOTE:
SKETCH PLAN ONLY. PROPERTY BOUNDARIES, UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO SURVEY AND FINAL DESIGN. TRAFFIC MEASURES PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

6.4m SMALL RIGID VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020





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Swept Path of Clearance to Vehicle Body

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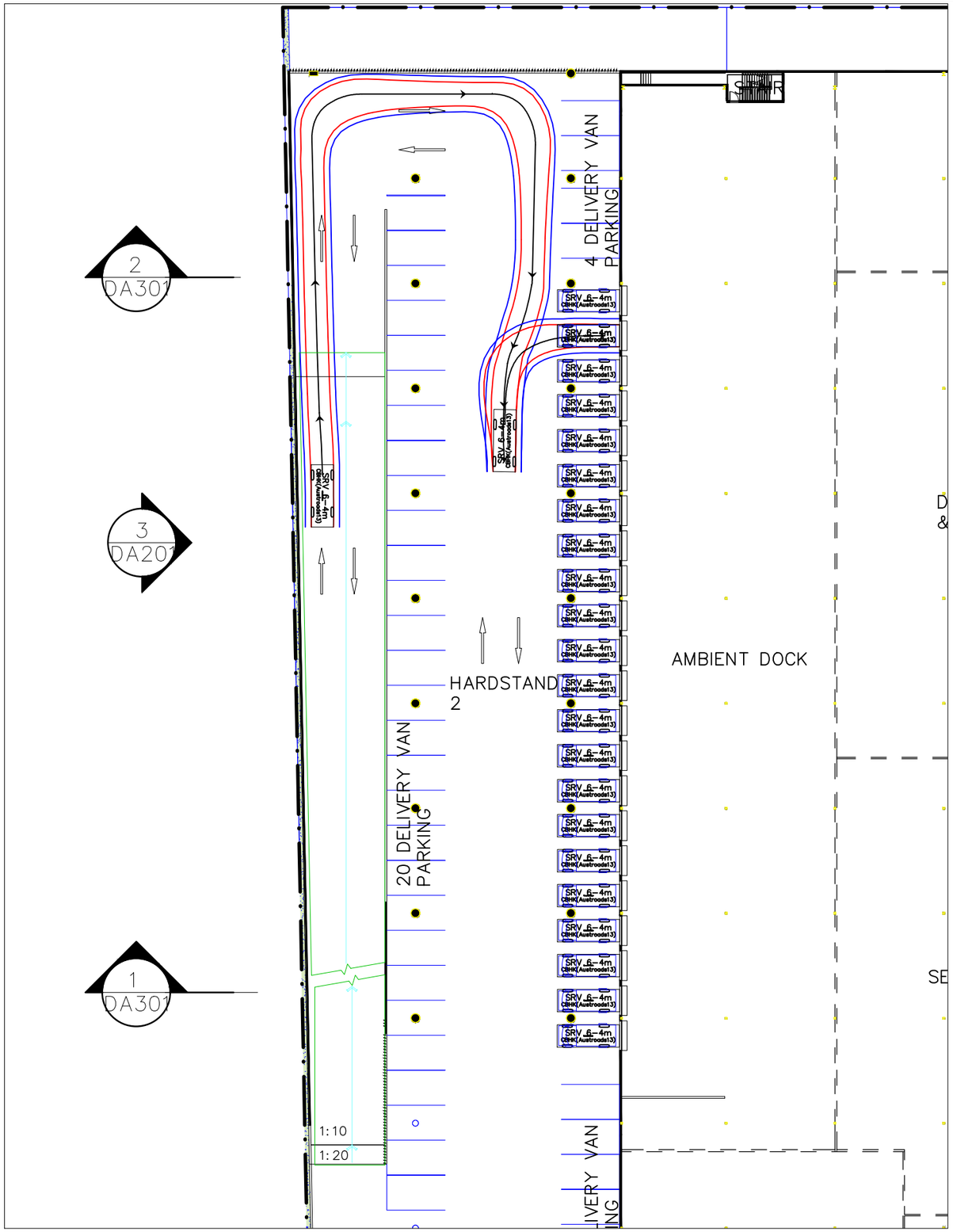

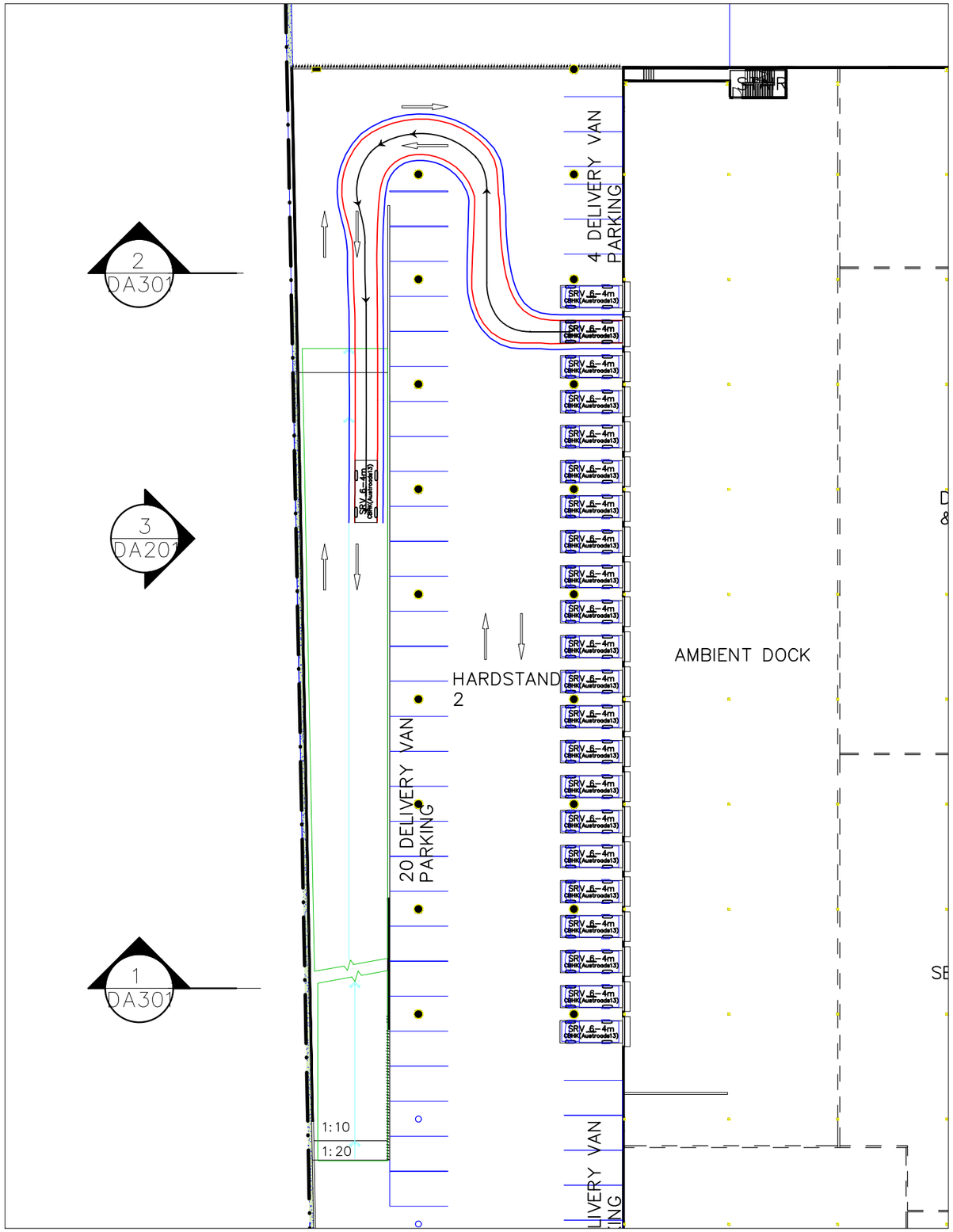

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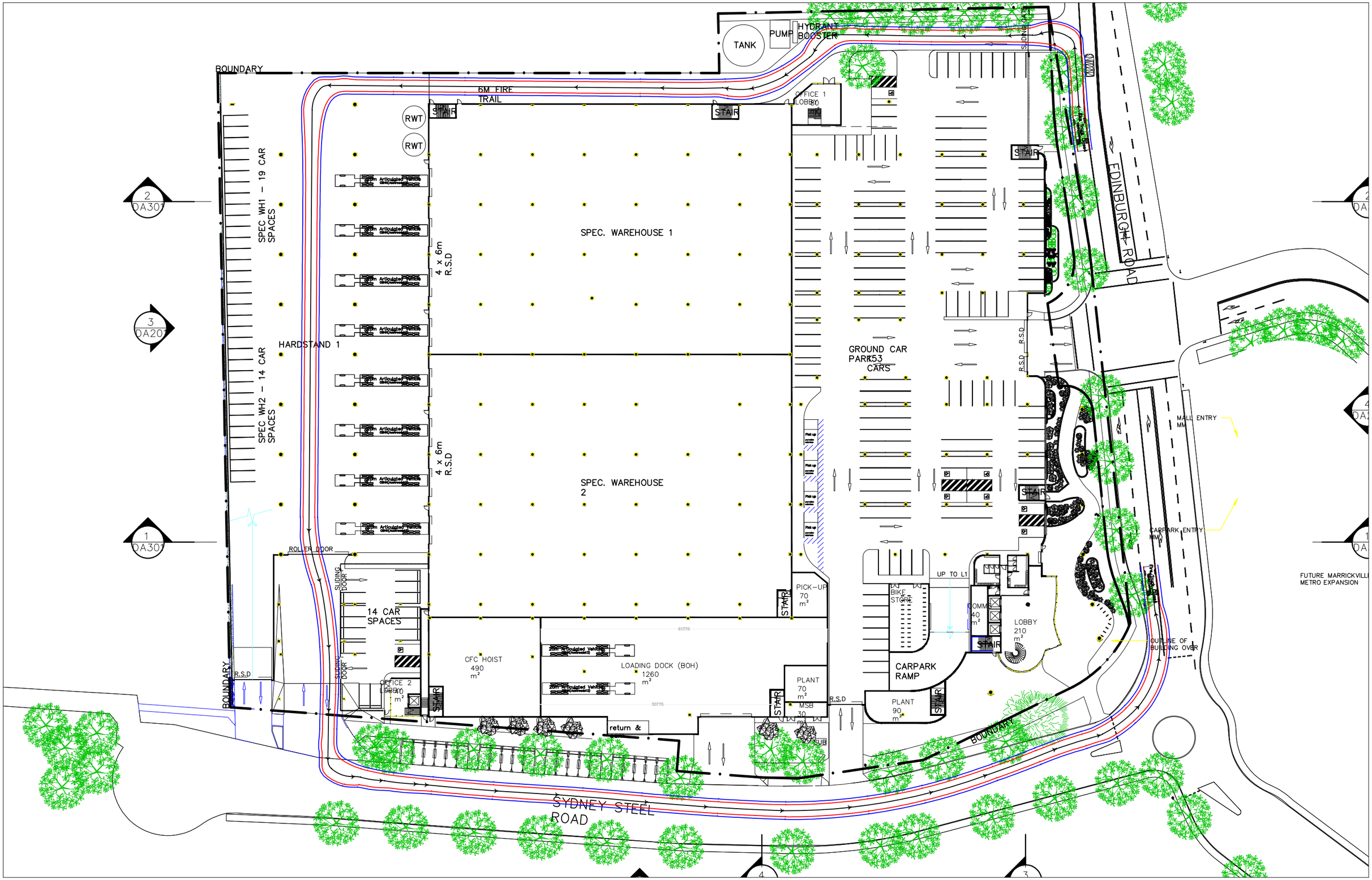
Swept Path of Clearance to Vehicle Body

6.4m SMALL RIGID VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020



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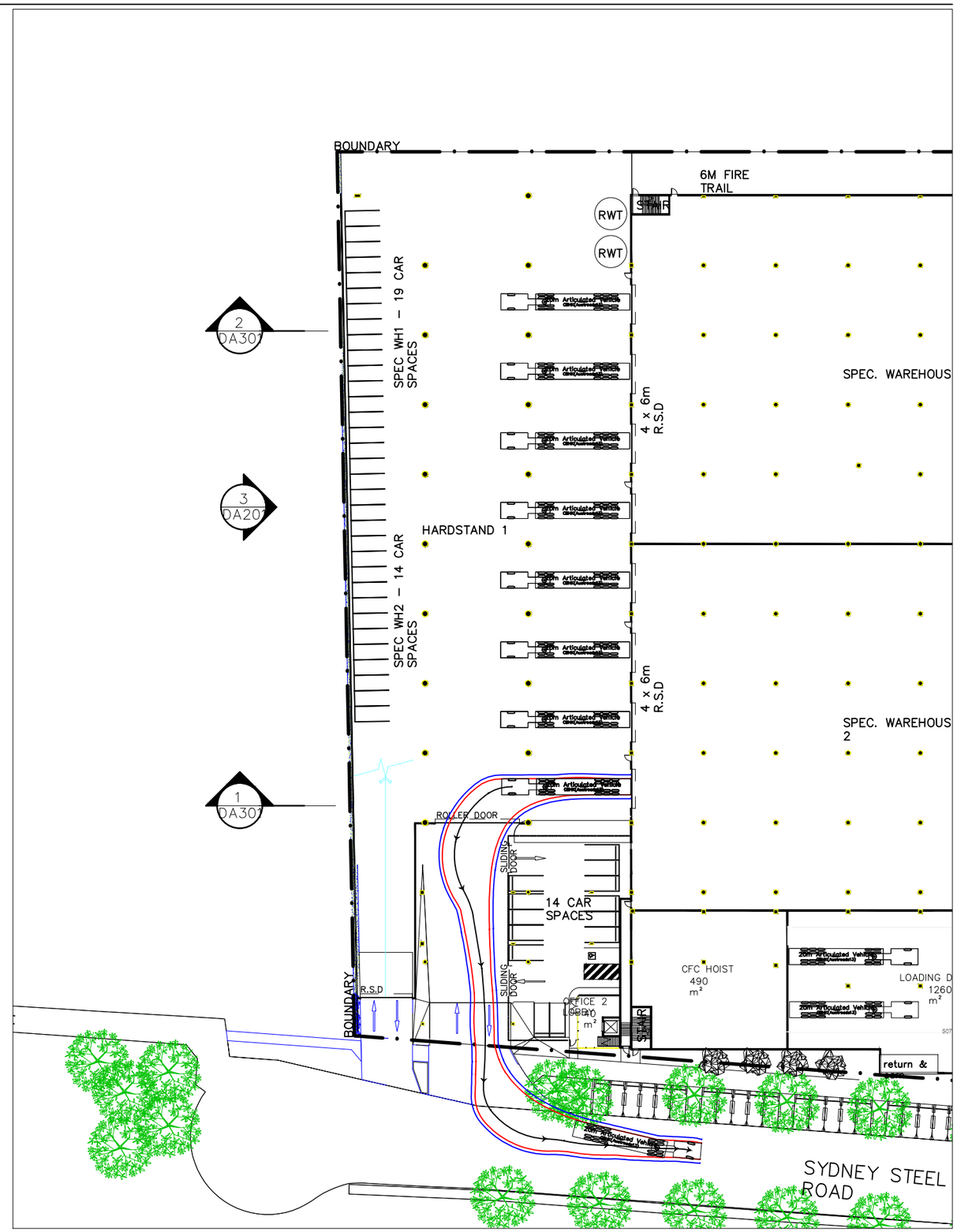
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

7.6m FIRE TRUCK SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020

7



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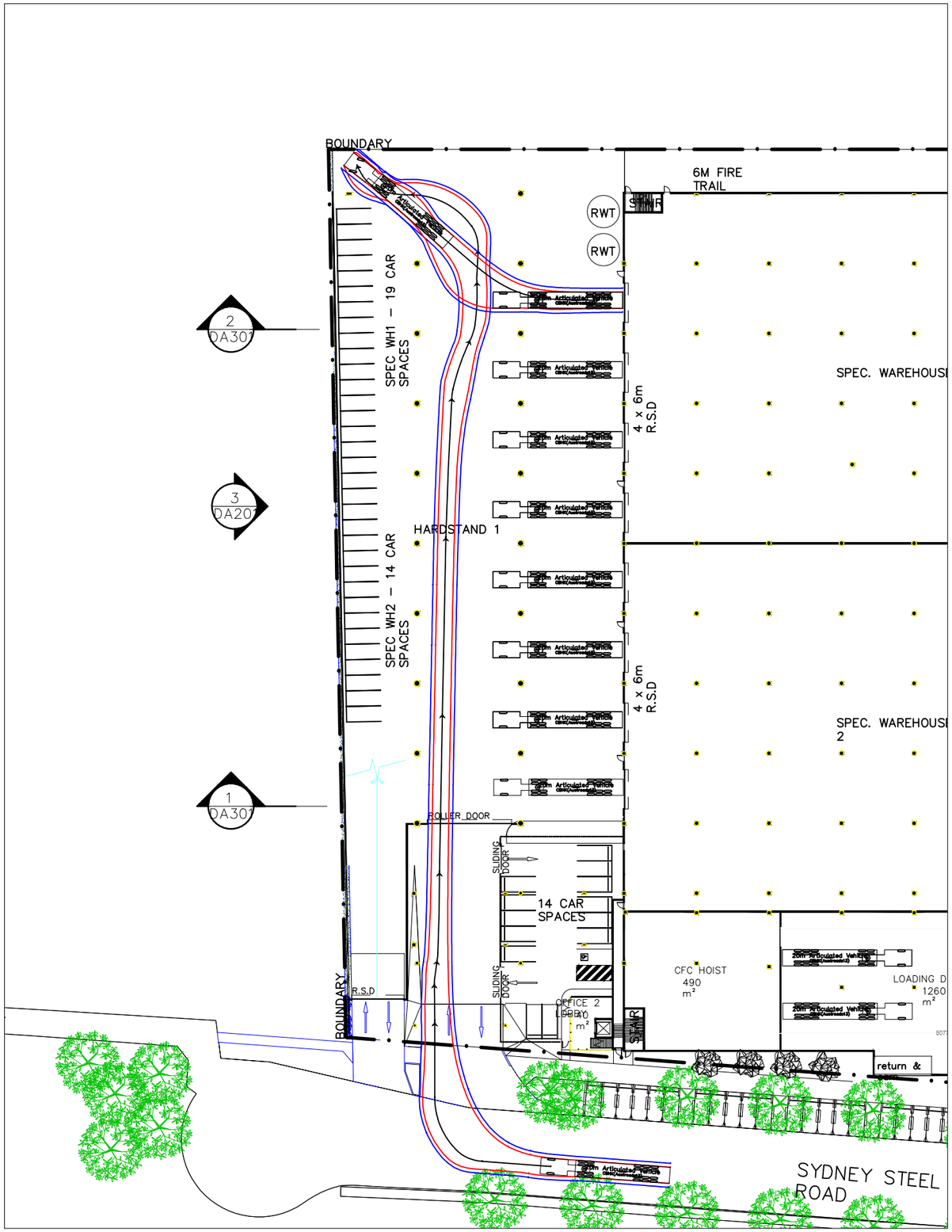
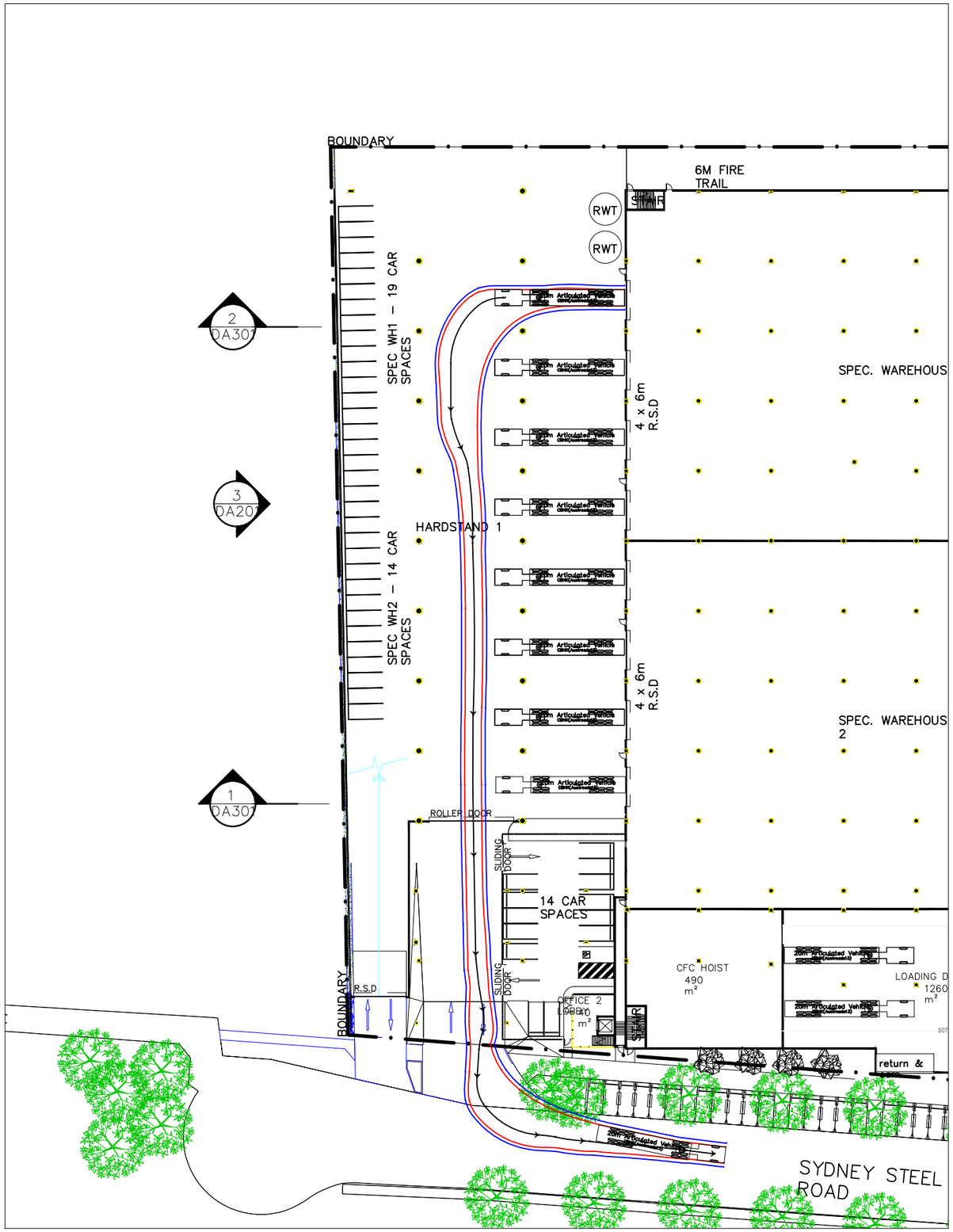
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

20.0m ARTICULATED VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020





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Swept Path of Clearance to Vehicle Body

20.0m ARTICULATED VEHICLE SWEPT PATHS

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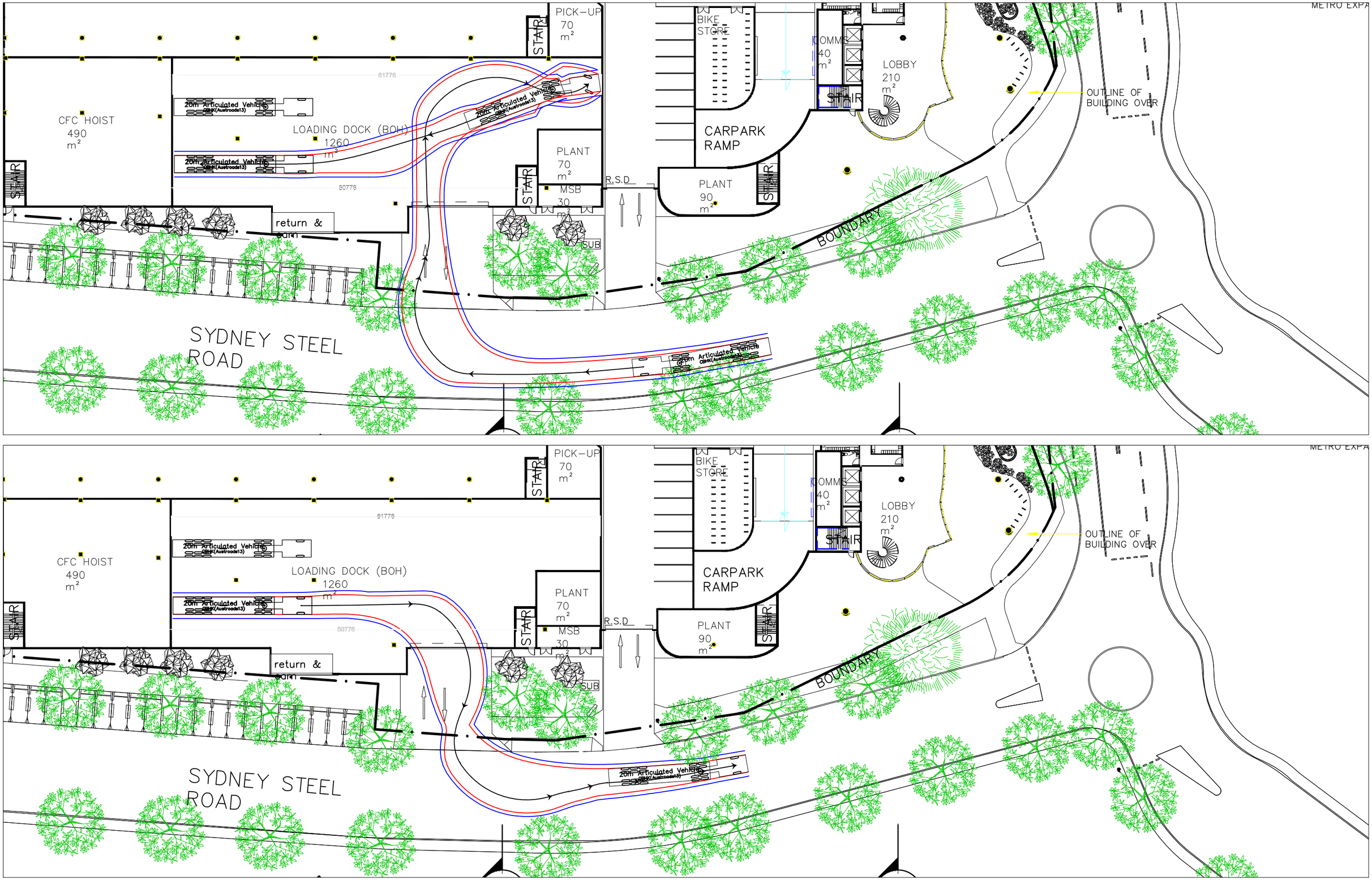

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20.0m ARTICULATED VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020

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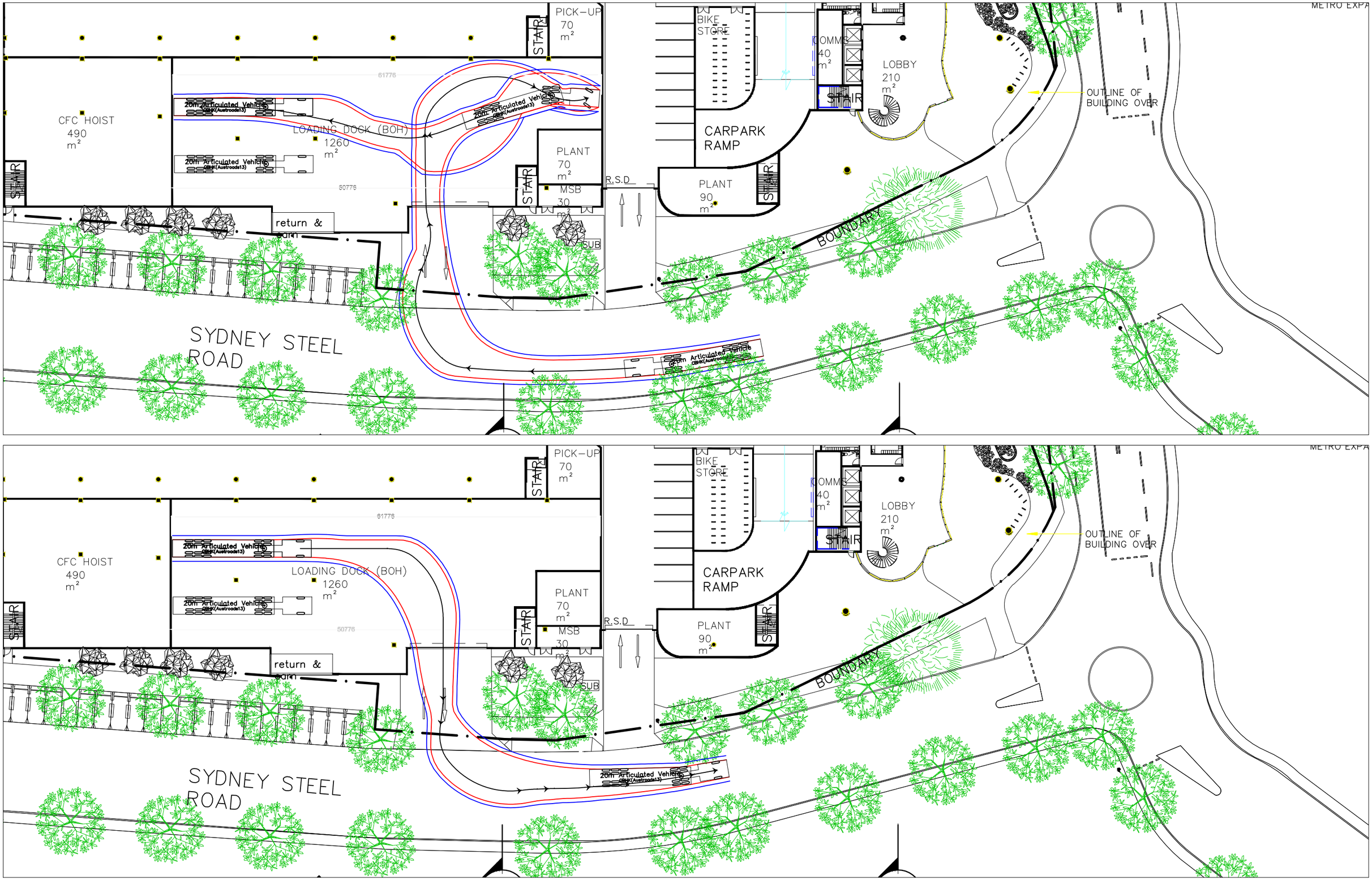

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Swept Path of Clearance to Vehicle Body

20.0m ARTICULATED VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11441 20 AUGUST 2020

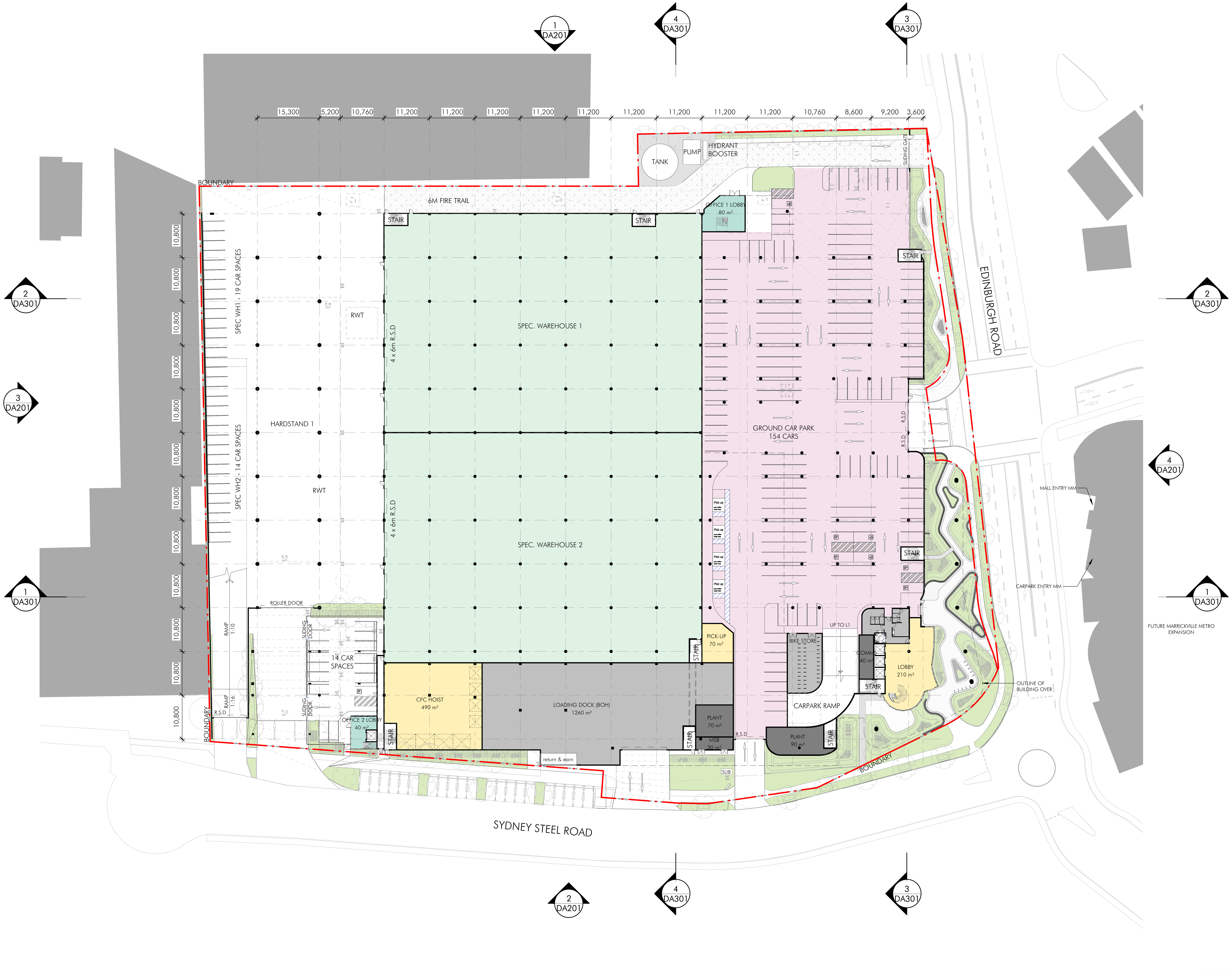
APPENDIX A

Cycle routes

LEGEND
Park
Sports Fields
Community Garden
Swimming Pool
Community Centre
Library
Theatre
Sustainability
Town Hall
Shopping District
Lookout
Sports Centre
Gallery
Water Play Park
Golf Club
Park
Train line
Train Station
Bus route
Bus route no.
Light Rail
Light Rail Station
Cycle route
Cooks River
SUMMER HILL
LEWISHAM
PETERSHAM
STANMORE
ENMORE
NEWTOWN
CAMPERDOWN
DULWICH HILL
MARRICKVILLE
SYDENHAM
ST. PETERS
TEMPE
TAVERNERS HILL
LEWISHAM WEST
WARATAH MILLS
ARLINGTON
DULWICH GROVE
HURLSTONE PARK
WOLLI CREEK
SYDNEY INTERNATIONAL AIRPORT
ERSKINEVILLE
Sancta Sophia College
St. Johns College
St. Andrews College
Royal Prince Alfred Hospital
LIVERPOOL RD
PARAMATTA RD
NEW CANTERBURY RD
ILLAWARRA RD
WARDELL RD
MARRICKVILLE RD
SALISBURY RD
TRAFALGAR ST
STANMORE RD
ADDISON RD
ENMORE RD
KING ST
ALICE ST
MAY ST
CAMPBELL ST
PRINCES HWY
AIRPORT DRIVE
SCALE
250m
500m
750m
1000m
N
KEY PLACES OF INTEREST
1 Council Art Gallery - Chrissie Cotter Gallery (U2)
2 Cottage in the Graveyard Community Garden (V4)
3 Denison Road Community Garden (E8)
4 Dulwich Hill Library & Seaview Street Hall (F8)
5 Wilga Avenue (F13)
6 Annette Kellerman Aquatic Centre (Q10)
7 Francis Street Community Garden (R8)
8 Cooks River foreshore (J19)
9 Marrickville Golf Club (E18)
10 Marrickville Library and Town Hall (K12)
11 Dulwich Hill Shopping District (G10)
12 Marrickville West Community Garden (G15)
13 Marrickville Youth Resource Centre (K10)
14 Marrickville Metro (R11)
15 Marrickville Shopping District (M11)
16 Red Rattler Theatre (O12)
17 Richardson's Lookout (K19)
18 The Factory Theatre (O10)
19 Water Play Park (G18)
20 Wilkins Green Community Garden (L9)
21 Addison Road Community Centre and Council's Community Nursery (N9)
22 Camdenville Paddock Community Garden (T11)
23 Enmore Theatre (S7)
24 Green Living Centre (V5)
25 Newtown Neighbourhood Centre (U6)
26 Newtown Shopping District (V5)
27 The New Theatre (V9)
28 Turtle Lane Community Garden (S5)
29 All Saints Community Garden (Pete's Patch) (L6)
30 Fanny Durack Aquatic Centre (J4)
31 St Peters Library (P15)
32 Stanmore Library (O5)
33 Robyn Webster Sports Centre (N23)
34 Herb Greedy Hall (K12)
35 Petersham Town Hall (M5)
36 Borgia Debbie & Abbey Community Recreation Centre (G16)
37 Tom Foster Community Care (V10)
PARKS & SPORTS FIELDS
1 Camperdown Memorial Rest Park (V4)
2 Mackey Park (K18)
3 Weekley Park (O4)
4 O'Dea Reserve (S3)
5 Enmore Park (R10)
6 McNeilly Park (I14)
7 Morton Park (7H)
8 Warren Park (J18)
9 Beaman Park (D15)
10 Sydney Park (V12)
11 Jack Shanahan Reserve (E12)
12 Johnson Park (D8)
13 Arlington Recreation Reserve (E9)
14 Camdenville Park (T11)
15 Steel Park (H18)
16 Camperdown Park (T2)
17 Henson Park (M10)
18 Marrickville Park (J8)
19 Petersham Park (I3)
20 Simpson Park (T13)
21 Tillman Park (O17)
22 Tempe Recreational Reserve (M22)
23 Tempe Lands (O20)
24 Mahoney Reserve Sports Field (F18)
25 Fraser Park (N15)

APPENDIX B

Proposed pedestrian and cycle route improvements



1 Ground
1 : 500

Area Schedule

Land Use	Area
CFC	558 m²
CFC Warehouse	21,000 m²
Commercial (CFC)	8,361 m²
Core	249 m²
Plant	1,278 m²
Spec Office	596 m²
Spec Warehouse	8,578 m²
Grand total	40,619 m²

Car Parking

Carpark - Accessible	7
Carpark - Standard	317
Pick-Up	4
Spec. Warehouse - Accessible	1
Spec. Warehouse - Standard	46
Grand total	375

Van Parking

CFC - Van Parking	140

ISSUED FOR SSDA

Client: Woolworths The fresh food people

Issue	Description	Date
1	Issued for SSDA	28.08.2020

Project Name
Warehouse Facility

Project Address
74 Edinburgh Road, Marrickville, NSW, 2204

Key Plan
0 10000 25000

Drawing Title: **Ground Floor Plan**

Author: Min | Checker: - | Sheet Size: A1 | Scale: 1:500

Drawing Number: **10437_DA101** | Issue: 1

nettletontribe
nettleton tribe partnership pty ltd ABN 58 161 683 122
117 Willoughby Road, Crows Nest, NSW 2065
t +61 2 9431 6431
e: sydney@nettletontribe.com.au w: nettletontribe.com.au

APPENDIX C

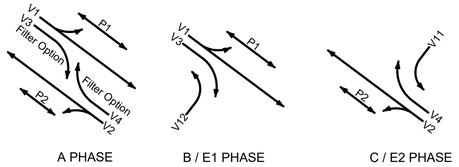
Concept traffic signal plan

TCS 3769

DRAWN BY CADD
DO NOT AMEND MANUALLY

DATE IN SERVICE : 28/05/2004

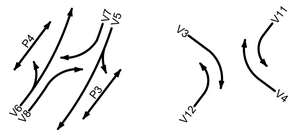
Transport Roads & Maritime Services



A PHASE B / E1 PHASE C / E2 PHASE

ALTERNATE

MOVEMENTS



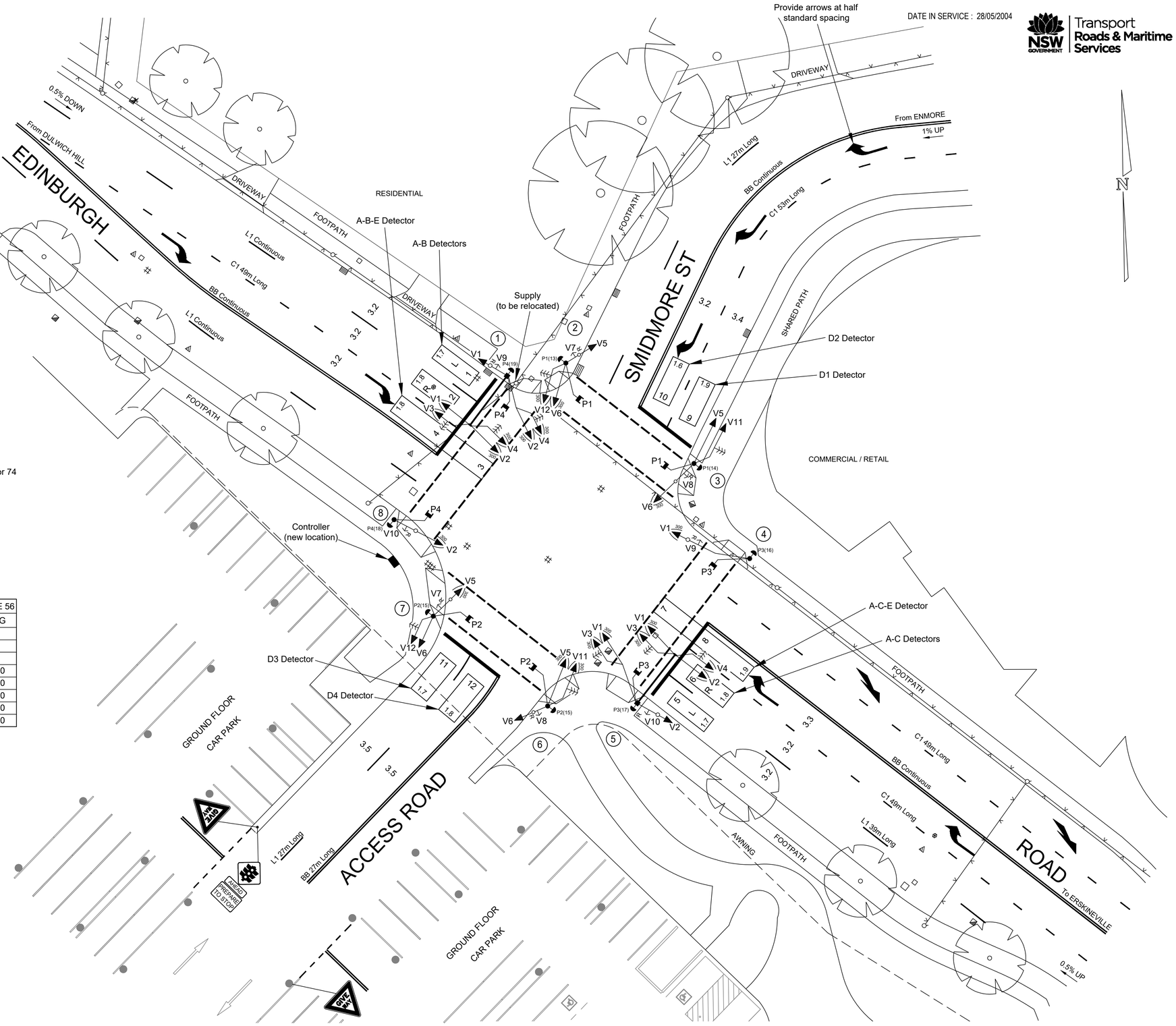
D PHASE E PHASE

NOTES

1. This site is SCATS linked.
2. Special STOP Sign (R1-4) placed on Post 3 and 7.
3. Audio-tactile push buttons are provided on Posts 1, 2, 3, 4, 5, 6, 7 and 8.
4. Kerb ramps to be constructed in accordance with RMS Standard (Road) Drawing No.R0300-11.
5. V6, V8 and V12 lanterns on Post 6 and 7 mounted at a height to provide vision into the car park.
6. Refer to Plan No.10437 by Nettleton Tribe Partnership Pty Ltd for associated development plans for 74 Edinburgh Road, Marrickville.
7. Position of relocated power supply to be confirmed by Level 2/3 Service Provider during detailed design stage.
8. Trees on approach to the intersection are to be regularly inspected and trimmed by Council to minimise lantern obstruction.

POSTS

POST	TYPE	LENGTH	OFFSET	REMARKS	MGA CO-ORDINATES ZONE 56	
					EASTING	NORTHING
1	9	-	0.6	EXISTING Mast Arm(6mOutreach)	-	-
2	2	4.1	1.0	EXISTING	-	-
3	2	4.1	0.8	EXISTING	-	-
4	2	4.1	1.0	NEW	000000.00	0000000.00
5	9	-	1.0	NEW Mast Arm(6mOutreach)	000000.00	0000000.00
6	2	4.1	1.0	NEW	000000.00	0000000.00
7	2	4.1	1.0	NEW	000000.00	0000000.00
8	2	4.1	1.0	NEW	000000.00	0000000.00



PRELIMINARY PLAN

PREPARED IN ACCORDANCE WITH SECTION 3.5 OF THE TRAFFIC SIGNAL DESIGN MANUAL

SIGNAL GROUP PHASE CHART, DETECTOR SPECIFICATION, DETECTOR DIMENSIONS / NUMBERING, POST CO-ORDINATES TO BE SHOWN ON DETAILED TCS DESIGN

A ORIGINAL ISSUE

PUBLIC UTILITY LEGEND	
HYDRANT	□
STOP VALVE	▲
GAS VALVE	#
SEWER MANHOLE	⊗
COMMS PIT	◪
ELECT LIGHT POLE	☾
POWER POLE	○
STAY POLE	⊘
TELEPHONE BOX	T
COMMS PILLAR	◕

REFERENCE PLANS	
SYMBOLS/ABRVS	VD003-6
STD POSN CMPT	VD001-5
INSTL STOP DET	VC005-17
VEH GROUP OP	TS-TN-019
DET LOGIC OP	TS-TN-020
PED MVT OP	TS-TN-021
SURVEYOR : LTS Lockleys	
DATE : 14.5.20	

U.B.D. Ref. Map 17 L6
I.S.G. E : 315 760
CO-ORDS N : 1 245 750

DESIGNED : LISA TULAU
CHECKED : TERRY LAWRENCE
LISA TULAU
SITE CHECKED
TERRY LAWRENCE
RECOMMENDED

DESIGN APPROVAL	RMS RECOMMENDATION	RMS ACCEPTANCE
APPROVED	ROAD DESIGN ENGINEERING	ACCEPTED
TERRY LAWRENCE	NAME	NAME
POSITION DIRECTOR	POSITION	POSITION
DATE 1.9.20	DATE	DATE
DESIGN PREPARED BY	NETWORK OPERATIONS	ACCEPTED BY
TRANSPORT AND URBAN PLANNING PL	NAME	SECTION
	POSITION	
	DATE	

ROADS AND MARITIME SERVICES

INNER WEST COUNCIL AREA
TRAFFIC SIGNALS AT EDINBURGH ROAD
AND SMIDMORE STREET,
MARRICKVILLE

DESIGN LAYOUT

EXISTING ☐ PROPOSED ☒

CADD FILE: VV3769_-A.dgn

SCALE 5 0 (1:200) 5 10

FILE SF0000/000000

SUPERSEDES SHEET/ISSUE 1/C

ISSUE A

REG No. DS0000/000000

TCS No. 3769

SHEET -

$DATE$ $TIME$ $FILE$

Revision 6 - July 2017

APPENDIX D

Draft construction traffic management plan

WOOLWORTHS

DRAFT CONSTRUCTION TRAFFIC MANAGEMENT PLAN FOR PROPOSED WAREHOUSE, DISTRIBUTION CENTRE AND OFFICE DEVELOPMENT, 74 EDINBURGH ROAD, MARRICKVILLE

OCTOBER 2020

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1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by Woolworths to prepare a draft construction traffic management plan for a proposed warehouse, distribution centre and office development at 74 Edinburgh Road, Marrickville. The site location is shown in Figure 1.

1.2 The proposed customer fulfilment centre comprises 21,558m^2 warehouse, 70m^2 customer pick-up plus 8,383m^2 office. The other development provides 8,578m^2 industrial plus 596m^2 offices. Car parking is proposed adjacent to Edinburgh Road, with loading and delivery areas adjacent to Sydney Steel Road. Vehicle access is proposed from Edinburgh Road in two locations and from Sydney Steel Road in four locations. 24 hour, seven day operation of the development is proposed. Online grocery orders would be completed at and distributed from the facility to customers' homes.

1.3 The draft construction traffic management plan has been prepared in the context of the overall Construction Management Plan[1] prepared by Root Partnerships.

1.4 The draft construction traffic management plan is presented in the following chapter.

[1] "Construction Management Plan Woolworths Warehouse and Distribution Centre, Marrickville." Prepared by Root Partnerships, 15 September 2020.

2. DRAFT CONSTRUCTION TRAFFIC MANAGEMENT PLAN

2.1 The draft construction traffic management plan is set down through the following sections:

- site location and road network;
- proposed development;
- overall principles for traffic management;
- hours of work;
- truck routes;
- traffic and parking effects; and
- draft construction traffic management plan.

Site Location and Road Network

2.2 The site is on the south-western corner of the intersection of Edinburgh Road/ Sydney Steel Road at Marrickville, as shown in Figure 1.

2.3 Adjacent the site, Edinburgh Road provides one traffic lane and one parking lane in each direction, clear of intersections. It has a shared pedestrian and cycle path along the site frontage. It provides access to industrial and residential properties. There are bus stops on both sides of the road, close to the site.

2.4 Sydney Steel Road runs south from Edinburgh Road at an unsignalised t-intersection controlled by give way signs, with Edinburgh Road having priority.

2.5 Sydney Steel Road is a dead end south of Edinburgh Road. It provides access to industrial properties, including the subject site and the Marrickville dive site. It provides for two-way traffic with parking permitted on both sides, and is signposted as a bicycle route.

Proposed Development

2.6 The proposed customer fulfilment centre comprises 21,558m^2 warehouse, 70m^2 customer pick-up plus 8,383m^2 office. The other development provides 8,578m^2 industrial plus 596m^2 offices. Car parking is proposed adjacent to Edinburgh Road, with loading and delivery areas adjacent to Sydney Steel Road. Vehicle access is proposed from Edinburgh Road in two locations and from Sydney Steel Road in four locations. 24 hour, seven day operation of the development is proposed. Online grocery orders would be completed at and distributed from the facility to customers' homes.

Overall Principles for Traffic Management

2.7 The overall principles for traffic management during construction of the development are:

- provide a convenient and appropriate environment for pedestrians;
- minimise effects on pedestrian movements and amenity;
- manage and control vehicular movements to and from the site;
- maintain traffic capacity at intersections and mid-block around the site;

- maintain access to other properties adjacent to the site;
- restrict vehicle activity to designated truck routes through the area;
- maintain safety for workers;
- provide appropriate access to the site for construction traffic; and
- manage and control vehicle activity in the vicinity of the site.

2.8 If works zones are required in Edinburgh Road or Sydney Steel Road, a separate application will be made to Inner West Council.

Hours of Work

2.9 Subject to conditions of consent, work associated with construction activities will be carried out between the following hours:

- Monday to Friday: 7:00 am to 6:00 pm;
- Saturday: 7:00 am to 4:00 pm; and
- Sunday/public holidays: no work.

2.10 Any work outside these times would be subject to a separate application to Inner West Council. The control of hours of operation avoids truck movements during the early hours of the morning, before 7:00 am and in the evening, after 5:00 pm.

Truck Routes

2.11 During construction activities, trucks transporting material to the site will be accommodated on the site, or in works zones to be located on Edinburgh Road or Sydney Steel Road. As noted above, any works zones will be subject to separate future applications if required. Vehicular access to and from the site will be provided from Edinburgh Road and Sydney Steel Road.

2.12 During construction activities, trucks would travel to and from the site along the following designated routes, as shown in Figure 2:

- approach routes:
  - Princes Highway, Railway Road, Gleeson Avenue, Railway Parade, Buckley Street, Sydenham Road, Victoria Road, Edinburgh Road, Sydney Steel Road;
  - Sydenham Road, Victoria Road, Edinburgh Road, Sydney Steel Road;
  - Princes Highway, Campbell Street, Bedwin Road, Edinburgh Road, Sydney Steel Road;

- departure routes:
  - Sydney Steel Road, Edinburgh Road, Bedwin Road, Campbell Street, Princes Highway;
  - Sydney Steel Road, Edinburgh Road, Victoria Road, Sydenham Road; and
  - Sydney Steel Road, Edinburgh Road, Victoria Road, Sydenham Road, Sydenham Road, Railway Parade, Gleeson Avenue, Railway Road, Princes Highway.

2.13 The designated truck routes to and from the site is proposed to restrict truck traffic to the main road network through the area. The approach and departure route of construction vehicles to and from the site are considered appropriate.

Traffic and Parking Effects

2.14 The number of vehicles generated during the various stages of construction is likely to be some 50 to 100 vehicles per hour two-way at peak times. As noted in our traffic and access report, the observed on-road peak hours were 8:30 – 9:30 am and 4:45 – 5:45 pm.

2.15 This traffic generation compares to operational traffic generation of some 270 vehicles per hour two-way. The effects of construction vehicle activity on the surrounding road network will therefore be less than the operational effects. Construction vehicles will access the site from Edinburgh Road and Sydney Steel Road.

2.16 The majority of these vehicles would be construction employee vehicles. A small number would be associated with the delivery of materials to the site (up to some 10 trucks per hour), including during concrete pours. Trucks would include rigid trucks up to 12.5 metres long and semi-trailers up to 20 metres long.

2.17 As noted in our traffic and access report, the base traffic flows counted on the surrounding road network include traffic generated from other construction activities in the area, including Sydney Metro and Marrickville Metro.

2.18 However, we note that Marrickville Metro extension is expected to be completed in 2020. Construction activities of these two sites will therefore not overlap.

2.19 Traffic generation of the subject site during construction is likely to be similar to the existing traffic generation of the site. It should therefore not noticeably affect the operation of the surrounding road network.

2.20 Construction employee numbers will vary over the construction period, but would be generally be some 30 to 60. Construction employees will be able to park on the site, as parking areas become available.

Draft Construction Traffic Management Plan

2.21 The draft traffic management plan for construction of the proposed development is presented below. It includes the principles of traffic management and is subject to SafeWork NSW requirements, as well as survey and final design.

2.22 The builder, once appointed, will be responsible for preparation of a detailed construction traffic management plan, to incorporate these principles and refine the staging and timing.

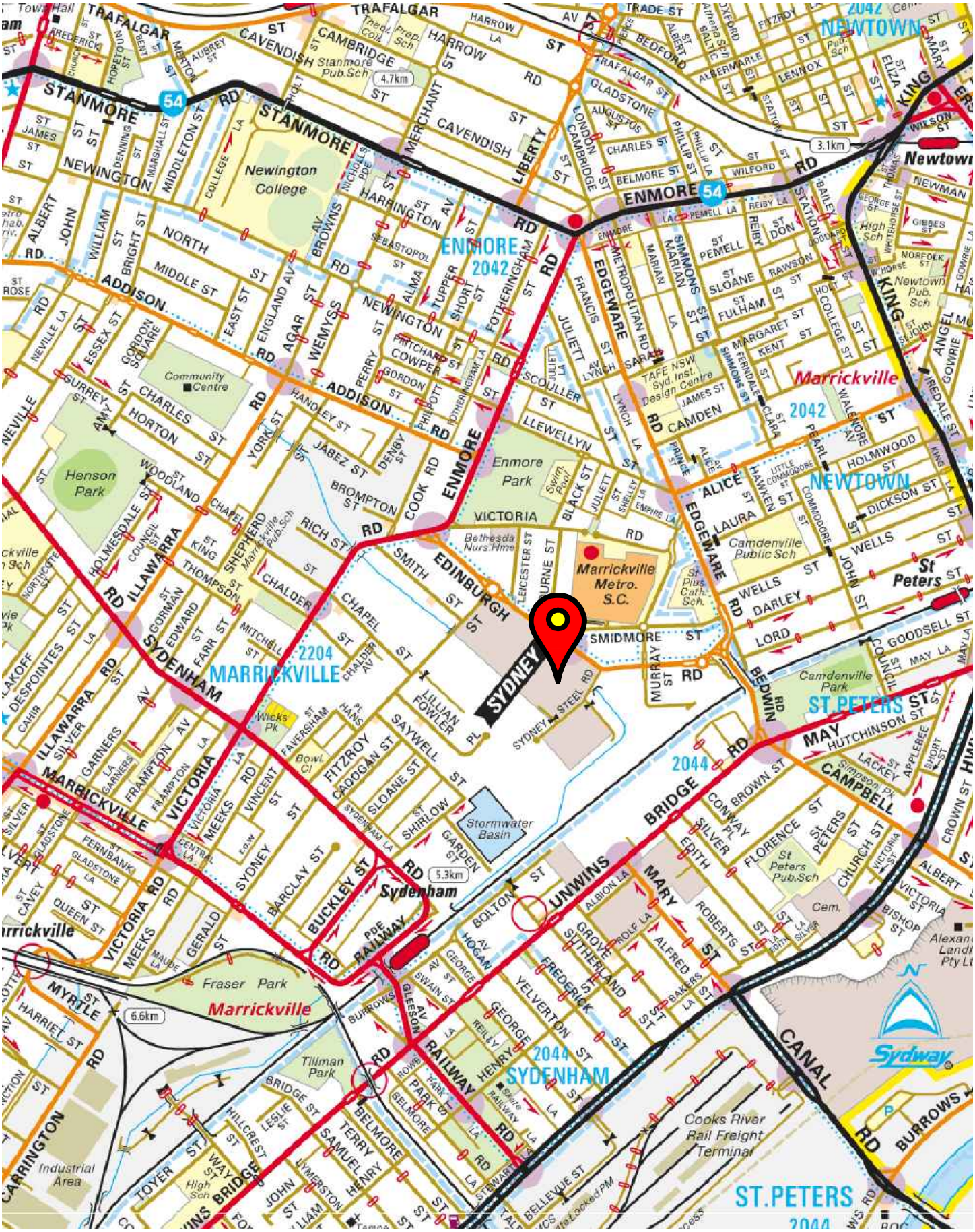
2.23 Signage, fencing, overhead protection, safety barriers and line marking details, as required, will be provided in accordance with Australian Standards 1742 and the Roads and Maritime Services' Manual for Traffic Control at Work Sites. A copy of the traffic management plan will be kept on-site at all times. Signage details, the control of pedestrians in the vicinity of the site, and the control of trucks to and from the site will be the responsibility of the site contractor.

2.24 The draft construction traffic management plan includes the following:

- construction activity to be provided for on-site;
- construction vehicle access to be provided from Edinburgh Road and Sydney Steel Road;
- where required, the movement of trucks on and off the site to be managed and controlled by traffic controllers in accordance with a safe work method statement and appropriate traffic control plans;
- truck movements to and from the site to be restricted to the designated truck route shown in Figure 2;
- Class A construction fencing, and overhead protection where required, to be provided adjacent to the site frontages;
- openings to be provided in the construction fence for access to the site for construction vehicles;
- the management of the site works will be the responsibility of the site contractor;
- pedestrian activity across the site access driveways will be managed and controlled by traffic controllers where required;
- pedestrian warning signs to be utilised in the vicinity of the site;

- pedestrian arrangements, construction activity and erection of safety fencing will be provided in accordance with SafeWork NSW requirements; and

- construction signage to be provided in accordance with Australian Standards and the Roads and Maritime Services' Manual for Traffic Control at Work Sites.



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Location Plan

Colston Budd Rogers & Kafes Pty Ltd

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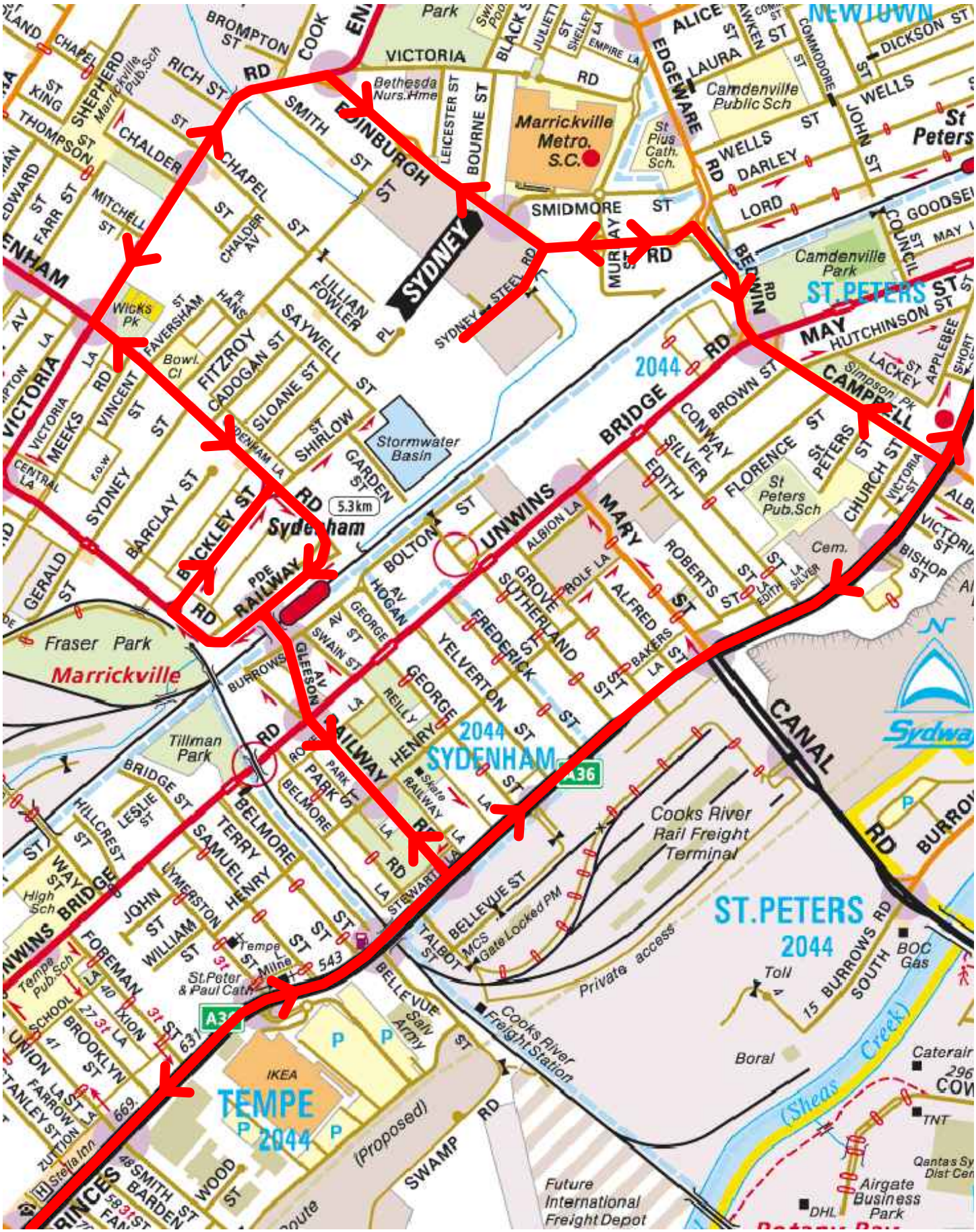
Figure 1



Truck Routes

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Figure 2