QANTAS

TRAFFIC REPORT FOR PROPOSED RELOCATION OF FLIGHT TRAINING CENTRE, MASCOT

MAY 2019

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1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by Qantas Airways Ltd (Qantas) to prepare a report examining the traffic implications of the proposed relocation of the Flight Training Centre, and associated ancillary uses including a multi-deck car park at Mascot, in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the **SSD 10154** for the development of a new Flight Training Centre at 297 King Street, Mascot. The Flight Training Centre needs to be relocated because the proposed road upgrades as part of the Sydney Gateway project, will result in the flight simulators within the training centre being unable to operate.

1.2 As the relocation of Flight Training Centre will result in the loss of parking within the King Street north car park, in association with this project, a new multi deck car park will be constructed on land to the north of the King Street north car park (north of the Sydney Water canal and east of the catering facility) This area is currently used for at grade parking by Qantas staff (some 250 spaces). The new multi deck car park will be constructed in stages, with Stage 1 (748 spaces) replacing parking lost to relocate the Flight Training Centre (some 810 spaces comprising 560 on King Street North and 250 spaces in the area north of the canal). In addition to the new multi deck car park some 39 at grade spaces will be provided adjacent to the new Flight Training Centre. Thus Stage 1 will provide a total of 787 spaces.

1.3 Stage 2 will increase the size of the multi deck car park to some 2,059 spaces to accommodate parking that will be lost by Qantas due to future development (such

as 80 spaces lost as a result of the relocation of Dnata catering to the Coward Street car park) or end of leases (such as the Fifth Street car park located in the domestic terminal precinct, some 580 spaces, and parking within the Jet Base precinct, some 530 spaces). Construction of the 2,059 space car park will allow for consolidation of Qantas staff parking within the campus site, resulting in Qantas being able to better manage its parking facilities.

1.4 This report addresses the traffic matters raised in the SEARs issued by NSW Planning and Environment for the relocation of the Flight Training Centre. With respect to traffic and transport the SEARS includes the following matters:

- a traffic and parking assessment detailing all daily and peak hour traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, including a description of vehicle type, access routes and the impacts on nearby intersections;
- details of access to the site from the road network including intersection location, design and sight distance;
- details of the likely arrival and departure times for vehicles for all components of the proposed development;
- an assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development;
- an assessment of the implications for public and active transport, the potential for implementing a location specific sustainable travel management strategy and the provision of end of trip facilities to increase active transport usage to and from the site;
- plans of any road upgrades or new roads required for the development, if necessary;

- details of the parking provision on-site, including the existing parking provided and its users and a justification for the amount of parking proposed, demonstrating compliance
- detailed plans of the proposed layout of the internal road network and parking provision on-site, in accordance with the relevant Australian Standards; and
- details of any likely dangerous goods to be transported on arterial and local roads to/from the site, if any, and the preparation of an incident management strategy, if necessary.

1.5 The SEARs also required consultation with RMS and TfNSW.

Description of Site and Locality

1.6 The site is located at 297 King Street, Mascot and comprises land known as Lots 2 & 4 DP 234489, Lot 1 DP 202747, Lot B DP 164829 and Lot 133 DP 659434. The site is identified in Figure 1.

1.7 Key features of the site are as follows:

- The site is approximately 5.417ha and is an irregular shape. It is approximately 240m in length and maintains a variable width of between approximately 321m in the northern portion of the site and approximately 93m along the King Street frontage (refer to Figure 1).

- The site possesses a relatively level slope across the site. An open Sydney Water drainage channel bisects the northern portion of the site in an east-west direction. There are some isolated changes in level immediately adjacent

to this channel. A Site Survey Plan accompanies the application which details the topographic characteristics of the site.

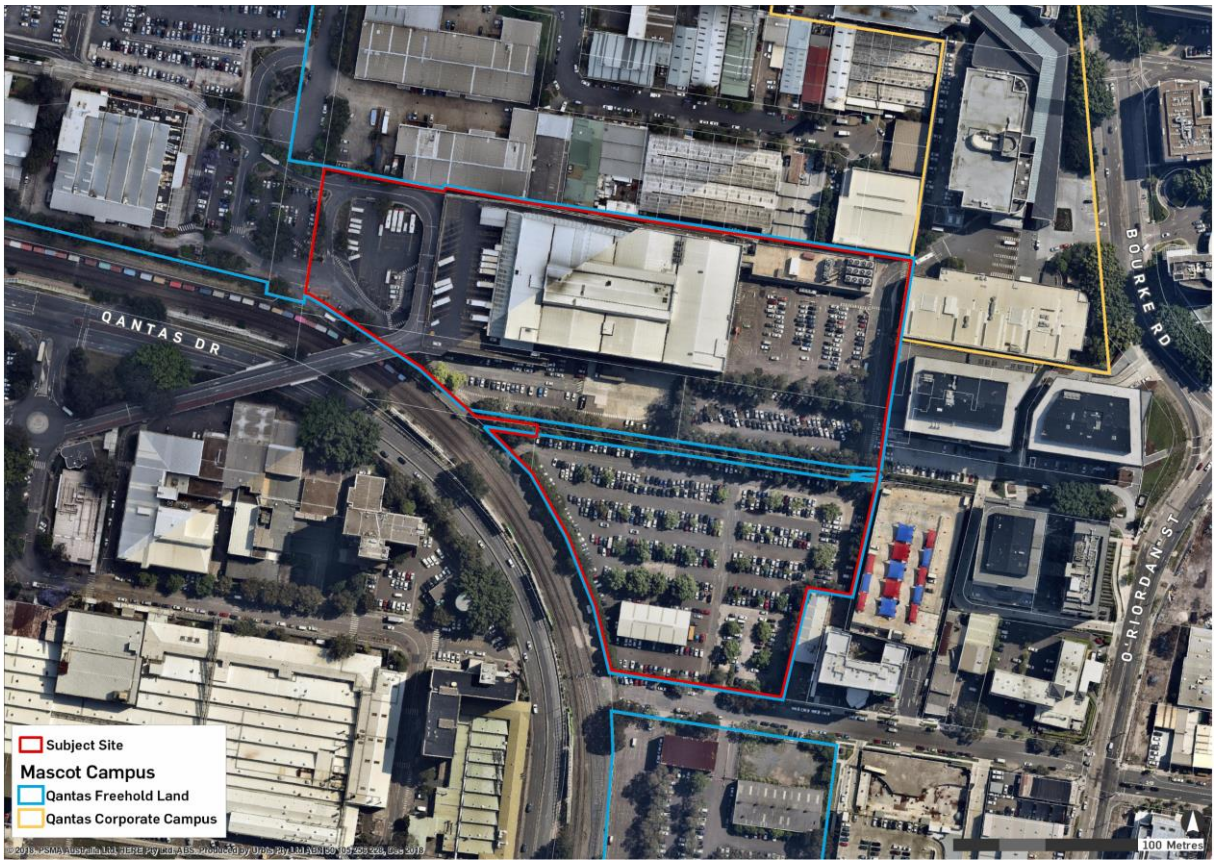


Figure 1 – The Site

- Multiple mature Plane Trees are scattered throughout the site. A variety of native and exotic tress and vegetation also exist around the perimeter of the site which help screen the site from surrounding uses.

- Site improvements include at-grade car parking for Qantas staff, an industrial shed to store spare aviation parts, a substation, a disused gatehouse, a Sydney Water Asset with two driveways over it, the Qantas catering facility and Qantas tri-generation plant.

- The site forms part of a larger land holding under the ownership of Qantas that generally extends between Qantas Drive to the west, Ewan Street to the south, Coward Street to the north, with the Qantas "Corporate Campus" fronting Bourke Road.

- Vehicular access to the site from the local road network is available from King Street. The site has intra-campus connections along the northern boundary in the form of two connecting driveways in the north-eastern and north-western corner of the site along the northern boundary which link it to the broader Mascot Campus.

- The site is located within the Bayside LGA.

1.8 Key features of the locality are:

- bordered to the east by commercial development including a newly completed Travelodge hotel which includes a commercial car park. Additional commercial development to the east includes the Ibis Hotel and Pullman Sydney Airport fronting O'Riordan Street.

- **South:** The site is bounded to the south by King Street, beyond which is Qantas owned at-grade car parking and other industrial uses. Further south is the Botany Freight Rail Line and Qantas Drive beyond which is the Domestic Terminal at Sydney Airport.

- **West:** The site is bordered to the west by the Botany Freight Rail Line and Qantas Drive, beyond which lies Sydney Kingsford Smith Airport and the Qantas Jet Base (location of the current Flight Training Centre).

Project Description

1.9 Safety is Qantas' first priority. The Flight Training Centre is a key pillar of this value. The facility enables pilots and flight crews to undertake periodic testing to meet regulatory requirements by simulating both aircraft and emergency procedural environments. The Project seeks consent for the construction and operation of a new Flight Training Centre, and associated ancillary uses including a multi-deck car park. The Project is comprised of the following use.

Flight Training Centre

1.10 The proposed Flight Training Centre will occupy the southern portion of the site. It is a building that comprises 4 core elements as follows:

- An emergency procedures hall that contains;
  - cabin evacuation emergency trainers,
  - an evacuation training pool,
  - door trainers,
  - fire trainers
  - slide descent towers,
  - security room,
  - aviation medicine training and equipment rooms.

- A Flight Training Centre that contains:

- a flight training hall with 14 bays that will house aircraft simulators,
- integrated procedures training rooms, computer rooms, a maintenance workshop, storerooms, multiple de-briefing and briefing rooms, pilot's lounge and a shared lounge.

- Teaching Space that contains
  - training rooms,
  - classrooms and two computer based exam rooms.

- Office Space
  - Office space for staff and associated shared amenities including multiple small, medium and large meeting rooms, think tank rooms, informal meeting spaces, a video room and lunch/tea room.

- Ancillary spaces including the reception area at the ground floor, toilets, roof plant and vertical circulation. The external ground floor layout will include a loading dock, at-grade car parking for approximately 39 spaces and a bus drop-off zone at the northern site boundary.

Car Park

1.11 The proposed multi-deck car park will be located to the north-east of the Flight Training Centre and adjacent the existing Qantas catering facility and tri-generation plant and provide parking for Qantas staff. The car park will be constructed in 2 Stages. Stage 1 will provide 748 spaces and Stage 2 will provide 2,059 spaces. Vehicle access to the car park will be provided via King Street, Kent Road and from Qantas Drive via the existing catering bridge.

1.12 The traffic aspects of the proposed relocation of the Flight Training Centre are set out through the following chapters:

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

2. EXISTING CONDITIONS

Site Location

2.1 The existing Flight Training Centre is located on the Jet Base within Sydney Airport (with frontage to Qantas Drive, Lancastrian Road, Constellation Road and the overpass connecting the Qantas Corporate campus with Sydney Airport). The Flight Training Centre provides training facilities for Qantas flight crews, including a number of flight training facilities. Some 54 parking spaces are located in the area adjacent to the Flight Training Centre and are used by Qantas staff. The main vehicular access to the Flight Training Centre is via Qantas Drive, with secondary access to the corporate campus via the overpass.

2.2 The site where the Flight Training Centre will be relocated is known as the King Street North car park, which is located in the southern section of the Qantas Corporate Campus. The site has frontage to King Street (along the southern boundary) and is currently occupied by at-grade parking (some 561 spaces) used by Qantas staff. Vehicular access to the car park is provided directly to King Street and through the corporate campus site to Qantas Drive and Kent Road.

2.3 As noted in Chapter 1, to accommodate parking lost as part of the relocation of the Flight Training Centre, a new multi deck car park will be constructed on land immediately north of the King Street North car park (on the northern side of the Sydney Water Canal). This area is currently used for at-grade parking by Qantas staff (some 230 spaces). Access to this car park is through the King Street North car park via a bridge over the canal (eastern end of the site).

2.4 The locations of the existing Flight Training Centre, King Street North car park and adjacent car park are shown on Figure 1

Road Network

2.5 The roads adjacent to the site include Qantas Drive, Joyce Drive, Robey Street, O'Riordan Street, Bourke Road, Coward Street, Kent Road and King Street. Qantas Drive and Joyce Drive are located on the northern boundary of Sydney Airport and are major access roads to Sydney Airport, connecting to the M5 Motorway in the west (via Marsh Street) and Southern Cross Drive/General Holmes Drive in the east. Adjacent to the airport, both roads are constructed as dual carriageways, with two to four lanes in each direction. Major intersections along the road are traffic signal controlled.

2.6 Robey Street (between Qantas Drive and O'Riordan Street) has recently been modified to be one way eastbound. East of O'Riordan Street, it provides for two way traffic. The intersections of Robey Street with Qantas Drive and O'Riordan Street are traffic signal controlled. Access to the Qantas Corporate campus is provided to Qantas Drive via the overpass adjacent to the existing Flight Training Centre.

2.7 O'Riordan Street runs in a north south direction through Mascot and forms part of a route connecting Sydney Airport with the CBD. Currently it is generally a four lane undivided road, with works underway for an upgrade to a six lane dual carriageway. Between Robey Street and Joyce Drive, O'Riordan Street is one way south bound. North of Robey Street it provides for two way traffic. The intersections of O'Riordan Street with King Street, Bourke Road and Coward Street are traffic signal controlled.

2.8 Bourke Road runs in a north south direction through Mascot to the west, and generally parallel to, O'Riordan Street. It varies between a four lane divided road (south of Coward Street) and a four lane undivided carriageway (north of Coward Street). Access to developments either side of Bourke Road (including a Qantas car park on the western side) is provided by a traffic signal controlled intersection, between Coward Street and O'Riordan Street.

2.9 Coward Street runs in an east direction to the north of the Qantas Corporate Campus. It connects Mascot with Botany to the east. Through Mascot it varies from two traffic lanes in each direction to one traffic lane in each direction plus kerb side parking. The intersections of Coward Street with Bourke Road and Kent Road are traffic signal controlled. In addition a traffic signal controlled access to a Qantas car park is provided in the section between Bourke Road and Kent Road.

2.10 Kent Road runs in a north south direction and connects Coward Street with Rickety Street/Gardeners Road to the north. North of Coward Street, Kent Road provides four traffic lanes with kerb side parking outside of peak periods. South of Coward Street it provides access to development sites including the Qantas Corporate campus.

2.11 King Street runs in an east direction and connects O'Riordan Street with Botany to the east. West of O'Riordan Street it is a no through road with one traffic lane in each direction with kerb side parking. Access to the Qantas Corporate campus is provided to King Street (via the King Street North car park).

2.12 Access to the car parking areas within the corporate campus, affected by the relocation of the Flight Training Centre, is provided from Kent Road, Qantas Drive (via the overpass) and King Street. Access to these car parks is restricted by boom gate controls to Qantas staff with appropriate passes. Within the corporate campus an internal road network connects the various areas of the campus.

Road Network Improvements

2.13 RMS is currently undertaking a number of upgrades to the road network in the vicinity of the site as part of the Airport North Precinct upgrade. In addition, RMS proposes some modifications to nearby intersections as part of the Mascot Intersection Upgrades. The works currently under construction as part of the Airport North Precinct upgrade include:

- Widening O'Riordan Street to three lanes in each direction between Bourke Road and Robey Street;
- Making Robey Street one way eastbound between Qantas Drive and O'Riordan Street (completed);
- Making O'Riordan Street one way southbound between Robey Street and Joyce Drive (completed);
- Providing a new right turn bay from O'Riordan Street into King Street (westbound); and
- Providing dual left turn lanes from O'Riordan Street into Bourke Road.

2.14 The relevant modifications proposed in the Mascot Intersection Upgrades are:

- No right turn from Coward Street (westbound) into Bourke Road (northbound);

- No right turn from Bourke Road (northbound) into Coward Street (eastbound) – buses excepted;
- New slip lane to accommodate left turning vehicles from Kent Road (southbound) into Coward Street (eastbound); and
- New signalised pedestrian crossing on the Coward Street east approach at the intersection with Kent Road.

2.15 In addition to the above road works in the vicinity of the Qantas Corporate Campus, RMS is preparing to submit State Significant Infrastructure Application (SSIA) for the Sydney Gateway Project. The RMS website provides the following description of the Sydney Gateway Project:

Sydney Gateway will increase capacity and improve connections to the ports to assist with growth in passenger, freight and commuter movements across the region. It will strengthen Sydney's position as a global city, expanding and improving the existing road and freight rail networks

2.16 With respect to road network improvements the following information is provided:

A new alternative route to the domestic and international airport terminals from the Sydney motorway network at St Peters Interchange. Sydney Gateway includes a new dedicated flyover from Qantas Drive to the front door of the domestic airport. This route will bypass all traffic lights along major Sydney motorway networks to the domestic terminals. This project will be delivered by Roads and Maritime Service. This will provide:

- *easier journeys to and from Sydney Airport and improved connections between the terminals*
- *Provide new roads to Sydney Airport to help reduce congestion and cater for forecast growth in passenger and air freight*

Traffic Flows

2.17 Weekday morning and afternoon peak period traffic counts have been undertaken at the following locations:

- Qantas Drive/Lancastrian Drive (Jet Base access);
- Lancastrian Drive/Qantas Drive Overpass;
- Qantas Drive/ Robey Street/Seventh Street;
- Joyce Drive/O'Riordan Street/Sir Reginal Ansett Drive;
- Robey Street/O'Riordan Street;
- O'Riordan Street/King Street;
- O'Riordan Street/Bourke Road;
- O'Riordan Street/Coward Street;
- Bourke Road/traffic signal access;
- Coward Street/Bourke Road; and
- Coward Street/Kent Road.

2.18 The results of the surveys are shown in Figures 2 and 3 and summarised in Table 2.1.

Table 2.1: Existing Two-Way (Sum of Both Directions) Peak Hour Traffic Flows		
Road	**Weekday Morning**	**Weekday Afternoon**
Qantas Drive		
– west of O'Riordan Street	4,375	3,435
– east of Robey Street	4,375	3,545
– east of Lancastrian Drive	3,665	3,415
– west of Lancastrian Drive	3,790	3,615
Lancastrian Drive		
– south of Qantas Drive	465	405
Joyce Drive		
– east of O'Riordan Street	3,350	2,870
Seventh Street		
– south of Qantas Drive	1,930	2,230
Robey Street		
– east of Qantas Drive	2,190	1,965
– west of O'Riordan Street	2,170	1,945
– east of O'Riordan Street	690	630
O'Riordan Street		
– north of Qantas Drive	1,520	2,100
– north of Robey Street	3,190	3,385
– north of King Street	3,195	3,560
– north of Bourke Road	2,435	2,795
– north of Coward Street	2,260	2,385
King Street		
– east of O'Riordan Street	510	580
– west of O'Riordan Street	280	325
Bourke Road		
– north of O'Riordan Street	1,255	1,405
– north of Qantas Access	1,190	1,170
– north of Coward Street	660	975
Kent Road		
– north of Coward Street	1,045	1,010
– south of Coward Street	330	230
Coward Street		
– east of O'Riordan Street	960	1,205
– east of Bourke Road	535	620
– east of Qantas Access	1,155	1,040
– east of Kent Road	1,165	1,090
– west of Kent Road	460	310

2.19 Table 2.1 shows that:

- Qantas Drive carried traffic flows of some 4,375 vehicles per hour two-way during the peak periods;

- Lancastrian Drive carried traffic flows of some 465 vehicles per hour two-way during the peak periods;

- Robey Street carried traffic flows of some 2.190 vehicles per hour two-way during the peak periods;

- O'Riordan Street carried traffic flows of some 3,560 vehicles per hour two-way during the peak periods;

- King Street carried traffic flows of some 580 vehicles per hour two-way during the peak periods;

- Bourke Road carried traffic flows of some 1.405 vehicles per hour two-way during the peak periods;

- Kent Road carried traffic flows of some 1,045 vehicles per hour two-way during the peak periods. Traffic flows were highest north of Coward Street; and

- Coward Street carried traffic flows of some 1,205 vehicles per hour two-way during the peak periods.

2.20 In addition to the traffic counts on the surrounding road network, surveys of traffic movements into and out of the King Street North car park and adjacent car park to the north (total of some 810 spaces) were undertaken to determine traffic

generation of parking that will be replaced as part of the relocation of the Flight Training Centre. The surveys found that these two car parks generated some 450 vehicles per hour (two way) in the morning peak hour and some 300 vehicles per hour in the afternoon peak hour. At the time of the surveys, the two car parks were effectively at capacity. Some 75% of the traffic generation of the two car parks was inbound in the morning with the reverse in the afternoon peak hour. Based on the surveys, the arrival/departure routes of traffic using the two car parks are set out in Table 2.2.

Table 2.2	**Summary of Existing Arrival/Departure Routes**			
	Arrivals		Departures	
Access	AM	PM	AM	PM
King Street	25%	25%	55%	35%
Qantas Drive	55%	25%	20%	45%
Kent Road	25%	50%	25%	20%
Total	100%	100%	100%	100%

2.21 Table 2.2 reveals that arrival and departure routes vary between the morning and afternoon peak periods. From discussions with Qantas, this is a reflection on the operation of the surrounding network.

Intersection Operations

2.22 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 the SIDRA 8 network model taking into account the road network improvements currently under construction. SIDRA analyses intersections controlled by traffic signals, roundabouts and signs.

2.23 SIDRA provides 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

2.24 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.

2.25 The SIDRA analysis found that:

- The intersection of Qantas Drive and Lancastrian Drive operates with average delays of less than 28 seconds per vehicle in the peak periods. This represents level of service B, a good level of service with minimal delays and spare capacity;
- The intersection of Qantas Drive, Robey Street and Seventh Avenue operates with average delays of less than 40 seconds per vehicle in the peak periods. This represents level of service C, a satisfactory level of service;
- The intersection of Qantas Drive, O'Riordan Street and Sir Reginald Ansett Drive operates with average delays of less than 45 seconds per vehicle in the peak periods. This represents level of service D, a satisfactory level of service for a major urban intersection;
- The intersection of O'Riordan Street and Robey Street operates with average delays of less than 15 seconds per vehicle in the peak periods. This represents level of service A/B, a good level of service;

- The intersection of O'Riordan Street and King Street operates with average delays of less than 30 seconds per vehicle in the peak periods. This represents level of service B/C, a satisfactory level of service;
- The intersection of O'Riordan Street and Bourke Road operates with average delays of less than 25 seconds per vehicle in the peak periods. This represents level of service B, a good level of service;
- The intersection of O'Riordan Street and Coward Street operates with average delays of less than 30 seconds per vehicle in the peak periods. This represents level of service B/C, a satisfactory level of service;
- The intersection of Bourke Road and Coward Street operates with average delays of less than 35 seconds per vehicle in the peak periods. This represents level of service C, a satisfactory level of service;
- The intersection of Coward Street and Kent Road operates with average delays of less than 35 seconds per vehicle in the peak periods. This represents level of service C, a satisfactory level of service

2.26 In summary, with the road upgrades currently under construction or proposed by RMS, the surrounding road network generally operates at a satisfactory level of service in the peak periods. It is noted that congestion on other parts of the road network in the vicinity of the site (such as the M5 Motorway, General Holmes Drive or Southern Cross Drive) can divert traffic accessing the airport through Mascot, resulting in increased delays and reduction in the levels of service at the above intersections .

Public Transport

2.27 The Qantas corporate campus is located some 300 metres south of Mascot train station (located on the corner of Bourke Road and John Street). Mascot train

station is located on the T8 Line (City to Macarthur via the Airport). This service operates approximately every five to ten minutes during the morning and afternoon peak periods and run between 4:30am to 12am.

2.28 In addition to being in close proximity to the train station, Sydney Buses operate a number of bus services along Bourke Road, Coward Street and O'Riordan Street with the nearest bus stops located in Bourke Road (north and south of Coward Street) and Coward Street (east of Bourke Road). They provide transport from many areas of Sydney including the Eastern suburbs and south west Sydney. These services operate approximately every 15 minutes during the morning and afternoon peak periods and approximately every 30 minutes during off peak periods and run between 5:00am and 11:30pm. The services operated by Sydney Buses include:

- 305 Redfern to Mascot via Alexandria
- 307 Bondi Junction to Port Botany via Mascot, Pagewood and Matraville;
- 400 Sydney Airport to Bondi Junction via Mascot, Maroubra and Randwick;
- 418 Burwood to Kingsford via Mascot, Sydenham and Dulwich Hill; and
- 420 Burwood to Eastgardens via Mascot, Rockdale and Bexley North.

2.29 In summary, the site is accessible by public transport (buses and trains).

2.30 Qantas also operates its own internal bus service, connecting the various parts of the corporate campus with Jet Base and international and domestic terminals. It operates a fleet of buses (mainly small buses) that circulate about every half hour. In peak periods (weekday morning and afternoon) larger buses operate. The main stops are the Jet Base, corporate building (on Bourke Road) and the domestic/international terminals. Intermediate stops are located at major car

parks, such as King Street North and catering.

Parking

2.31 Qantas currently has access to some 5,480 car parking spaces at Mascot through ownership, lease or rent. The parking is located over four precincts (corporate campus, domestic terminal, international terminal and jet base) as summarised in Table 2.3. Figure 4 shows the location of existing Qantas parking within corporate, domestic and jet base precincts.

Table 2.3	**Summary of Existing Qantas Parking Provision**
Precinct	Number of Spaces
Corporate	3900
Jet Base	530
Domestic	580
International	470
Total	5480

Source: Qantas

2.32 Table 2.3 reveals that the majority of parking available to Qantas is located within the corporate campus (some 71%). Parking within the corporate, domestic and international precincts is highly utilised during peak periods.

2.33 Qantas has advised that parking within the domestic terminal located in Fifth Street (580 spaces) is leased from Sydney Airports who have indicated that it will be unavailable to Qantas when the leases expires. Similarly parking within the Jet Base (530 spaces) which is leased from Sydney Airport will be unavailable to Qantas when the lease expires or spaces are lost to accommodate the RMS

Gateway project. In addition the following changes to parking within the corporate campus are proposed:

- closure of the Coward Street car park (380 spaces) to accommodate the relocation of Dnata catering;
- closure of Trigen, Trigen South and King Street North car parks (810 spaces) to accommodate the relocated Flight Training Centre and new multi-deck car park; and
- availability of 300 spaces on level 3 of the catering carpark following the relocation of Dnata to the Coward Street car park.

2.34 The above changes will result in a net loss of some 2,000 spaces over the corporate, domestic and jet base precincts. These are due to expiry of leases within the jet base and domestic precincts, impact of the Gateway project on the jet base, relocation of Dnata catering within the corporate precinct and relocation of the flight training centre from the jet base to the corporate precinct.

Pedestrians and Cyclists

2.35 The corporate campus has pedestrian/cyclist access from Kent Road, Bourke Road and King Street. Cyclists can also access Qantas Drive via the overpass. Within the site, there is a network of pedestrian paths connecting the main corporate building (on Bourke Road) with car parks and other buildings within the campus. Within the main corporate building, end of trip facilities are provided for people who cycle to work.

3. IMPLICATIONS OF PROPOSED DEVELOPMENT

3.1 The proposed development comprises the relocation of the Flight Training Centre from the Jet Base to the King Street North Car Park and the construction of a multi-story car park on land to the north of the King Street North Car Park (north of the Sydney Water canal and east of the catering facility). This new car park is being constructed to replace parking lost as a result of the relocation of the Flight Training Centre (some 810 spaces) and to provide parking that will be lost by Qantas due to future development or end of leases (some 1,190 spaces). The new multi deck car park will be constructed in stages, with Stage 1 (786 spaces) replacing lost parking due to relocation of the Flight Training Centre. Stage 2 will increase the size of the multi deck car park to some 2,059 spaces. Construction of the 2,059 space car park will allow for consolidation of Qantas staff parking within the campus site, resulting in Qantas being able to better manage its parking facilities.

3.2 Overall the proposed development will not result in any major change in staff numbers or parking provision with respect to Qantas's operations at Mascot and Sydney Airport.

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

- public transport;
- pedestrians and cyclists;
- parking provision;
- access, servicing and internal layout;

- traffic generation and effects;
- response to SEARs; and
- summary.

Public Transport

3.2 As previously discussed, the site is accessible to existing public transport services in the area. It is located within close walking distance to Mascot train station which is located on the T8 line (Macarthur to City via the Airport).

3.3 In addition the site is serviced by a number of bus routes that connect the area with Eastgardens, Bondi Junction, Burwood, Kingsford and Port Botany. Bus stops are located in Bourke Road and Coward Street in close proximity to the site.

3.4 Thus the location of the site provides opportunities for people to travel to the site by means other than car. Thus the proposed development is consistent with government objectives and 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.

3.5 Within the site, the existing bus network will maintained with some minor changes to accommodate the new development. As part of the new Flight Training Centre, new bus stops will be provided on the access road between the canal and Flight Training Centre building. The provision of new wider roads that generally separate parking areas will improve travel by buses along the internal bus routes.

Pedestrians and Cyclists

3.6 As noted in Chapter 2 the site currently has pedestrian and cyclist connections to the adjacent road network. Within the site the network of pedestrian paths, that connect the main corporate building on Bourke Road with car parking areas and other building within the campus, will be maintained. Around the new multi-deck car park and Flight Training Centre, new paths will be constructed, improving pedestrian connectivity and separating pedestrians from parking areas within this part of the corporate campus.

3.7 Within the ground floor of the new multi-deck car park, additional bicycle parking will be provided. Cyclists will be able to use the existing end of trip facilities within the main corporate building on Bourke Road.

Parking

3.8 It is proposed to construct a new multi-deck car park (some 2,059 spaces) to the north of relocated flight training facility site. The new multi deck car park will be constructed in stages, with Stage 1 (748 spaces) replacing parking lost to relocate the Flight Training Centre (some 810 spaces comprising, 560 on King Street North, 250 spaces in the area north of the canal). In addition to the new multi

deck car park some 39 at grade spaces will be provided adjacent to the new Flight Training Centre. Thus Stage 1 will provide a total of 787 spaces.

3.9 Stage 2 will increase the size of the multi deck car park to some 2,059 spaces. This will accommodate the changes to parking (net loss of 2,000 spaces) within the corporate, domestic and jet base precincts:

- closure of the Coward Street car park (380 spaces) within the corporate precinct to accommodate the relocation of Dnata catering;
- closure of the Trigen, Trigen South and King Street North car parks (810 spaces) to accommodate the relocated Flight Training Centre and new multi-deck car park;
- availability of 300 spaces on level 3 of the catering carpark within the corporate precinct following the relocation of Dnata to the Coward Street car park;
- loss of parking within the domestic terminal located in Fifth Street (580 spaces) when the leases expires; and
- loss of parking within the Jet Base (530 spaces) when the lease expires or spaces are lost to accommodate the RMS Gateway project.

3.10 With the inclusion of the 39 space at grade parking adjacent to the Flight Training Centre, Stage 2 will provide a total of a total of 2,098 spaces. Table 3.1 provides a summary of parking provision for the existing, Stage 1 and Stage 2.

Table 3.1	**Summary of Parking Supply**		
Precinct	Existing Supply	Stage 1	Stage 2
Corporate	3900	3877	5108
Jet Base	530	530	0
Domestic	580	580	0
International	470	470	470
Total	5480	5477	5578

3.11 Examination of Table 3.1 reveals that:

- for Stages 1 and 2 overall parking provision remains similar compared to the existing situation. In Stage 1 there is a 0.4% reduction in parking. In Stage 2 there is a 1.8% increase in parking;
- in Stage 1 parking provision within each precinct is largely unchanged compared to the existing situation; and
- in Stage 2, parking is relocated from the Jet Base (some 530 spaces) and Domestic (some 580 spaces) precincts to the Corporate Precinct.

3.12 Construction of the 2,059 space car park will allow for consolidation of Qantas staff parking within the campus site, resulting in Qantas being able to better manage its parking facilities.

3.13 The major arrival and departure routes to the flight training centre and new multi-deck car park are shown on Figure 5. Access to the flight training centre and multi-deck car park is provided directly from King Street or from Kent Road and Qantas Drive via internal roads through the corporate campus.

Travel Demand Management

3.14 To encourage travel modes other than private vehicle, a travel demand management approach would be adopted. The site is accessible by public transport, being within walking distance of Mascot train station and serviced by a number of bus routes that provide local and regional connections. To achieve this, Qantas would prepare a work place travel plan and transport access guide to support the objectives of encouraging the use of public transport. The work place travel plan and travel access guide would include the following:

- encourage the use of public transport, including rail services through Mascot train station and accessibility by buses;
- work with public transport providers to improve services;
- encourage public transport by employees and visitors through the provision of information, maps and timetables;
- raise awareness of health benefits of walking (including maps showing walking and cycling routes, including through and adjacent to the site);
- encourage cycling by providing safe and secure bicycle parking, including the provision of lockers and change facilities.

3.15 The travel access guide would be developed in accordance with the principles identified by TfNSW and RMS, and distributed with marketing material for the proposed development. The travel access guide would assist in delivering

sustainable transport objectives, by considering the means available for reducing dependence solely on cars for travel purposes, encouraging the use of public transport, cycling and walking and supporting the efficient and viable operation of public transport services.

3.16 Travel demand management would apply to Qantas employees that work during the day (typically 8.00am to 6.00pm). It is recognized that for a proportion of employees (for example flight crew and support staff that work shifts that start or finish at night or early morning) the majority of these will continue to drive to work as there are not suitable alternative means of travel.

Access, Servicing and Internal Layout

3.17 Vehicular access to the proposed development will be as currently exists to Corporate Campus, that is, from King Street, Kent Road and Qantas Drive. As part of the proposed development, the existing separate entry/exit driveways will be closed and replaced with two new driveways at the eastern and western ends of the site. Both driveways will cater for two way traffic. The eastern driveway will be the primary access, and will provide access to the new multi deck car park, Flight Training Centre and ingress for vehicles servicing the Flight Training Centre. The western access will be a secondary access for the Flight Training Centre and provide egress for vehicles servicing the Flight Training Centre.

3.18 Access to the site from King Street will be controlled via boom gates. On both driveways the boom gates will be located well within the site thus providing adequate queuing area. On the eastern access three boom gates will be provided. These will operate in a tidal arrangement, with two entry/one exit lane in the morning peak and one entry lane/two exit lanes in the afternoon peak. On the

western access a single lane boom gate will be provided. This will allow service vehicles to exit the site. Traffic flows on this secondary access will be low and thus a single lane will provide appropriate capacity. At the single lane section, signage will be provided indicating that vehicles exiting the site should give way to vehicles entering the site.

3.19 Within the King Street North car park, a new road will be constructed to the south of the canal. Parking and bus stops will be located along this new road. The existing bridge connections across the canal will retained, with traffic flow as per the existing situation (eastern bridge two way flow and western bridge one flow southbound). Both bridges will retain the existing pedestrian paths. The existing one way road (westbound) from the King Street North car park (adjacent to the freight line) will be retained, allowing vehicles to access Qantas Drive and Kent Road.

3.20 The new multi deck car park, to be constructed to the north of the canal, will have access to the existing road along the eastern boundary (that will connect to the new road through the King Street North car park site) and to the existing road south of the catering building. These arrangements will provide for access from Qantas Drive and Kent Road (past the catering building) and King Street (via the existing and new roads along the eastern boundary).

3.21 As part of the new multi deck car park, a new road will be constructed between the car park and the canal. In addition the area between the canal and the catering building will be reconfigured, to separate car park traffic from the operation of the catering docks. A service road between the new car park and the Tri-Gen building (to the north of the car park) will be provided to allow access

to the Tri-Gen building. Some at grade parking will be provided along this service road.

3.22 Within the new multi deck car park, circulation will generally be one way with a ramping system that provides for:

- a fast up circulation;
- a slow up circulation; and
- a fast down circulation.

3.23 This arrangement will allow vehicles to circulate each level of the car park or bypass levels if full. It also allows for vehicles on the higher levels of the car park to not have to circulate each level to exit the car park. The fast up and down ramps are at separate ends of the car park so as to avoid the crossover of traffic movements. All parking areas (driveways, ramps, circulating aisles and parking bays) will be designed to comply with requirements of AS2890.1-2004 and AS2890.6-2009. It is suggested that a parking management system be provided to inform drivers of the number of vacant spaces on each level.

3.24 Loading for the Flight Training Centre will be provided within a service area, located on the eastern side of the building. The docks will be designed to accommodate rigid trucks and to comply with the requirements of AS2890.2-2002 with all trucks entering and departing the docks in a forward direction. Trucks will access the site via King Street, entering via the eastern driveway and departing via the western driveway.

3.25 A secondary service area will be located adjacent to the western driveway, to allow delivery of hydraulics to the flight simulators. It is understood that access is

required by a medium rigid truck at this location on an infrequent basis (typically twice a year). When required, the truck would enter the site via the western driveway, reverse into the service area and exit via the western driveway in a forward direction. Given the infrequency of this service and that the western driveway is a secondary access (carrying low traffic flows), this arrangement is satisfactory.

3.26 On occasions an articulated truck will need to access the Flight Training Centre (such as to install or remove a flight simulator). The service area and internal roads adjacent to the flight centre building will be designed to allow circulation by an articulated truck. However as the truck would take up the full width of the roads, appropriate traffic management will need to be provided to manage traffic flow when these trucks are on-site. These events will occur outside of peak traffic flow periods (such as the weekday morning and afternoon).

3.27 Vehicle turn paths are provided in Attachment A.

Traffic Generation and Effects

3.28 The relocation of the Flight Training Centre and construction of the new multi-deck car park will not result in any major change in staff numbers or parking provision with respect to Qantas's operations at Mascot and Sydney Airport.

3.29 In addition to the traffic counts on the surrounding road network, surveys of traffic movements into and out of the King Street North car park and adjacent car park to the north (total of some 786 spaces) were undertaken, to determine traffic generation of parking that will be replaced as part of the relocation of the Flight Training Centre. The surveys found that these two car parks generated

some 450 vehicles per hour (two way) in the morning peak hour and some 300 vehicles per hour in the afternoon peak hour. At the time of the surveys, the two car parks were effectively at capacity. Taking into account that some of the traffic through these car parks is traffic generated by vehicles traveling between the main campus building and the other parts of Qantas (and thus not generated by parking spaces), this is equates to a traffic generation rate per car space of 0.55 vehicles per hour (two way) in the morning peak hour and 0.37 vehicles per hour (two way) in the afternoon peak hour.

3.30 The new multi-deck car park will be constructed in two stages. Stage 1 will be some 787 spaces (comprising 748 spaces within the multi-deck car park and 39 at-grade spaces adjacent to the Flight Training Centre) to replace the spaces lost to relocate the Flight Training Centre and construction of new multi deck car park. Stage 2 would increase the size of the car park to some 2,098 spaces (comprising 2,059 spaces within the multi-deck car park and 39 at-grade spaces adjacent to the Flight Training Centre), with the relocation of some 1,190 spaces from the domestic terminal (some 580 spaces), Jet Base (530 spaces) and the western part of the Corporate Campus (80 spaces). Thus once completed, of the some 2,098 spaces in the new car park, some 1,110 are new spaces to the Corporate Campus and thus would generate additional traffic in and out of the Corporate Campus. However, as they are relocated from the Jet Base or domestic terminal, they would not result in new traffic to/from the airport precinct, rather a redistribution of existing trips.

3.31 In assessing the traffic effects of the proposed development, it has been assumed that some 75% traffic generated by the 1,110 new/relocated spaces to the corporate campus would be new trips (this takes into account that some traffic generated by the existing car parks would use the same access points/routes as

the new car park). Using the surveyed generation rates per parking space and applying the 25% reduction, the relocated 1,110 spaces would generate some 450 and 310 vehicles per hour (two way) in the weekday morning and afternoon peak hours respectively.

3.32 This additional traffic has been assigned to the road network, based on existing arrival/departure routes to/from the corporate campus and taking into account changes to the road network as part of the RMS upgrades. The results are summarized in Table 3.2 and displayed in Figures 2 and 3.

3.33 Table 3.1 shows that the greatest increase in traffic flows on the surrounding road would be on King Street, west of O'Riordan Street (increases of 100 to 160 vehicles per hour two way), Qantas Drive, west of the Jet Base access (increases of 80 to 120 vehicles per hour two-way) and Joyce Drive, east of O'Riordan Street (increase of between 60 and 110 vehicles per hour two way). On other streets increases would be low at less than 60 vehicles per hour.

Table 3.2: Existing + Development Two-Way (Sum of Both Directions) Peak Hour Traffic Flows

Road	Weekday Morning		Weekday Afternoon	
	Existing	+ Dev	Existing	+ Dev
Qantas Drive				
– west of O'Riordan Street	4,375	+96	3,435	+34
– east of Robey Street	4,375	+96	3,545	+34
– east of Lancastrian Drive	3,665	+68	3,415	+21
– west of Lancastrian Drive	3,790	+124	3,615	+85
Joyce Drive				
– east of O'Riordan Street	3,350	+113	2,870	+57
Seventh Street				
– south of Qantas Drive	1,930	+0	2,230	+0
Robey Street				
– east of Qantas Drive	2,190	+28	1,965	+13
– west of O'Riordan Street	2,170	+28	1,945	+13
– east of O'Riordan Street	690	+0	630	+0
O'Riordan Street				
– north of Qantas Drive	1,520	+38	2,100	+23
– north of Robey Street	3,190	+27	3,385	+36
– north of King Street	3,195	+57	3,560	+45
– north of Bourke Road	2,435	+49	2,795	+36
– north of Coward Street	2,260	+27	2,385	+28
King Street				
– east of O'Riordan Street	510	+44	580	+22
– west of O'Riordan Street	280	+157	325	+102
Bourke Road				
– north of O'Riordan Street	1,255	+8	1,405	+9
– north of Qantas Access	1,190	+8	1,170	+9
– north of Coward Street	660	+10	975	+10
Kent Road				
– north of Coward Street	1,045	+34	1,010	+28
– south of Coward Street	330	+64	230	+56
Coward Street				
– east of O'Riordan Street	960	+43	1,205	+28
– east of Bourke Road	535	+23	620	+20
– east of Qantas Access	1,155	+30	1,040	+24
– east of Kent Road	1,165	+30	1,090	+24
– west of Kent Road	460	+0	310	+0

3.34 The operation of the surrounding intersections has been reanalysed using SIDRA, with development traffic in place and the RMS road improvements. The analysis found that:

- The intersection of Qantas Drive and Lancastrian Drive would continue to operate with average delays of less than 28 seconds per vehicle in the peak periods. This represents level of service B, a good level of service with minimal delays and spare capacity;
- The intersection of Qantas Drive, Robey Street and Seventh Avenue would continue to operate with average delays of less than 40 seconds per vehicle in the peak periods. This represents level of service C. a satisfactory level of service;
- The intersection of Qantas Drive, O'Riordan Street and Sir Reginald Ansett Drive would continue to operate with average delays of less than 45 seconds per vehicle in the peak periods. This represents level of service D, a satisfactory level of service for a major urban intersection;
- The intersection of O'Riordan Street and Robey Street would continue to operate with average delays of less than 15 seconds per vehicle in the peak periods. This represents level of service A/B, a good level of service;
- The intersection of O'Riordan Street and King Street would continue to operate with average delays of less than 30 seconds per vehicle in the peak periods. This represents level of service B/C, a satisfactory level of service;
- The intersection of O'Riordan Street and Bourke Road would continue to operate with average delays of less than 25 seconds per vehicle in the peak periods. This represents level of service B, a good level of service;
- The intersection of O'Riordan Street and Coward Street would continue to operate with average delays of less than 30 seconds per vehicle in the peak periods. This represents level of service B/C, a satisfactory level of service;
- The intersection of Bourke Road and King Street would operate with average delays of less than 35 seconds per vehicle in the peak periods. This represents level of service C, a satisfactory level of service;

- The intersection of Coward Street and Kent Road would continue to operate with average delays of less than 35 seconds per vehicle in the peak periods. This represents level of service C, a satisfactory level of service.

3.35 Table 3.3 below summarises the level of service (LOS) at the above intersection with and without development traffic.

Table 3.3	**Summary of Intersection Levels of Service (LOS)**	
Intersection	Level of Service (LOS)	
	No Development	With Development
Qantas Drive/Lancastrian Drive	B	B
Qantas Drive/Robey Street	C	C
Qantas Drive/O'Riordan Street	D	D
O'Riordan Street/Robey Street	A/B	A/B
O'Riordan Street/King Street	B/C	B/C
O'Riordan Street/Bourke Road	B	B
O'Riordan Street/Coward Street	B/C	B/C
Bourke Road/Coward Street	C	C
Coward Street/Kent Road	C	C

3.36 In summary with the road upgrades currently under construction or proposed by RMS, the surrounding road network would accommodate the traffic generated by the proposed development with surrounding intersections operating at satisfactory or better levels of service in the peak periods.

Response to SEARs

3.37 Our response to the Draft Sears is set out in Table 3.4

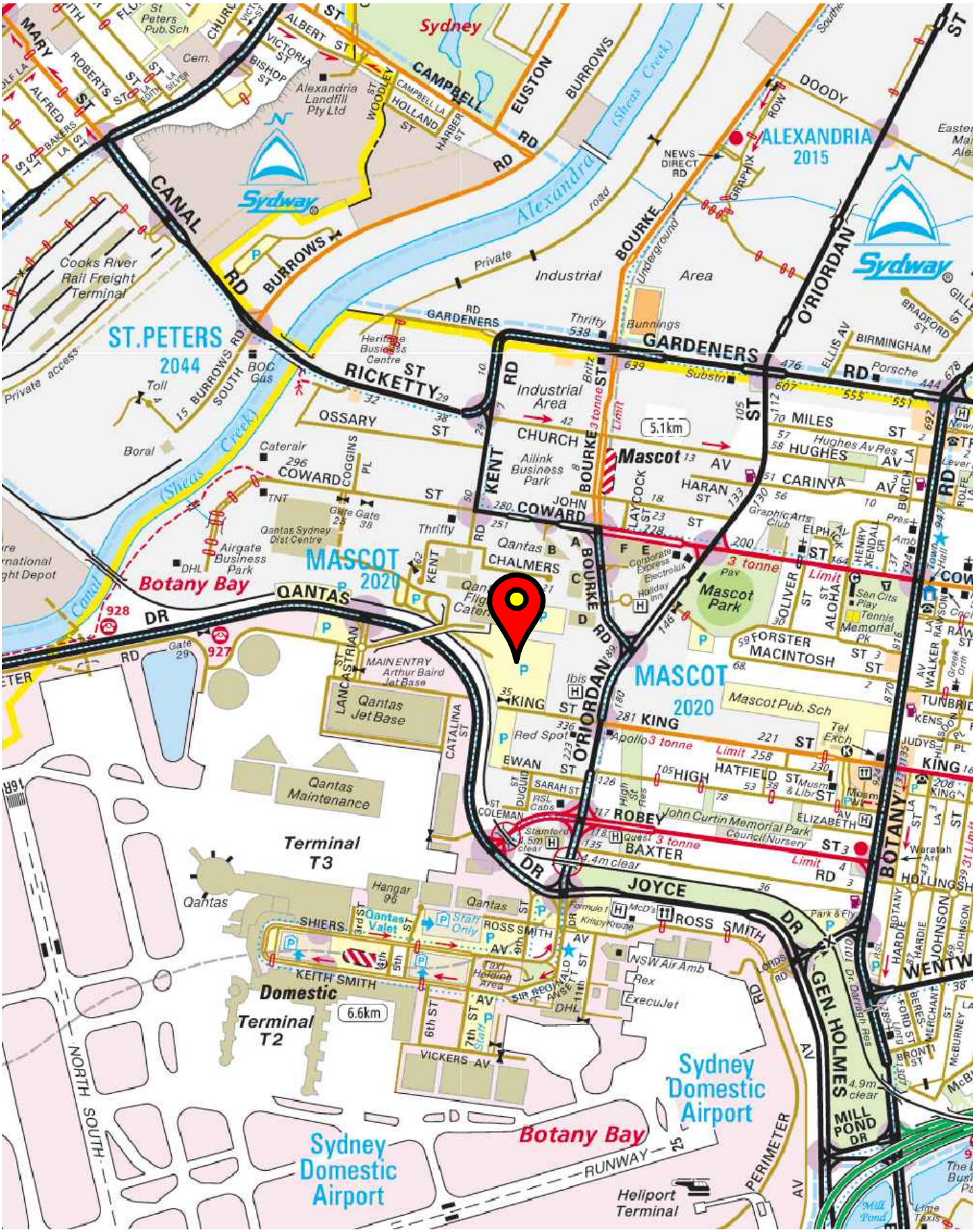
Table 3.4	**Response to SEARs**
Traffic Matter Raised	Response
A traffic and parking assessment detailing all daily and peak hour traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, including a description of vehicle type, access routes and the impacts on nearby intersections.	This report assesses traffic and parking effects of the operation of the proposed development. A separate Construction Traffic and Pedestrian Management Plan has been prepared.
Details of access to the site from the road network including intersection location, design and sight distance	Access to the proposed development will be via King Street, Kent Road and Qantas Drive. No changes are proposed to the existing Kent Road and Qantas Drive Accesses. Two new accesses are proposed to King Street (at the eastern and western ends of the site). The two accesses will be designed to comply with the requirements of AS2890.
Details of the likely arrival and departure times for vehicles for all components of the proposed development.	These are provided in sections 2.20 &, 2.21 and Table 2.2.
An assessment of predicted impacts on road safety and the capacity of the road network to accommodate the development	An assessment of the capacity of the road network has been undertaken as set out in Sections 2.25 and 3.32. This found that with the road upgrades currently under construction or proposed by RMS, the surrounding road network would accommodate the traffic generated by the proposed development with surrounding intersections operating at satisfactory or better levels of service in the peak periods
An assessment of the implications for public and active transport, the potential for implementing a location specific sustainable travel management strategy and the provision of end of trip facilities to increase active transport usage to and from the site	This report addresses public and active transport implications. The site is well serviced by existing public transport services (buses and trains) and provides end of trip facilities for cyclists. A Travel Demand Management strategy has been suggested to encourage travel by modes other than private vehicle. It is acknowledged that this cannot be applied

	to all staff, as a proportion work outside of typical business hours and will continue to drive.
Plans of any road upgrades or new roads required for the development, if necessary	No upgrades to the external road network are required as part of the proposed development
Details of the parking provision on-site, including the existing parking provided and its users and a justification for the amount of paring proposed, demonstrating compliance	Existing and proposed parking is addressed in Sections 2.31 to 2.33 and 3.8 to 3.11. Qantas's parking strategy is to replace existing parking lost as part of the relocation of the Flight Training Centre and to provide parking that will be lost by Qantas due to future development or end of leases. Construction of the new car park will allow for consolidation of Qantas staff parking within the campus site resulting Qantas being able to better manage its parking facilities
Details of the proposed layout of the internal road network and parking provision on-site, in accordance with the relevant Australian Standards	An assessment of the proposed layout of the internal road network and parking provision on-site is provided in Sections 3.15 to 3.25. All new car parks, access roads and service areas will be designed to comply with the requirements of AS2890.1-2004, AS2890.2-2002 and AS2890.6-2009.
Details of any likely dangerous goods to be transported on arterial and local roads to/from the site, if any, and the preparation of an incident management strategy, if necessary	We understand that the proposed development does not involve the transportation of dangerous goods.
Consultation with RMS/TfNSW	A meeting was held with representatives of RMS/TfNSW on 27 February 2019. The traffic matters set out in the SEARS reflect the matters that RMS/TfNSW identified at the meeting to be addressed in the traffic/transport assessment of the proposed development.

Summary

3.38 In summary, the main points relating to the traffic aspects of the proposed development are as follows:

i) the existing Qantas Flight Training Centre is being relocated;
ii) in association with the relocation, a new multi-deck car park will be constructed along with some at-grade parking;
iii) the multi-deck car park will be constructed in 2 Stages;
iv) Stage 1 will provide 787 spaces (748 spaces in the multi-deck car park and 39 at-grade spaces) which will replace existing parking lost to relocate the Flight Training Centre;
v) Stage 2 will provide 2,098 spaces (2,059 spaces in the multi-deck car park and 39 at-grade spaces). Construction of the Stage 2 car park will be accommodated relocated spaces from the Domestic Terminal, Jet Base and the Corporate Campus;
vi) Construction of the Stage 2 car park will allow for consolidation of Qantas staff parking within the campus site, resulting in Qantas being able to better manage its parking facilities;
vii) with the road upgrades currently under construction or proposed by the RMS, the surrounding road network would accommodate the traffic generated by the proposed development;
viii) the SEARs have been addressed.



Click: https://goo.gl/maps/dgLkwW2g6kD2

Location Plan

Colston Budd Rogers & Kafes Pty Ltd

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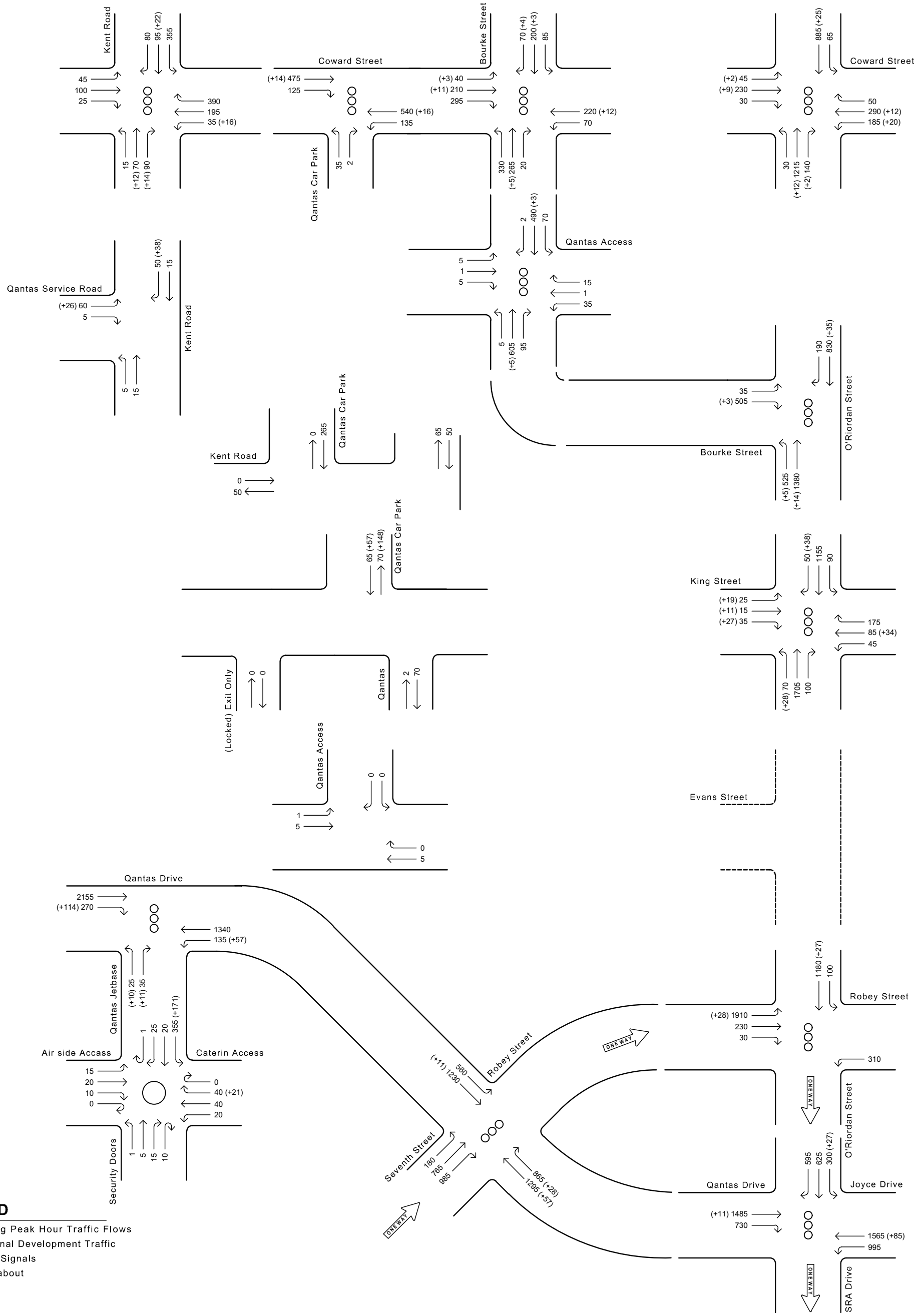
Figure 1



LEGEND

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

Existing redistributed weekday morning traffic flows plus development traffic

Figure 2

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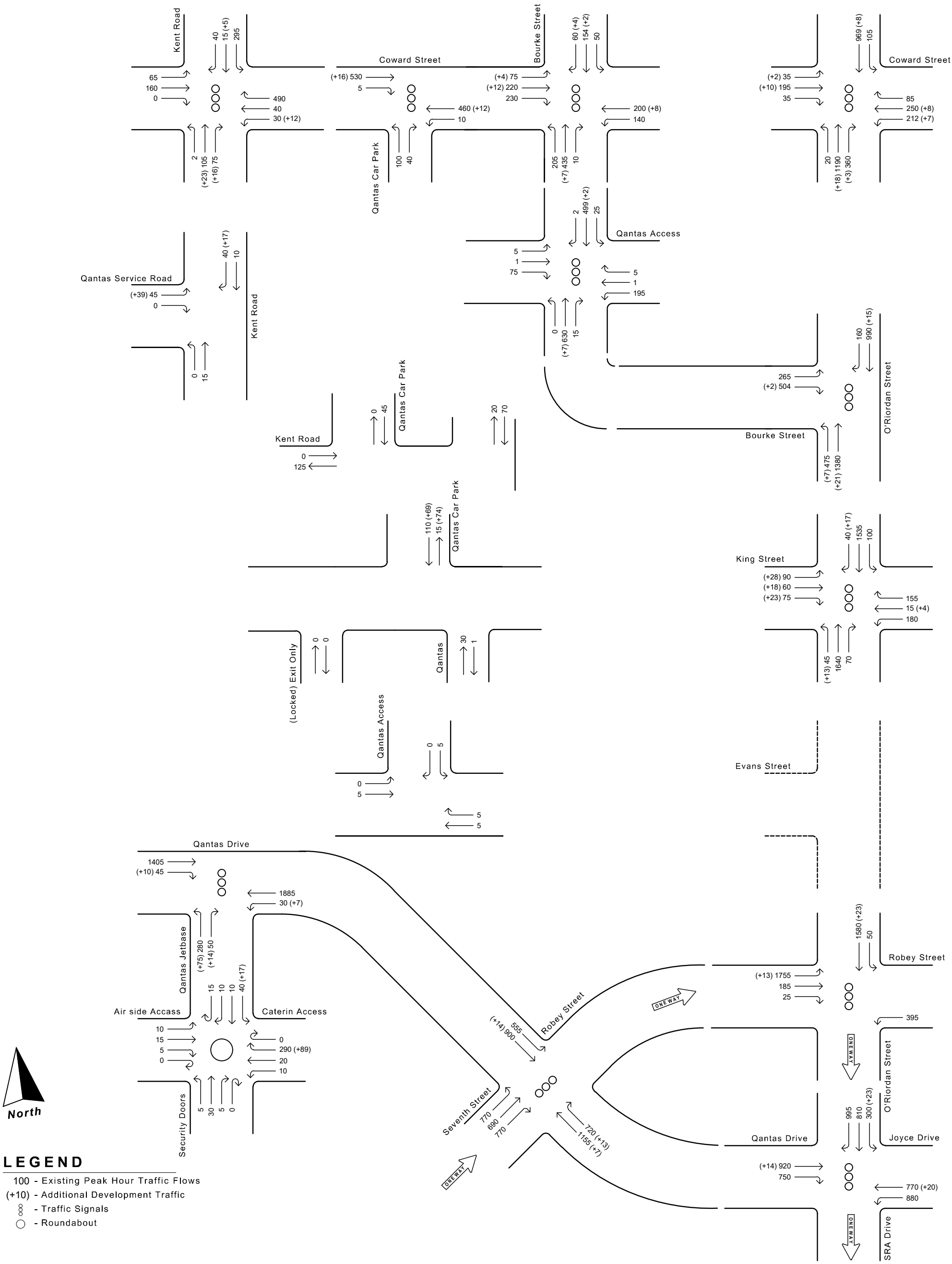

Existing redistributed weekday afternoon traffic flows plus development traffic

Figure 3

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KEY:
CAMPUS & FREEHOLD
JETBASE
DOMESTIC

CATERING GF ~ 330
CATERING L1 ~ 540
CATERING L2 ~ 290
TOTAL ~ 1160

COWARD ST ~ 350
PTC ~ 70
QCA/B ~ 860
COWARD ST WEST ~ 140
QCD ~ 140
TRIGEN ~ 120
TRIGEN SOUTH ~ 130
KING ST NORTH ~ 560
KING ST SOUTH ~ 400
PWC ~ 190
PVC ~ 70
P48 ~ 50
PCR ~ 40
PB1 ~ 50
PB2 ~ 30
P67 ~ 95
5TH STREET ~ 580

Parking Supply	
Corporate	3900
Jet Base	530
Domestic	580
Total	5010

NOTE:
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QANTAS CURRENT PARKING SUPPLY (CORPORATE, JETBASE AND DOMESTIC)

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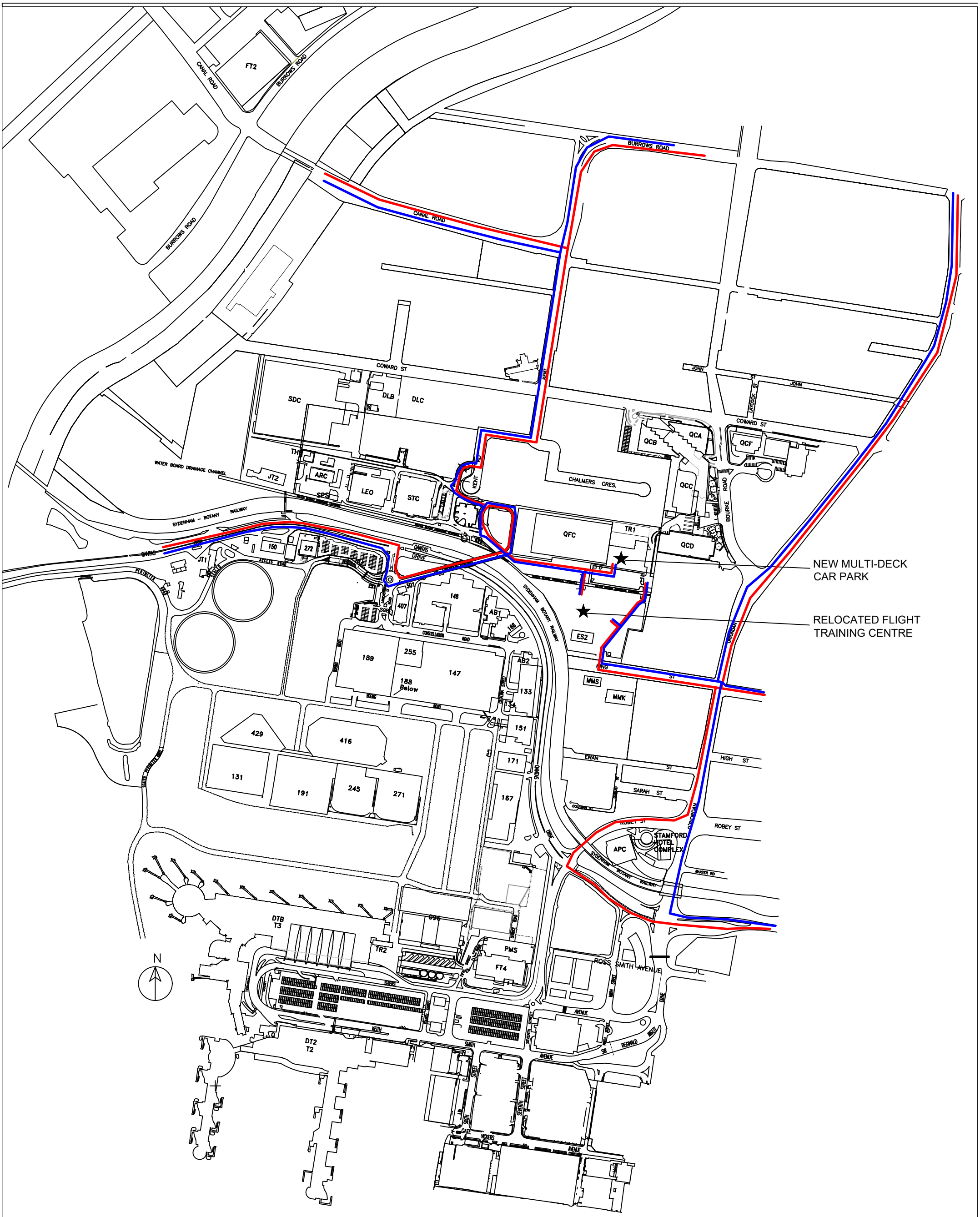

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Arrival Routes
Departure Routes

MAJOR ARRIVAL AND DEPARTURE ROUTES TO NEW MULTI-DECK CAR PARK AND RELOCATED FLIGHT TRAINING FACILITY

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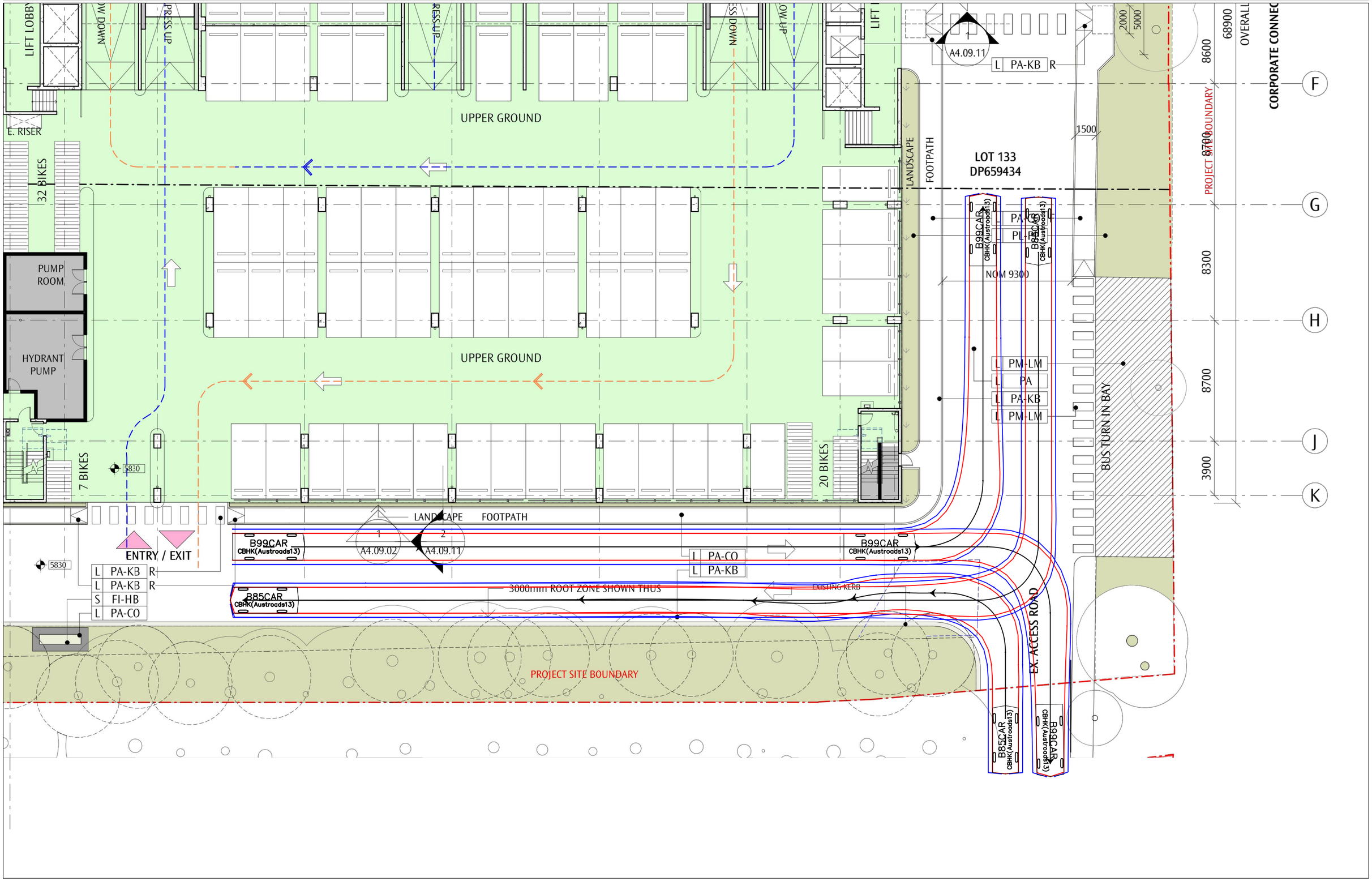
5

ATTACHMENT A

VEHICLE SWEPT PATHS



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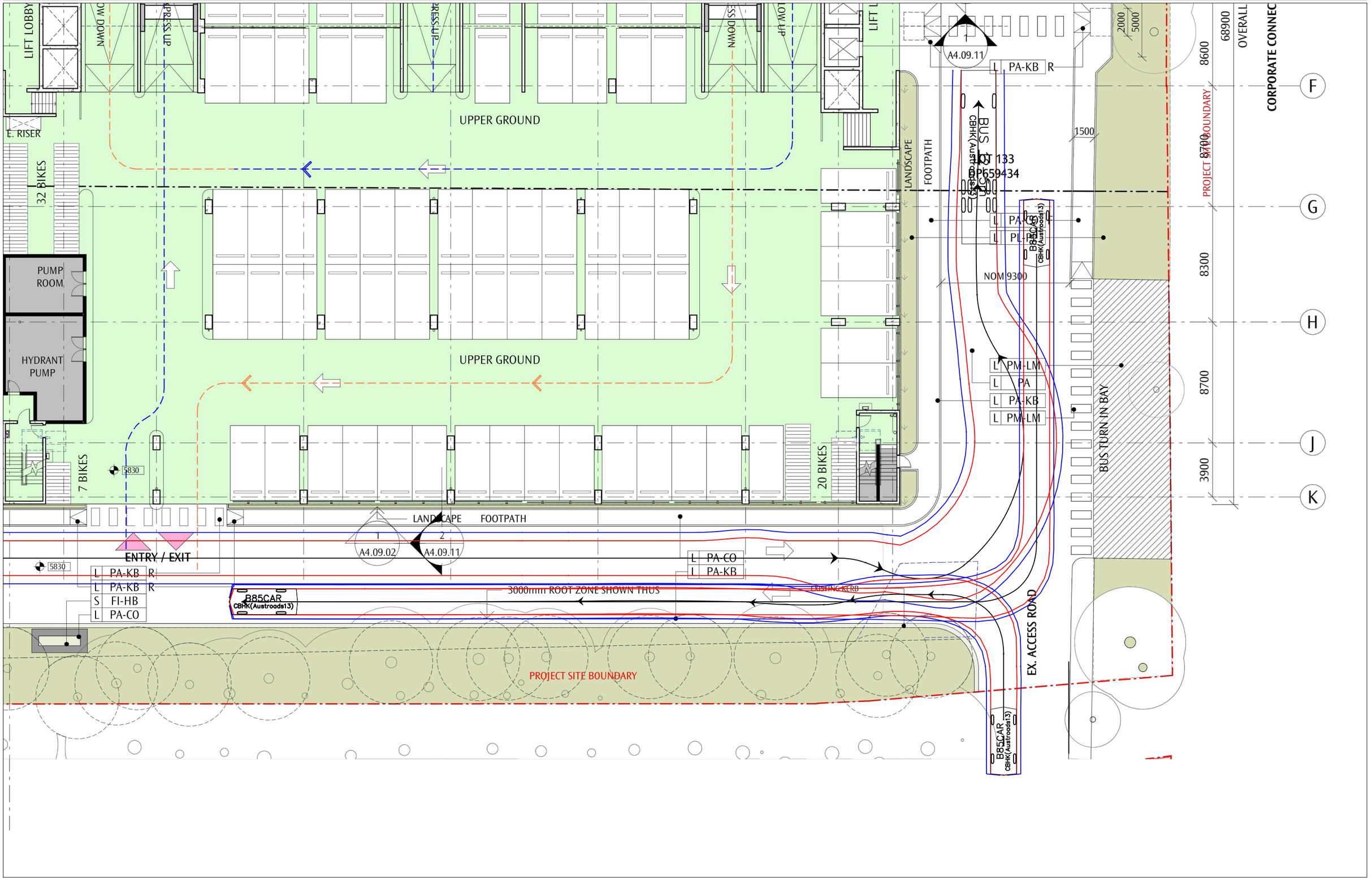
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

B85 & B99 VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mr Ref: 11146 16 April 2019

A1



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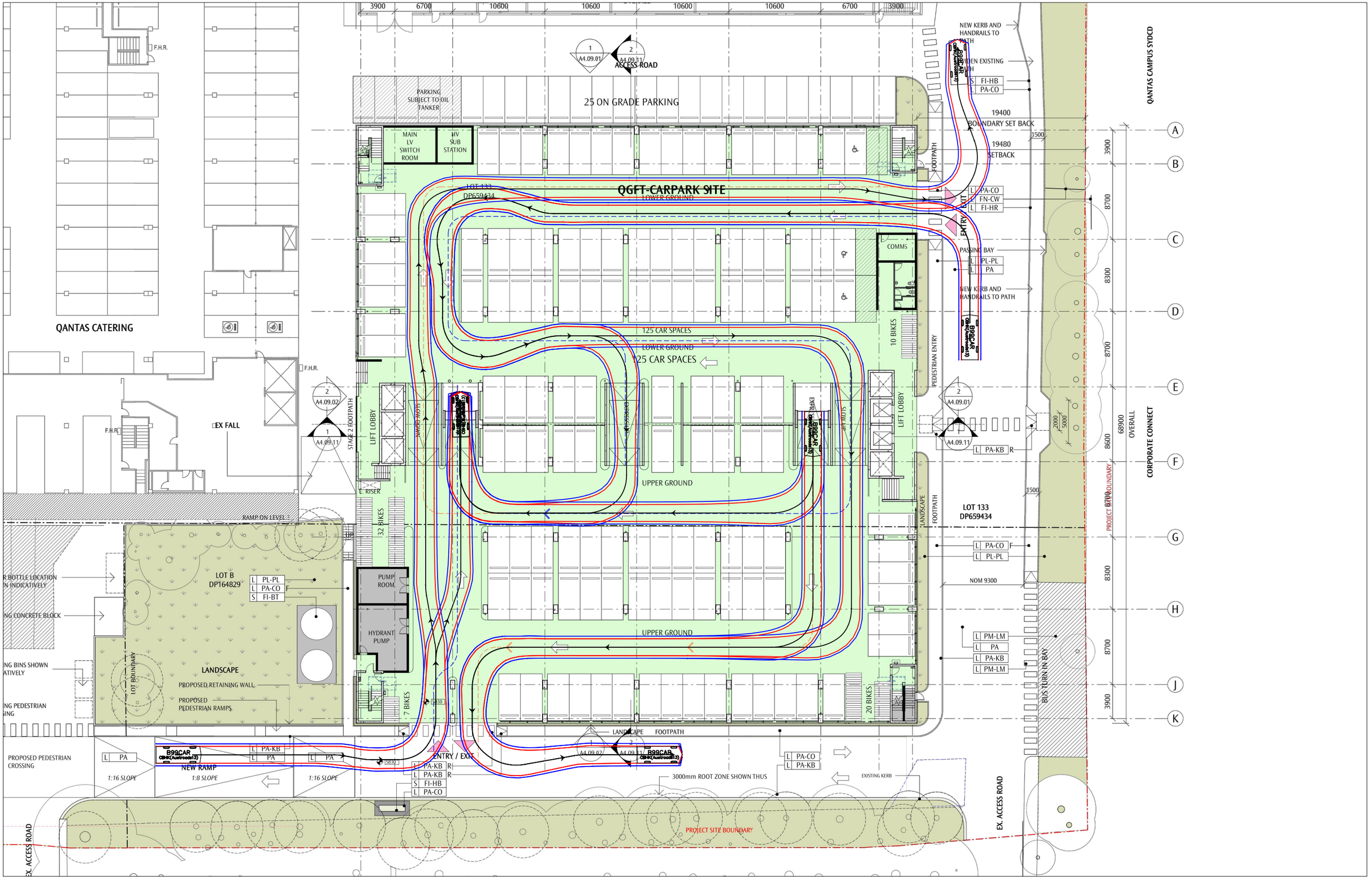
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

B85 & B99 VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mr Ref: 11146 16 April 2019

A2



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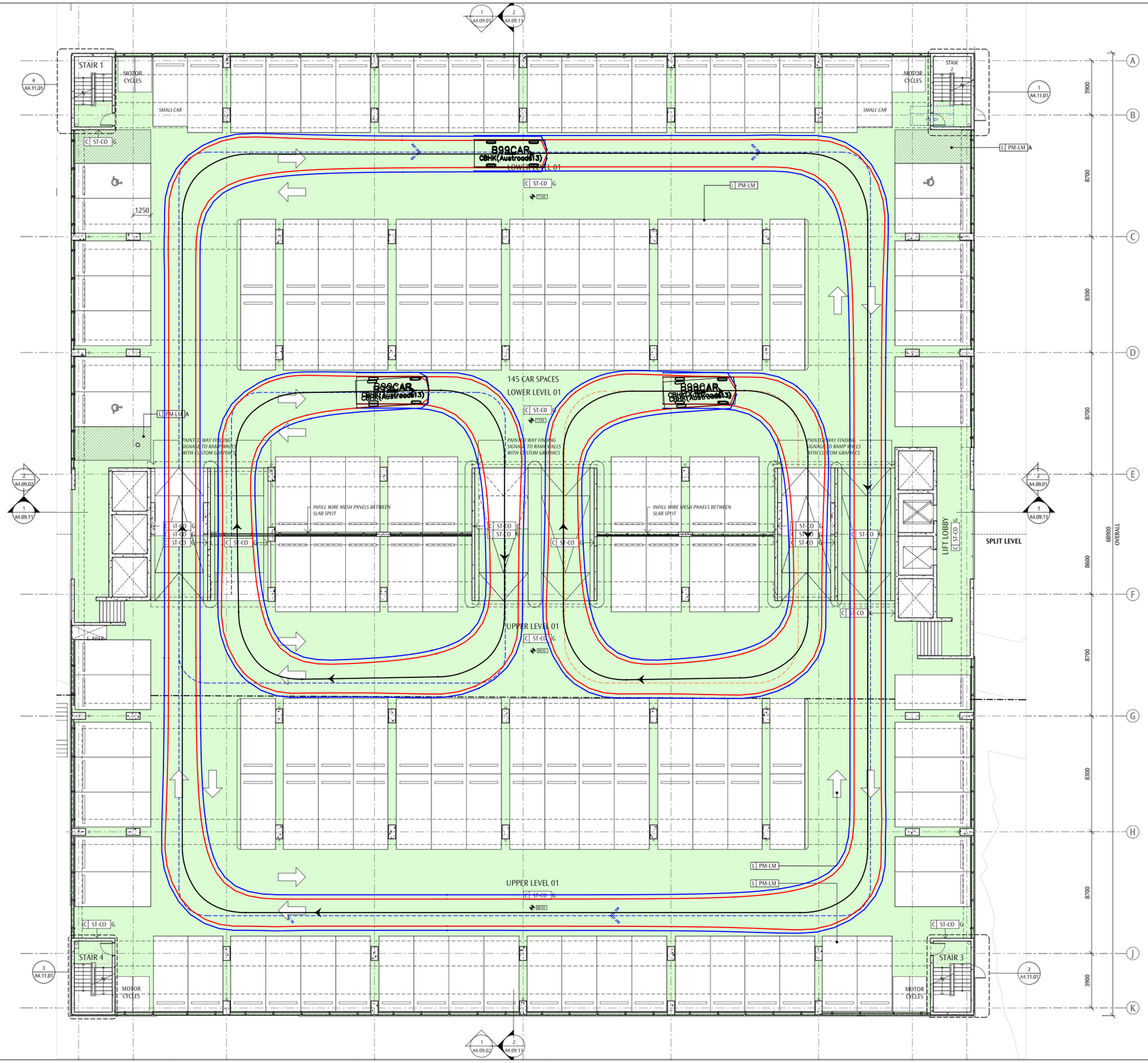
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

B99 VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mr Ref: 11146 16 April 2019

A3



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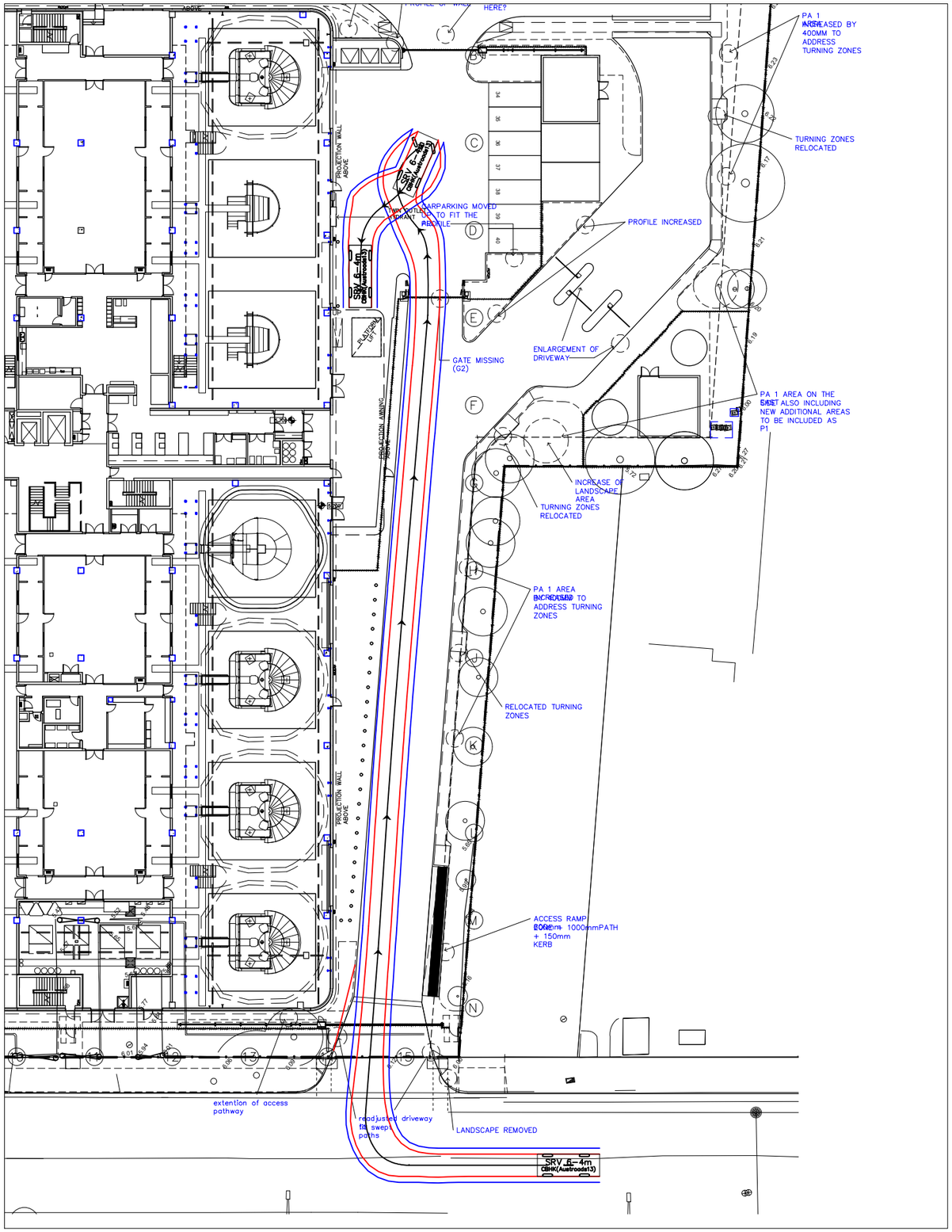
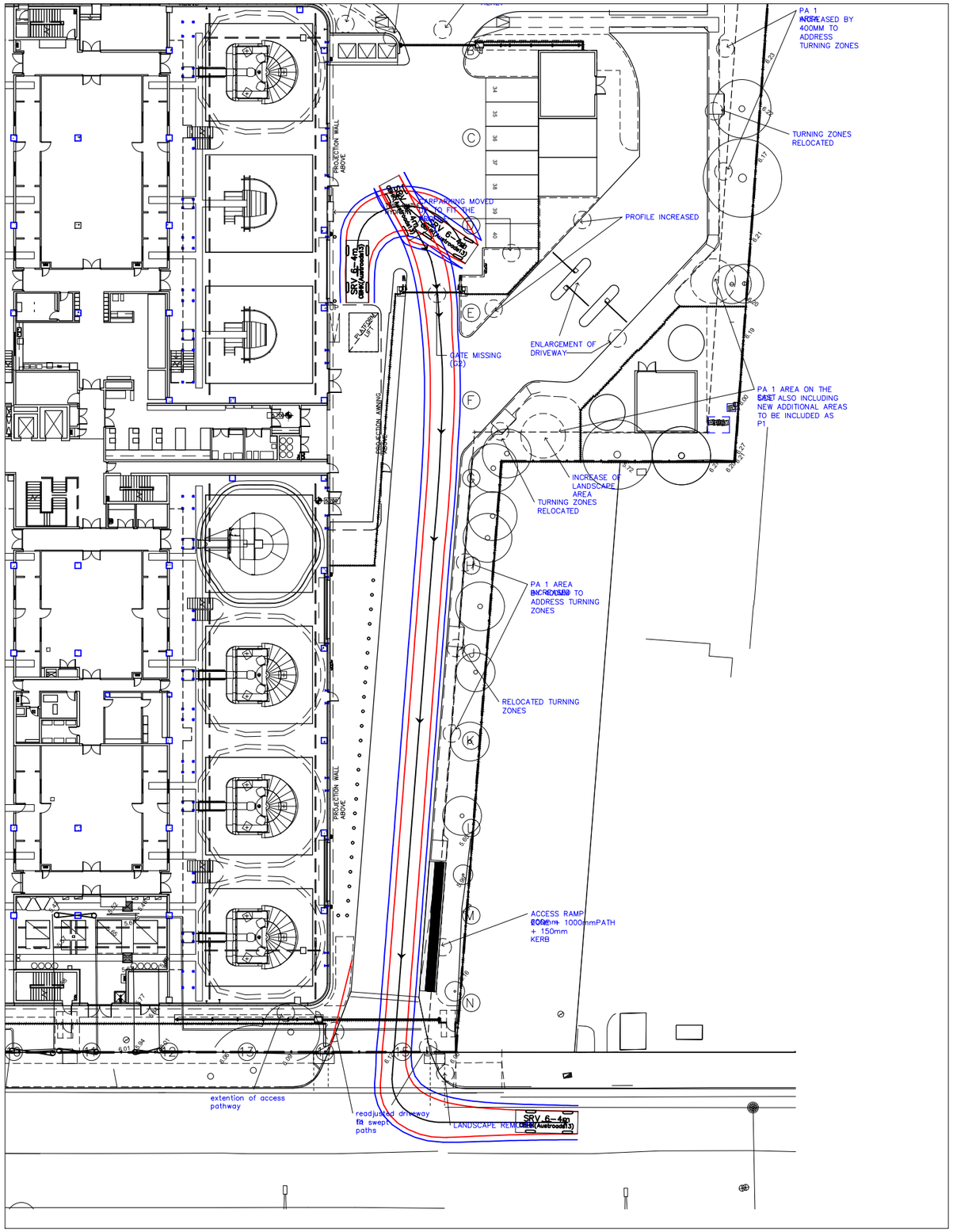
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

B99 VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mr Ref: 11146 16 April 2019

A4





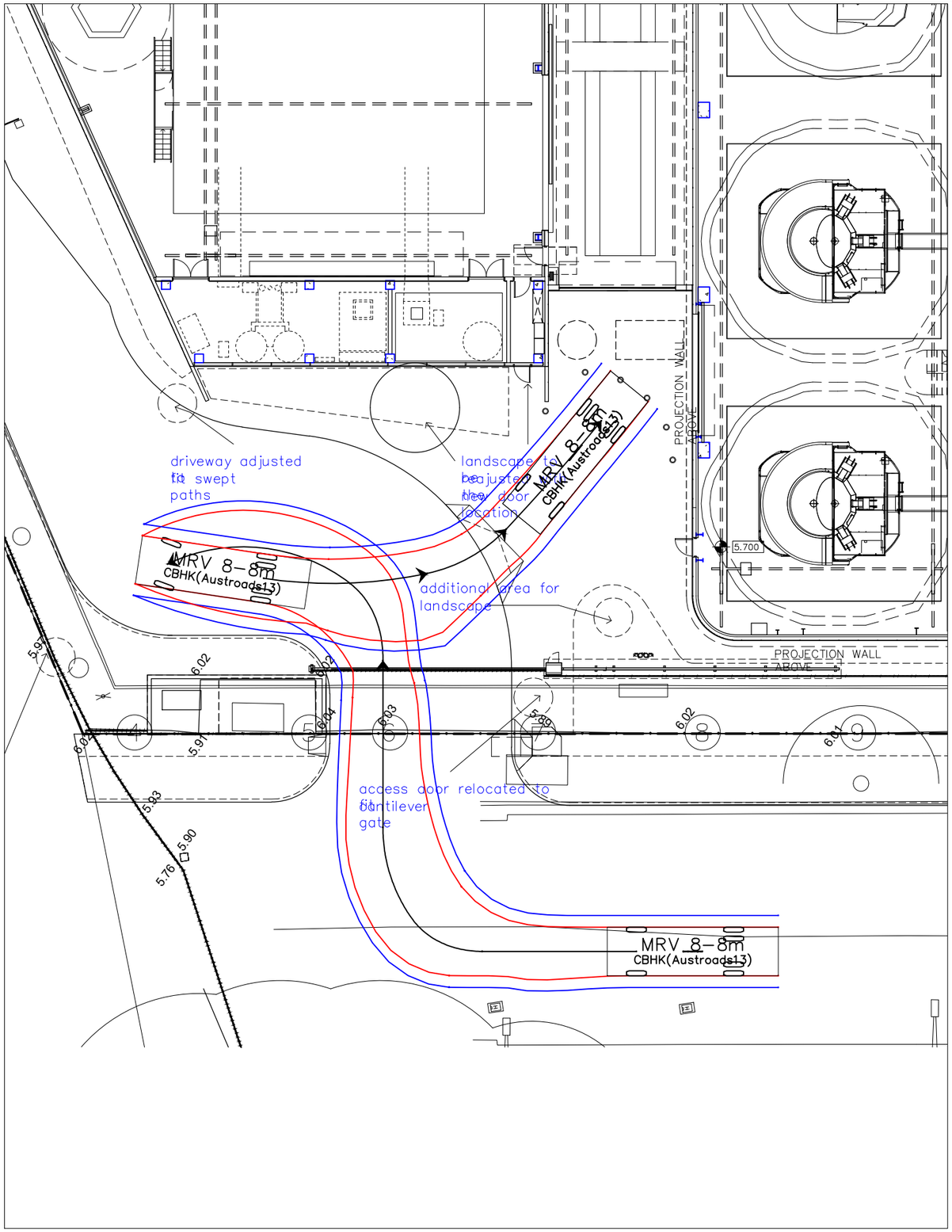
NOTE:
SKETCH PLAN ONLY. PROPERTY BOUNDARIES, UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO SURVEY AND FINAL DESIGN. TRAFFIC MEASURES PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

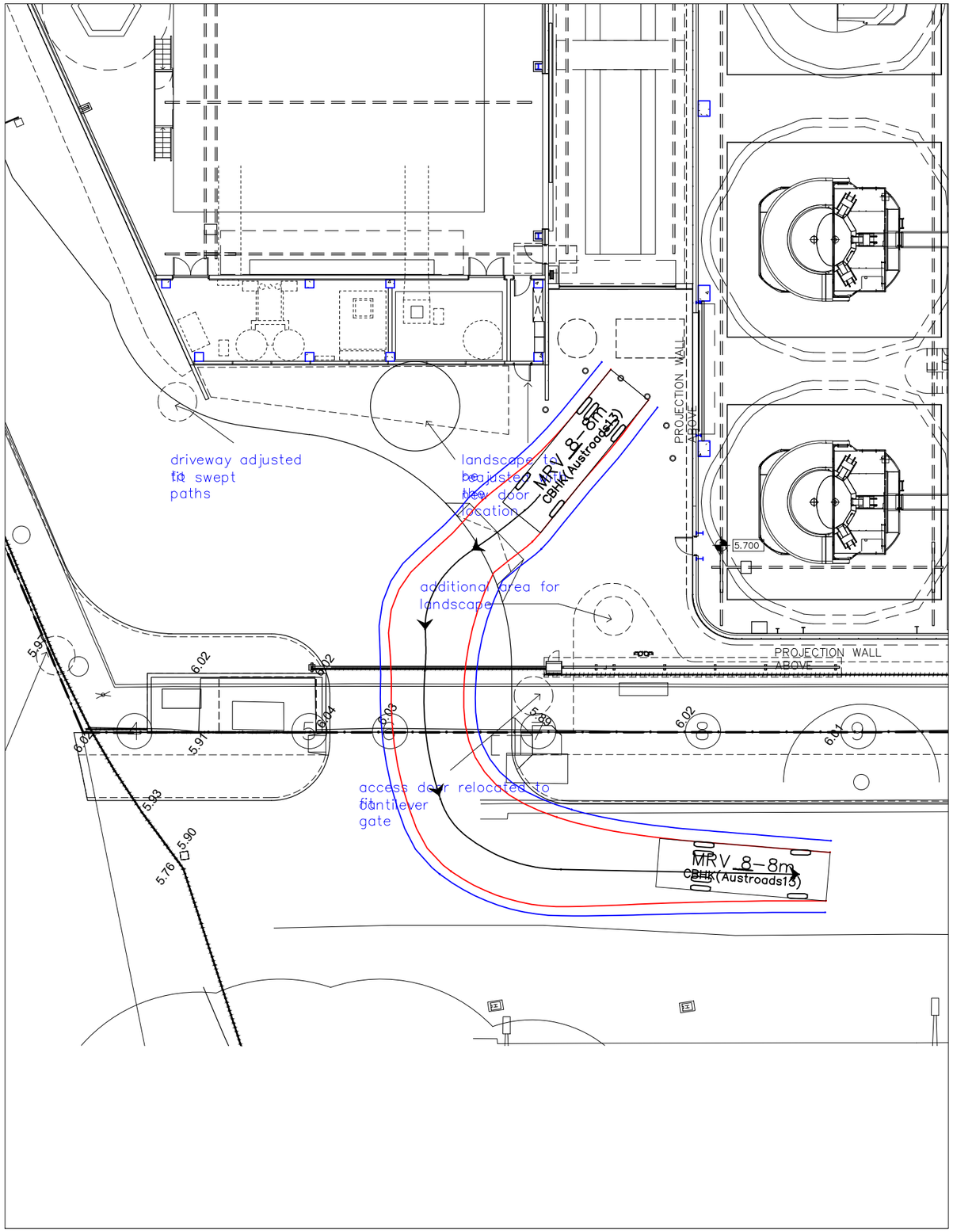
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

6.4m SMALL RIGID VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11146 5 APRIL 2019

A5





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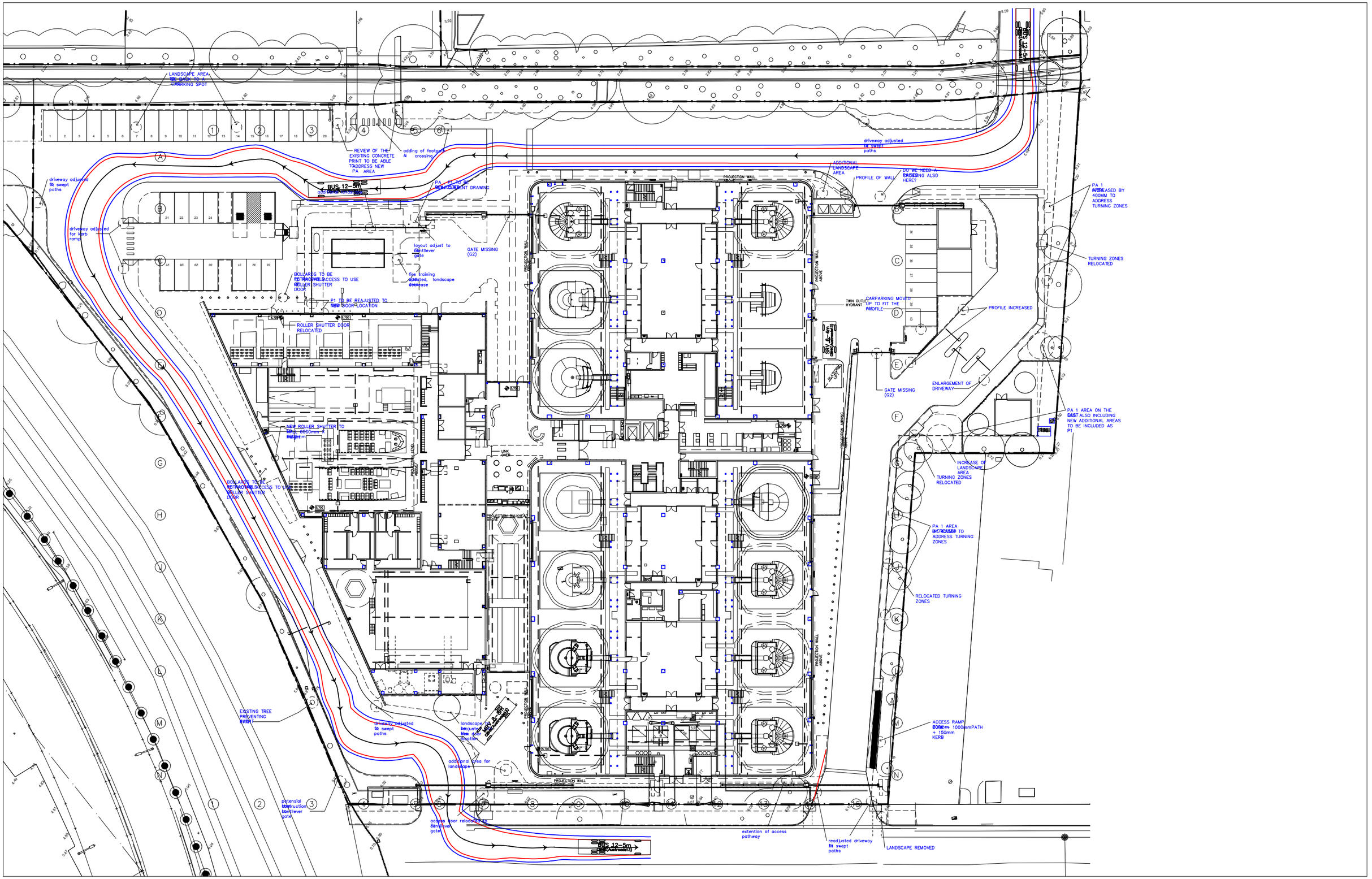
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

8.8m MEDIUM RIGID VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11146 5 APRIL 2019

A6



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

12.5m BUS SWEPT PATHS

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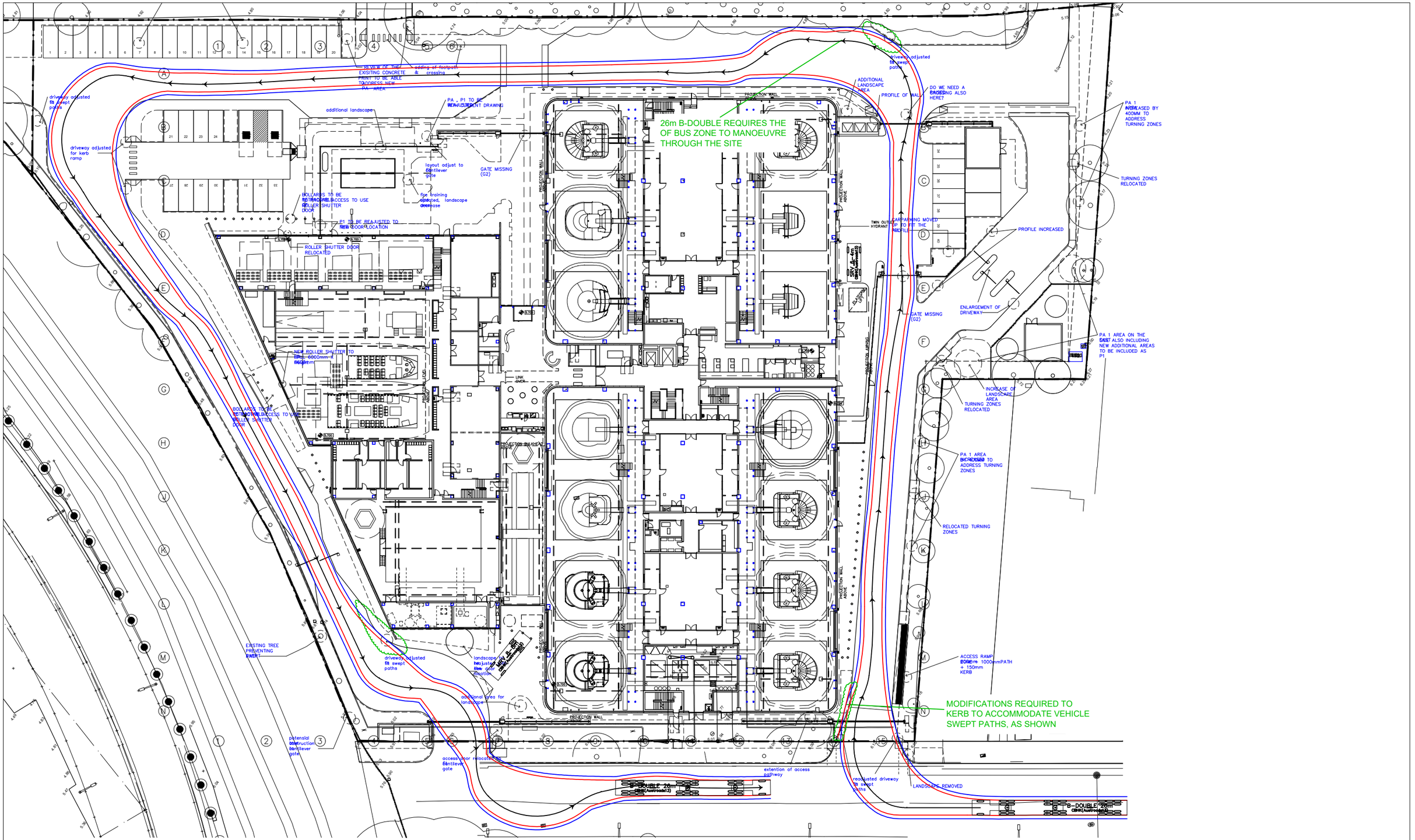
A7



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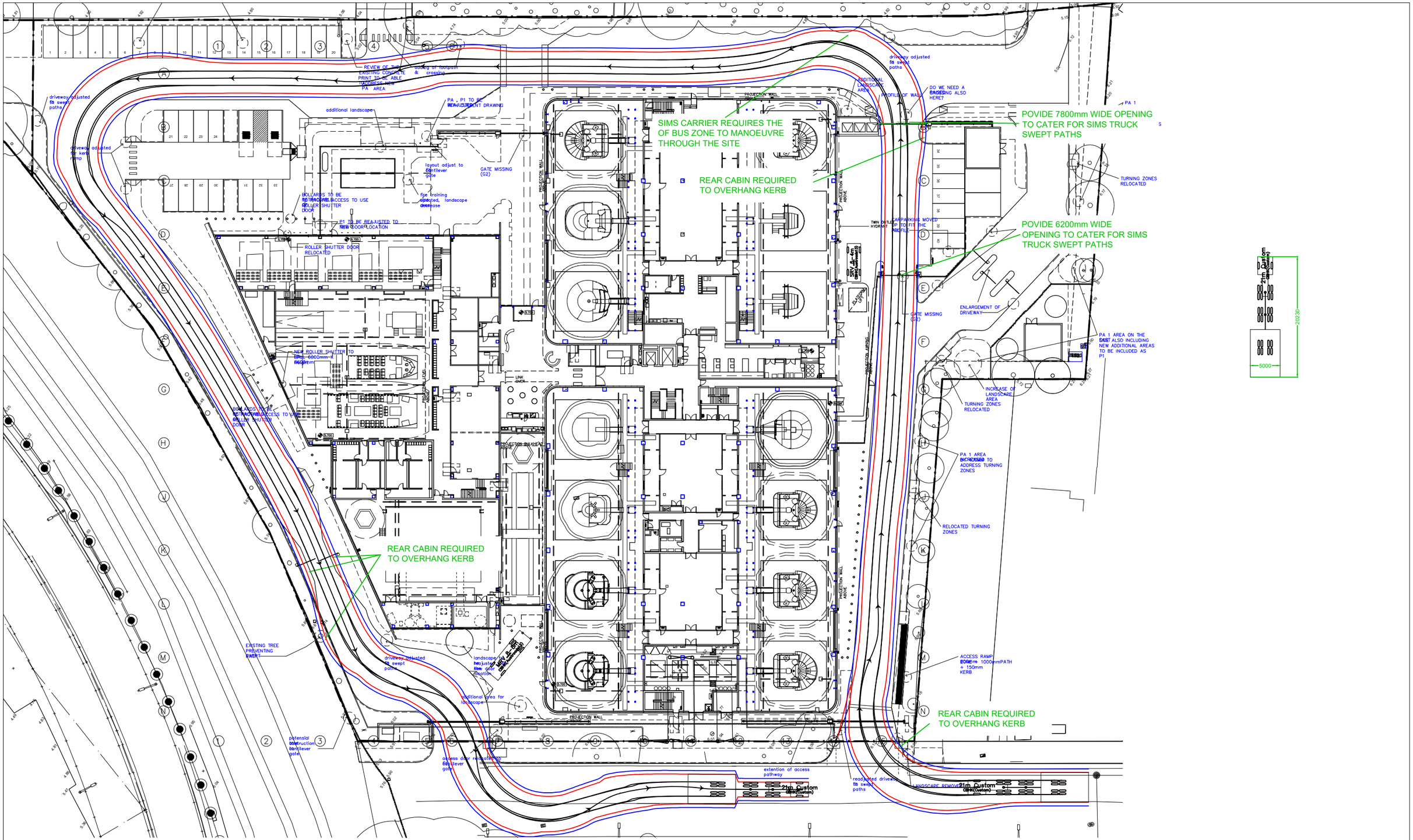
Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

26.0m B-DOUBLE VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11146 5 APRIL 2019

A8



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

20.2m SIMS CARRIER SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11146 5 APRIL 2019

A9

ATTACHMENT B

GLOSSARY AND ABBREVIATIONS

GLOSSARY

Term	Definition
The Site	Qantas Airways Limited owned land in Mascot to the north of Sydney Kingsford Smith Airport consisting of Lots 2-5 DP 234489, Lot 1 DP 202747, Lot B DP 164829 and Lot 133 DP 659434. Current site improvements include at-grade car parking for Qantas staff, an industrial shed to store spare aviation parts, a substation, a disused gatehouse, a Sydney Water Asset with two driveways over it, the Qantas catering facility and Qantas tri-generation plant.
The Project	The construction of a new Flight Training Centre and ancillary uses to replace the existing facility on the Qantas Jet Base that will be impacted by RMS' Sydney Gateway Project.
Mascot Campus	Over 19ha of Qantas Airways Limited controlled land in Mascot to the north of Sydney Kingsford Smith Airport consisting of freehold and leased land. The following lots are owned by Qantas: Lot 133 DP 659434; Lots 4 & 5 DP 38594 Lot 23 DP 883548; Lots 1 & 2 DP 738342; Lot 3 DP 230355; Lot 4 DP 537339; Lots 2 & 4 DP 234489; Lot 4 234489; Lot 1 DP 81210; Lot 1 DP 202093; Lot 1 DP 721562; Lot 2 DP 510447; Lot 1 DP 445957; Lot B DP 164829 and Lot 1 DP 202747 and equates to 16.5ha of land. The following lots are leased by Qantas: Lot 14 DP 1199594 and Lot 2 DP 792885 and equates to 2.7ha of land.
Jet Base	Qantas leased land within the boundaries of Sydney Kingsford Smith Airport.
Sydney Gateway Project	A RMS Project including a road and rail component that is intended to increase capacity and improve connections to the ports to assist with growth in passenger, freight and commuter movements across the region, by expanding and improving the existing road and freight rail networks.
Australian Standards	AS2890.1-2004. Parking Facilities: Part 1: Off Street Car Parking AS2890.2-2002. Parking Facilities: Part 2: Off Street Commercial Vehicle Facilities AS2890.6-2009. Parking Facilities: Part 6: Off Street Car Parking for people with Disabilities
Council	Bayside Council.

ABBREVIATIONS

Acronym	**Definition**
CBD	Central Business District
CPTMP	Construction Pedestrian and Traffic Management Plan
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EOA	Environment Operations Act 1997
Gateway	Sydney Gateway Project
LEP	Local Environmental Plan
LGA	Local Government Area
NSW	New South Wales
PPE	Personnel Protective Equipment
Qantas	Qantas Airways Limited
QCC	Qantas Corporate Campus
QFC	Qantas Food Catering
RMS	NSW Roads and Maritime Services
SACL	Sydney Airport Corporation Limited
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
sqm	Square Metres
SSD	State Significant Development
TBC	To Be Confirmed
TfNSW	Transport for New South Wales
the Airport	Sydney Kingsford Smith Airport
the Department	Department of Planning and Environment