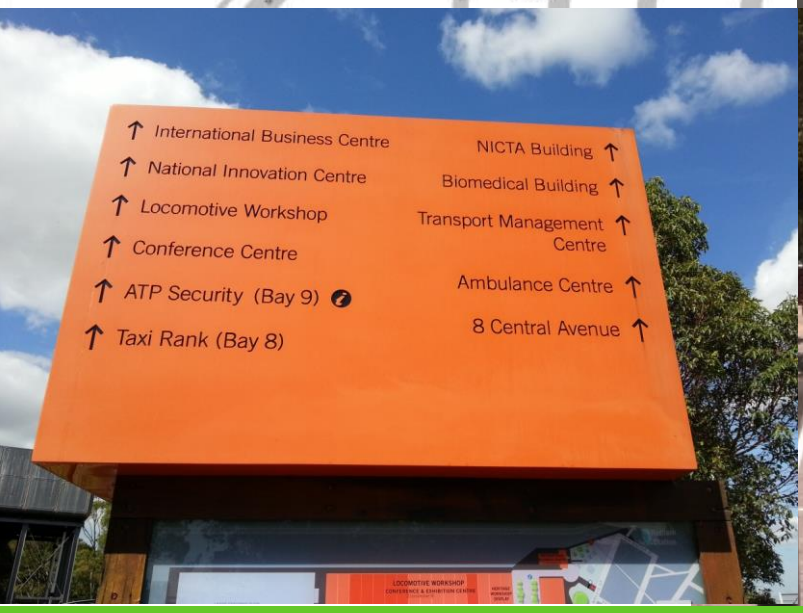

Australian Technology Park, Eveleigh Redevelopment Transport Impact Assessment

Client // Mirvac Projects Pty Ltd
Office // NSW
Reference // 15S1478000
Date // 17/12/15

Australian Technology Park, Eveleigh

Redevelopment

Transport Impact Assessment

Issue: B 17/12/15

Client: Mirvac Projects Pty Ltd
Reference: 15S1478000
GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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B	17/12/15	Final – For SSDA Submission	Oasika Faiz/ Michael Lee	Michael Lee	Ken Hollyoak	

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1. Introduction

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning and Environment pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Mirvac Projects Pty Ltd (Mirvac) is seeking to secure approval for the urban regeneration of the Australian Technology Park (ATP), including the redevelopment of three car parking lots within ATP for the purposes of commercial, retail and community purposes, along with an extensive upgrade to the existing public domain within ATP. Building heights of 4, 7 and 9 storeys are proposed across the 3 development lots.

Australian Technology Park (ATP) has been continuously developed since its establishment in 1996, but has been underutilised as a technology and business precinct for quite some time. UrbanGrowth NSW Development Corporation (UGDC) has actively encouraged new development and employment opportunities at the Park for the past 15 years, and Mirvac intends to continue with this and deliver upon the precinct's full potential, with the development of circa 107,400sqm for employment uses, which will facilitate the employment homes of an extra 10,000 staff everyday within ATP by development completion.

1.1 Background

Mirvac has been announced by UrbanGrowth NSW as the successful party in securing ownership and redevelopment rights for the ATP precinct, following an Expression of Interest (EOI) and an Invitation to Tender (ITT) process which commenced in 2014. Mirvac has also secured the Commonwealth Bank of Australia (CBA) as an anchor tenant for the development and intends to immediately commence the urban regeneration of this precinct through the lodgement of this SSDA. CBA's commitment to the precinct is in the form of one of the largest commercial leasing pre-commitments in Australian history, occupying circa 95,000 square metres of commercial, retail, community and childcare NLA, which will house circa 10,000 technology focused staff by 2019 and 2020. Mirvac's redevelopment goes well beyond the development on the 3 development lots, as it includes the regeneration of the public domain within ATP, the addition of retail to activate the precinct and also the provision of community facilities such as a community centre, a gym and 2 x 90 child childcare facilities.

1.2 Planning Framework

State Environmental Planning Policy (SEPP) Major Development 2005 is the principal environmental planning instrument applying to the ATP. Schedule 3, Part 5 of the Major Development SEPP sets out the zoning, land use and development controls that apply to development on the Site.

As the development has a capital investment value of more than $10 million, it is identified as State Significant Development under the *State Environmental Planning Policy (State and Regional Development) 2011*, with the Minister for Planning being the consent authority for the project.

1.3 Secretary's Environmental Assessment Requirements

DoPE has issued the Secretary's Environmental Assessment Requirements (SEARs) on 29 October 2015 (SSD 7317) for the preparation of an Environmental Impact Statement for the proposed development. The issues raised in the SEARs have been considered during the preparation of this transport assessment report. Table 1.1 summarises the relevant issues (related to transport and accessibility) and the location of the report where they have been addressed.

Table 1.1: Secretary's Environmental Assessment Requirements

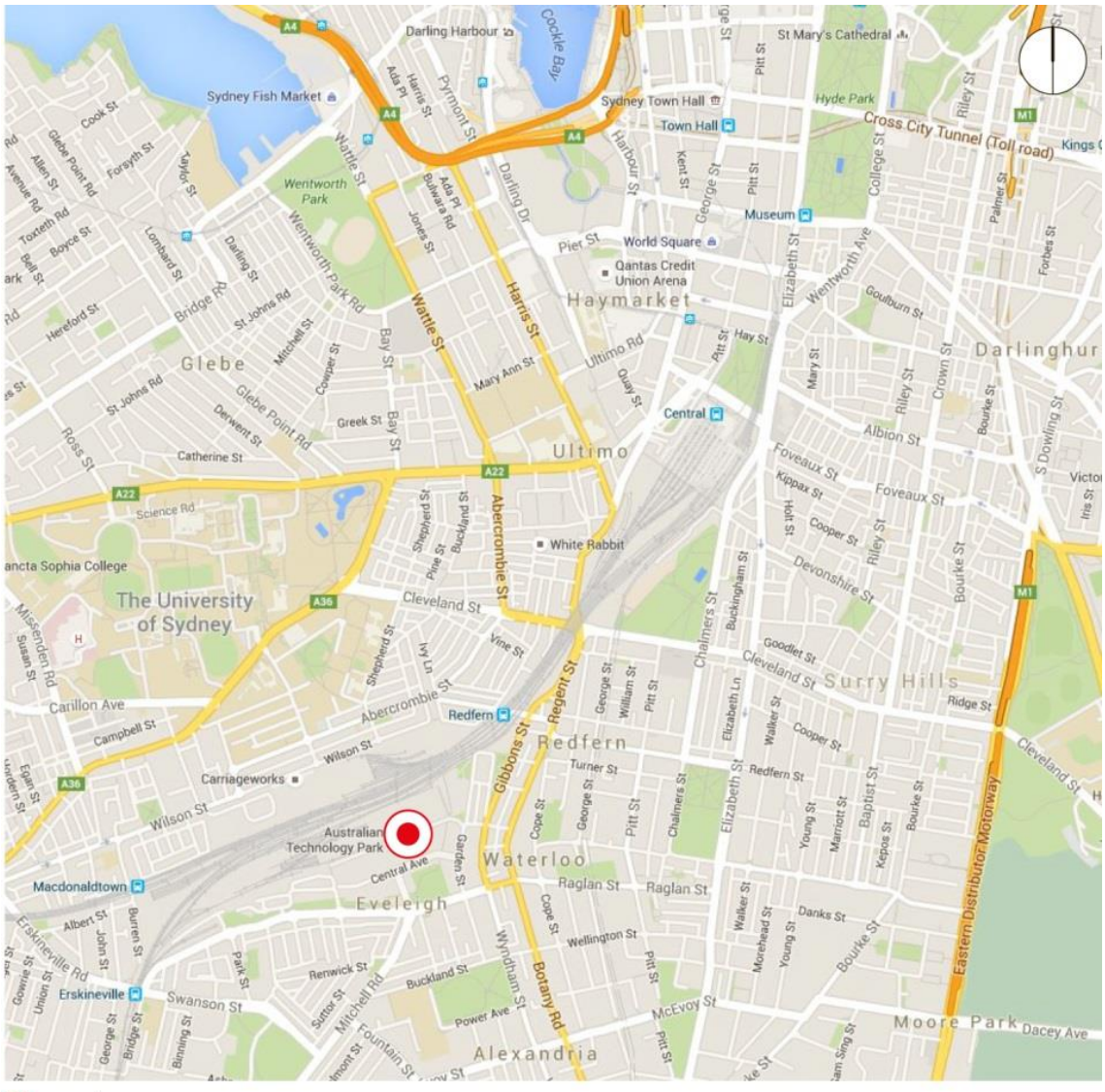
Issues	Report Section
The EIS shall include a Traffic and Transport Impact Assessment that:	
demonstrates that the level of car parking within the development will fall within the maximum 1,600 spaces permitted across the ATP under the State Environmental Planning Policy (Major Development) 2005 while: addressing the demand for car parking and the loss of existing tenant parking provided on the site demonstrating that parking rates support the shift to public transport use and sustainable travel choices	Addressed in Section 6.
demonstrates how the development will support Government strategies in promoting sustainable travel choices, for its future staff and visitors. The EIS should determine the adequacy of pedestrian and cycle facilities to meet the likely future demand of the proposed development and give consideration of measures to be implemented, and	Addressed in the Green Travel Plan in Section 7.
detail the traffic and transport impacts (including bus services and infrastructure) during construction and how these will be mitigated including the preparation of a preliminary Construction Traffic Management Plan.	A construction traffic management plan (CTMP) has been prepared to assess the traffic impacts during the construction site. This has been submitted separately.

2. Existing Conditions

2.1 Site Description

The ATP site is strategically located approximately 5km south of the Sydney CBD, 8km north of Sydney airport and within 200m of Redfern Railway Station. The site, with an overall area of some 13.2 hectares, is located within the City of Sydney local government area (LGA). Refer to Figure 2.1 below for a graphic representation of the site location and context.

Figure 2.1: Site Location



Three key sites remain undeveloped within the ATP site and are presently used for at-grade worker and special event car parking. These sites are:

- Lot 8 in DP 1136859 – site area circa 1,937m^2;
- Lot 9 in DP 1136859 – site area circa 8,299m^2; and

- Lot 12 in DP 1136859 – site area circa 11,850m^2.

Figure 2.2 provides an aerial image of the ATP site along with identifying the three development sites.

The SSDA works boundary excludes the Locomotive Workshop. Future development associated with the adaptive re-use of the Locomotive Workshop will be the subject of separate future applications.

Figure 2.2: Existing Site Layout

2.2 Road Network

The subject site is generally bounded by local streets with Garden Street and Cornwallis Street located to its east and Henderson Road located to its south. On the site's northern boundary runs the railway line. The ATP site is accessed by two internal roads, namely at Central Avenue from

Garden Street and Davy Road from Henderson Road. A description of the roads in the immediate vicinity of the site is summarised below.

Henderson Road is a two-way road aligned in an east-west direction. Henderson Road is a four-lane road to the east of Davy Road and a two-lane road to the west of Davy Road. Henderson Road is a regional road which is owned by Roads and Maritime Services (RMS), but maintained by Council with funding from the State Government. At intersections, Henderson Road includes auxiliary turning lanes. Kerbside parking lanes are also available on both sides of the road. It contains a carriageway width of 14 to 17 metres within an approximately 25 metre road reserve.

Garden Street is a two-way, two-lane local road aligned in the north-south direction. It has a 12 metre wide carriageway with kerbside parking within a 25 metre wide road reserve. North of Central Avenue, the carriageway widens to allow 90 degree parking on the western side of the road. Garden Street bends to the east at its intersection with Cornwallis Street and continues in an east-west alignment to the Gibbons Street intersection with Wyndham Street.

Cornwallis Street continues in a north-south alignment from Garden Street to Redfern Station. Cornwallis Street is a one-way local road in the southbound direction configured with a 6 metre carriageway within a 12 metre wide road reserve. Kerbside parking is permitted on the eastern side of the road.

Central Avenue is an internal two-way road configured with two lanes separated by a central median, on a 20 metre wide carriageway and with a 30 metre wide road reserve.

Davy Road is an internal two-way road configured with four lanes separated by a central median on a 15 metre carriageway and a 25 metre wide road reserve. At the intersection with Henderson Road, Davy Road includes an additional southbound, right turn lane.

Both Central Avenue and Davy Road are private roads.

2.2.1 Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- Henderson Road-Davy Road-Mitchell Road (signalised)
- Henderson Road-Garden Street(signalised)
- Garden Street-Central Avenue (non-signalised)
- Garden Street-Cornwallis Street-Locomotive Street (non-signalised), and
- Henderson Road-Alexander Street (roundabout).

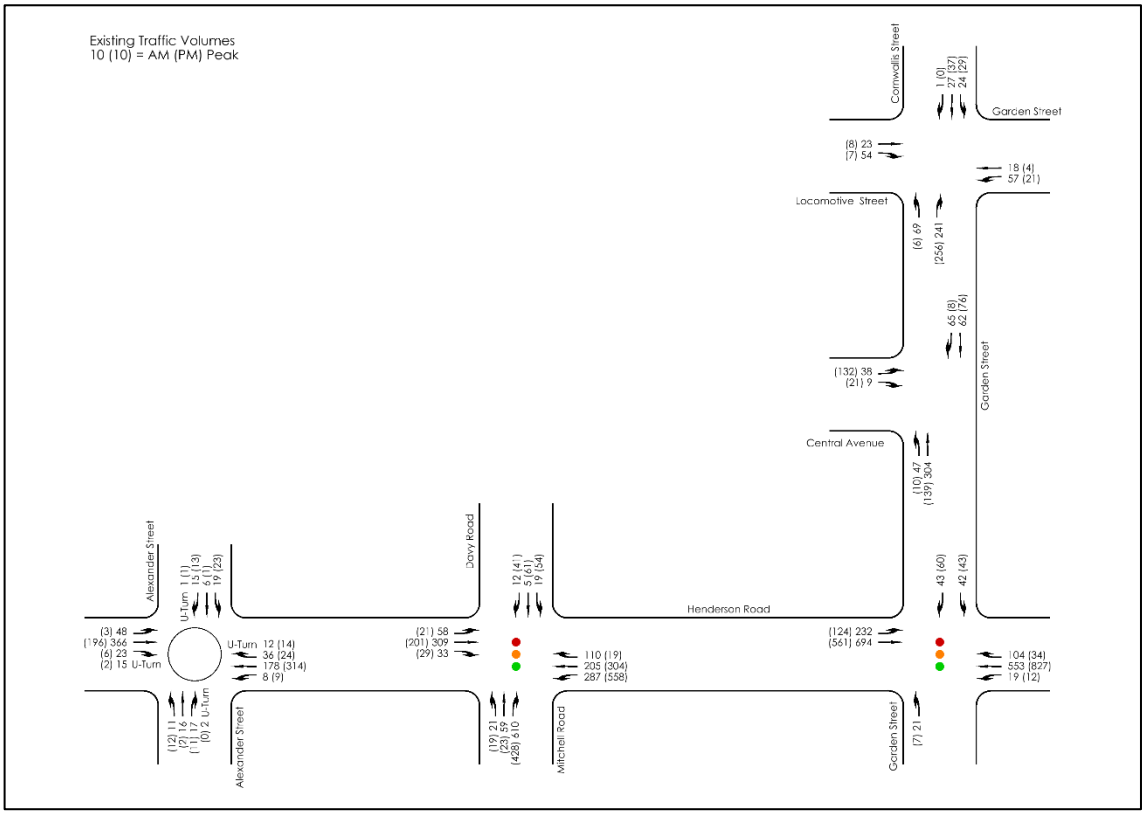
2.3 Traffic Volumes

Peak period intersection turning movement counts at the above key intersections have been conducted. The turning movement counts were carried out on 20 October 2015 for the following peak periods:

- morning period from 7:00am to 9:00am, and
- evening period from 4:00pm to 6:00pm.

The peak hour intersection turning movement volumes are shown in Figure 2.3.

Figure 2.3: Existing Peak Hour Intersection Turning Movement Volumes



2.4 Existing Use on the Site

The ATP accommodates predominantly commercial/business uses with a focus on technology and innovation. The Locomotive Workshop also is available for conference and function events. The current tenants at ATP include the Commonwealth of Australia, University of Sydney, Channel 7, Pacific Magazines, Roads and Maritime Services, and Fuji Xerox.

The existing buildings include:

- Media Centre Building (Channel 7 Building) (approximately 40,000m^2 GFA)
- Biomedical Building (approximately 7,600m^2)
- NICTA Building (approximately 11,200m^2 GFA)
- National Innovation Centre (NIC) (approximately 7,000m^2)
- International Business Centre (IBC) (approximately 950m^2), and
- Locomotive Workshop (Conference and Exhibition Centre) (has an allowable GFA of approximately 44,000m^2, but currently contains 20,000m^2 to 25,000m^2 GFA.)

The total combined gross floor area is approximately 110,750m^2.

As discussed in Section 2.6, the existing car parking provision is approximately 1,453 car parking spaces.

2.5 Existing Car Parking Supply

The ATP site currently contains a total of 1,453 car parking spaces spread across the site as follows:

- Spaces accessible from Davy Road, Central Avenue and Locomotive Street:
  - Channel 7 Building Visitor Parking – 363 spaces
  - Channel 7 Building Staff Parking – 339 spaces
  - Open air car park (Lot 12) (adjacent to Locomotive Workshop) – 280 spaces
  - Biomedical Building Staff Parking – 33 spaces
  - Open air car park adjacent to Biomedical Building (Lot 8) – 53 spaces
  - Locomotive Workshop – 4 spaces
  - Sub-Total – 1,072 spaces
- Spaces not accessible from Davy Road, Central Avenue and Locomotive Street:
  - Nicta Building – 66 spaces
  - NIC Building – 4 spaces
  - IBC Building – 17 spaces
  - Sub-total – 87 spaces
- Others
  - Open air car park west of Davy Road (Lot 9) (currently not in use) – 272 spaces
  - On-street parking spaces – 22 spaces
- total – 1,453 spaces

As noted above, the open air car park west of Davy Road is currently closed and not utilised. As such, for the purposes of the parking assessment in this report, the car parking provision of the ATP site is assumed to exclude this car park.

2.6 Existing Parking Usage

Parking demand surveys of the visitor car parking areas at ATP were carried out on Thursday 26 November 2015 between 8:00am and 5:00pm. The survey was conducted to determine the usage of the existing parking spaces.

The parking areas surveyed are shown in Figure 2.5.

Figure 2.4: Parking Occupancy Survey

Basemap: Google Maps Australia

A car parking supply of 694 spaces were included as part of the demand survey which included:

- Channel 7 visitor parking – 361 spaces
- Northern open air car park (Lot 12) (adjacent to Locomotive Workshop) – 280 spaces
- Open air car park adjacent to Biomedical Building (Lot 8) – 53 spaces

The ATP site includes additional staff car parking spaces which were not surveyed as they are unavailable to the public. These spaces included 339 staff car parking spaces in the Channel 7 building, 33 private spaces in the Biomedical building other private parking areas as noted in Section 2.4.

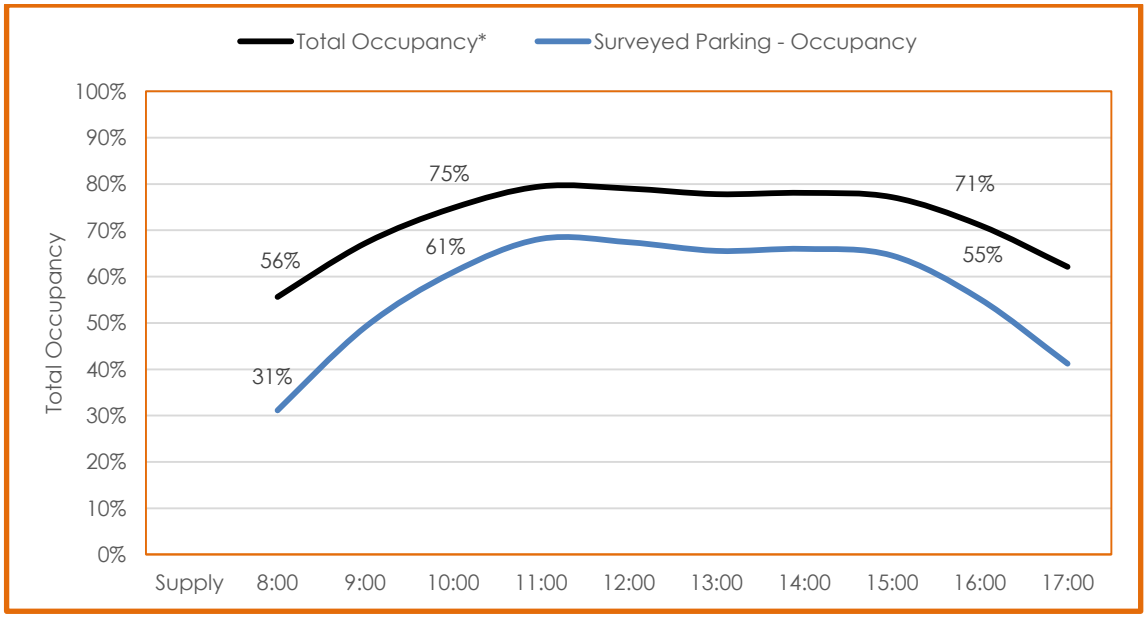
In addition, the existing open air car park to the south western corner of the Davy Road intersection with Central Avenue is currently not in use.

Table 2.1 and Figure 2.5 provide a summary of the supply and demand of the surveyed public parking areas.

Table 2.1: Public Car Parking Demand

Car Park	Supply	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Northern Car Park	280	93	166	194	216	211	212	214	214	191	135
Car Park Adjacent to Biomedical Building	53	33	40	47	51	51	55	50	49	46	40
Channel 7 Visitor Parking	361	90	135	182	206	206	188	194	185	146	111
Total	**694**	**216**	**341**	**423**	**473**	**468**	**455**	**458**	**448**	**383**	**286**
Staff (Private) Parking	-	NOT SURVEYED AS THEY ARE NOT AVAILABLE TO THE PUBLIC									

Figure 2.5: Car Parking Occupancy



*The total occupancy assumes that restricted parking within the Channel 7 car park and the Biomedical building is at 100% occupancy.

Figure 2.5 indicates that the car parking occupancy of visitor parking at ATP was 49 per cent and 41 per cent during the morning and evening peak periods respectively and the peak occupancy was 68 per cent which occurred at 11:00am.

Based on these survey results, an analysis has been carried out of the total parking demand at the ATP site. For the purposes of this traffic and parking assessment a conservative approach was taken by assuming that the staff parking spaces at ATP (Channel 7 and Biomedical buildings) were fully occupied. From this assumption the total occupancy of the ATP site was determined as 67 per cent and 62 per cent during the morning and evening peak periods respectively. The peak occupancy was at 79 per cent. The estimated total occupancy of the ATP site is also shown in Figure 2.5.

2.7 Public Transport

2.7.1 Train Services

Redfern Railway Station is located approximately 300m north-east of the ATP site and is within a 4 minute walk. The station is a major stop in the Sydney Trains network, with frequent services on

four rail lines, namely T1 North Shore, Northern & Western Line, T2 Airport, Inner West & South Line, T3 Bankstown Line, T4 Eastern Suburbs & Illawarra Line. The services are shown in Table 2.2.

Table 2.2: Rail Service Provision

Lines	Frequency Peak Period	Frequency Off Peak
T1 North Sore, Northern & Western Line	3 minutes	4 minutes
T2 Airport, Inner West & South Line	5 minutes	5-15 minutes
T3 Bankstown Line	10-15 minutes	10-15 minutes
T4 Eastern Suburbs & Illawarra Line	4 minutes	10 minutes

Data Source: www.transportnsw.info (accessed 05 November 2015)

2.7.2 Bus Services

Regular scheduled bus services also service the area. Bus stops are located within 2 minute walking distance from the site including on Henderson Road and Wyndham Street.

The available bus services are summarised in Table 2.3.

Table 2.3: Bus Service Provision

Service	Route	Route Description	Location of Stop	Distance to Nearest Stop	Frequency On/Off Peak
Bus	305	Mascot (Stamford Hotel) to Railway Square	Wyndham St near Boundary Street	120m	30 minutes between 3pm and 6.30pm
Bus	308	Marrickville Metro to City	Wyndham St near Boundary Street	120m	15 minutes peak/ 30 minutes off peak
Bus	309	Port Botany to Railway Square	Wyndham St near Boundary Street	120m	5-15minutes peak/ 20 minutes off peak
Bus	310	Eastgardens to Railway Square	Wyndham St near Boundary Street	300m	15 minutes peak/ 30 minutes off peak

Data Source: www.transportnsw.info (accessed 05 November 2015)

As can be seen from the above, the site is located in close walking distance to existing public transport services with regular and high frequency services.

2.8 Pedestrian Infrastructure

Pedestrian footpaths are located on both sides of all streets, surrounding and internal to the site. Public roads include footpath widths of 1.5-2 metres along Henderson Road, and 2.5 metres along Garden Street. The site's internal roads, Central Avenue and Davy Road contain footpaths of 3 to 4 metres in width which are connected to pedestrian only spaces within the site.

Marked foot crossings are provided at all signalised intersections within the area including along Henderson Road, and on the western and southern legs of the Wyndham and Garden Street intersection, which is located on the way to Redfern Railway Station from the site.

2.9 Cycle Infrastructure

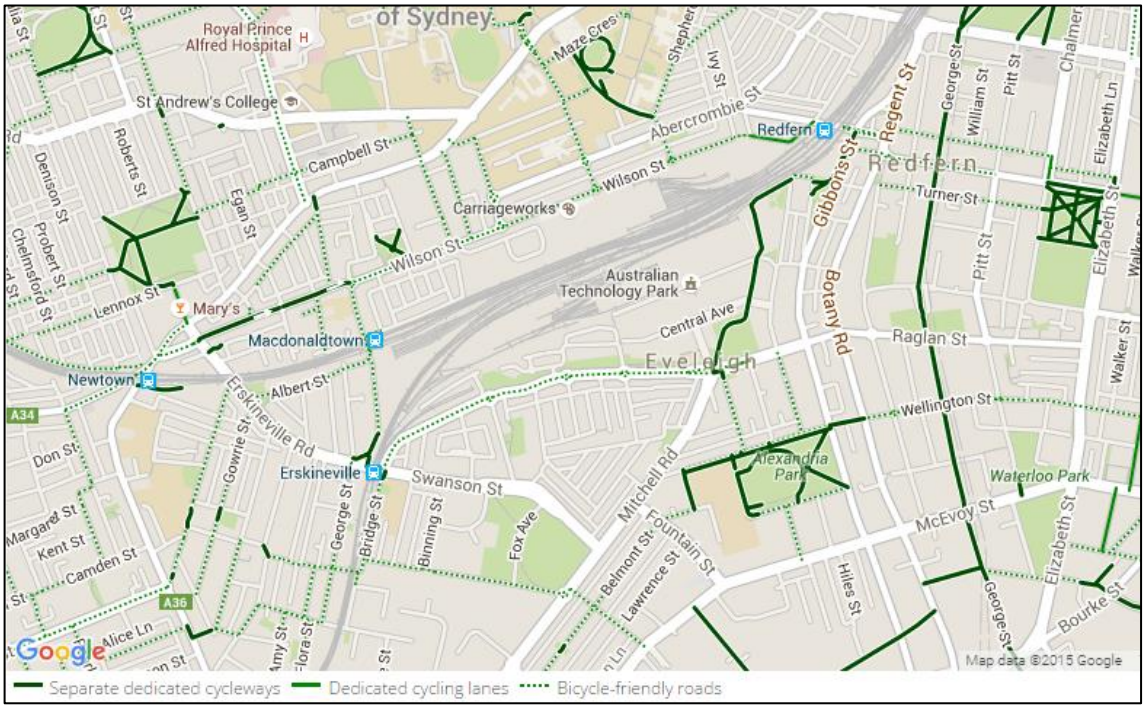
The ATP site is well situated within Sydney's cycle network with cycle routes surrounding the site and an off-road cycle route passing the site itself. A shared path between Henderson Road and Cornwallis Road runs through the site via the Vice Chancellors Oval and Mitchell Way (internal road).

Bicycle parking facilities are provided throughout the ATP site with bicycle racks located at the following locations:

- the top of Cornwallis Street
- Innovation Plaza
- 8 Central Avenue
- near the Biomedical Building, and
- at Mitchell Way.

The bicycle network surrounding the site is shown in Figure 2.6.

Figure 2.6: Cycle Network



Source: http://www.sydneycycleways.net/map/ (accessed 05 November 2015)

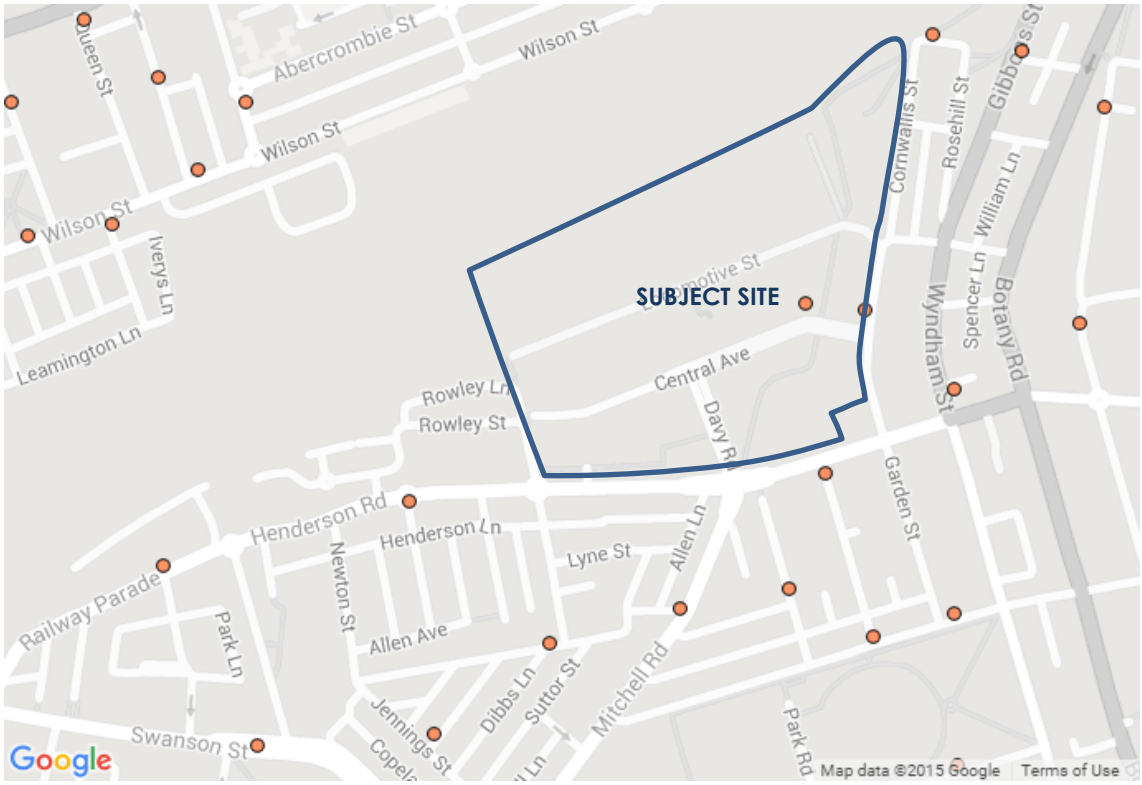
2.10 Car Sharing

Car share is a concept by which members join a car ownership club, choose a rate plan and pay an annual fee. The fees cover fuel, insurance, maintenance, and cleaning. The vehicles are mostly sedans, but also include SUVs and station wagons. Each vehicle has a home location, referred to as a "pod", either in a parking lot or on a street, typically in a highly-populated urban neighbourhood. Members reserve a car by web or telephone and use a key card to access the vehicle.

Similarly located councils (i.e. City of Canada Bay Council) have reported that "*each share car replaces between 8 and 23 private car parking spaces, depending on the location of the development*". Consequently, provision of car share in the site should be able to reduce both the parking demand for the site and the traffic generated by it.

As shown in Figure 2.7, ATP contains two car share vehicles within the northern, at-grade car park and several others in the surrounding area.

Figure 2.7: Car Share Pods



Source: City of Sydney, 05 November 2015

2.11 Existing Transport Modes

Travel mode information of existing staff employed at the ATP site has been obtained from the Bureau of Transport Statistics website (www.bts.nsw.gov.au). The information was derived from Journey to Work (JTW) data from the five-yearly Census of Population and Housing conducted by the Bureau of Statistics (ABS). Based on the JTW data, there are currently 1,881 people employed at the ATP site.

The travel modes for employed staff at ATP are presented Table 2.4.

Table 2.4: Existing ATP Travel Modes

Mode Share	Per Cent
Vehicle Driver	46%
Vehicle Passenger	2%
Train	40%
Bus	2%
Walked Only	6%
Other Mode	4%
Total	100%

From Table 2.4, it can be seen that the vast majority of employed staff at ATP travel to work by private vehicles or train.

It is expected in the future that travel mode would change to heavily biased towards public transport modes as the proposed development would implement measures to encourage people to use more sustainable transport modes (see Section 7 of this report).

2.12 ATP Masterplan 2005

The 2005 Masterplan for the Australian Technology Park (ATP) in Eveleigh supersedes the original 1994 ATP Masterplan and the 2003 Masterplan. The Masterplan was produced to meet requirements set in the Sydney Regional Environmental Plan No. 26 – City West (REP 26) to set development controls for the ATP site.

The Masterplan includes development controls relating to land use, number of employees working at the site, transport and access, permissible parking spaces and pedestrian and cycling connectivity. The Masterplan aims to take advantage of the close proximity to Redfern Railway Station and minimise car usage to site. Relevant objectives and controls set by the Masterplan include:

- enforcement of car parking provision cap of 1,600 spaces for the whole site
- aim to focus on pedestrian connections and amenity including the provision of a strong link to the Railway Station
- an action plan to establish a 'Transport review group', to monitor and assess the modal share split of the ATP and implement initiatives to reduce car usage, and
- enforcement to provide end of trip cycling facilities within the site.

3. Consultations with Authorities

Mirvac and GTA Consultants have undertaken consultation with various consent authorities. Below is a summary of the points discussed in the various meetings.

3.1 Transport for NSW

A meeting was held with Transport for NSW (TfNSW) on 4 December 2015. From a traffic and transport perspectives, the following main issues were discussed:

- TfNSW requested for additional traffic modelling of the following four intersections:
  - Henderson Road-Wyndham Street
  - Henderson Road-Botany Road
  - Boundary Street-Wyndham Street
  - Boundary Street-Botany Road
- options to provide an additional pedestrian access at the southern end of Redfern Station with direct access to all platforms, and
- TfNSW is looking undertaking bus improvements between Redfern and Eastern Sydney including relocation of bus stops on periphery roads surrounding the ATP site.

In relation to Item 1 above, intersection counts are being conducted and modelling results will be provided under separate cover.

In relation to Item 2, Mirvac will undertake further consultations with various consent authorities and stakeholders to determine the feasibility of providing a pedestrian access at the southern end of Redfern Station.

The bus improvement programs would enhance travel options for employees and visitors accessing the ATP site. Mirvac will continue to consult TfNSW and constructively considers any options proposed by TfNSW.

3.2 Roads and Maritime Services

A meeting with Roads and Maritime Services (RMS) was held on 14 December 2015.

The traffic and parking assessment methodology and modelling results were discussed during the meeting. RMS did not raise any concerns in relation to the assessment methodology and results. However, it was requested for the traffic assessment to consider the cumulative effects of the Central to Eveleigh Corridor project which includes the ATP site.

Given the scale and nature of the Central to Eveleigh Corridor project, in particular the project still being developed and is continuing to evolve, this will be considered further in the future. Mirvac is committed to work collaboratively in a constructive manner with stakeholders in considering this as information becomes available.

4. Development Proposal

4.1 Development Description

The development application seeks approval for the following components of the development:

- Site preparation works, including demolition and clearance of the existing car parking areas/ancillary facilities and excavation;
- Construction and use of a 9 storey building within Lot 9 (Building 1), comprising of parking, retail, commercial and childcare uses;
- Construction and use of a 7 storey building within Lot 12 (Building 2) comprising of parking, retail and commercial uses;
- Construction and use of a 4 storey community building within Lot 8 (Community Building) comprising of gym, retail, community, commercial and childcare uses;
- Extensive landscaping and public domain improvements throughout the precinct; and
- Extension and augmentation of physical infrastructure/utilities as required.

A more detailed and comprehensive description of the proposal is contained in the Environmental Impact Statement (EIS) prepared by JBA.

4.2 Development Schedule

The proposed development includes a combination of commercial, retail and community uses. The land use schedule of the proposed development comprises of the following mix of floor areas per building.

- Building 1
  - Commercial/ office premises – 45,663m^2 GFA
  - Retail – 314m^2 GFA
  - Childcare – 855m^2 GFA for 90 children
- Building 2
  - Commercial/ office premises – 54,593m^2 GFA
  - Retail – 2,095m^2 GFA
- Community Building
  - Commercial/ office premises – 2,286m^2 GFA
  - Gym – 450m^2 GFA
  - Retail – 381m^2 GFA
  - Childcare – 794m^2 GFA for 90 children

In total, the proposed development comprises the following total gross floor areas:

- Building 1 – 46,832m^2
- Building 2 – 56,688m^2
- Community Building – 3,911m^2, and
- Total gross floor area – 107,430m^2.

The proposed retail use in Building 2 includes a 500m^2 boutique supermarket. It is proposed to operate the supermarket on a 24/7 basis as a low scale shop serving the local community for supply of general provisions. As such, it is expected that the majority of custom for the proposed boutique supermarket would be from walk-ins from workers working and residents living in nearby developments including the existing and proposed developments within the ATP site.

The above proposed floor area relates to the detailed design application for the three buildings mentioned above as part of this SSDA. The detailed design application will also include approximately 706 parking spaces to be located in the basement car parks beneath Buildings 1 and 2. The exact number of proposed parking spaces is to be determined during the detailed design development. However, it is not expected that the final proposed parking provision would vary significantly to alter the results and findings of this traffic and transport assessment.

In addition, 42 on-street car parking spaces are also proposed. These would be located on Central Avenue and Davy Road.

4.3 Proposed Vehicle Access Arrangements

New access ways into the proposed basement car parks would be located along Central Avenue as is the existing case for the open air car parks. These would be reconfigured for improved vehicle circulation. Separate driveways to the loading areas in their respective buildings are also proposed.

Building 1 car parking access is proposed to be situated at the western end of Central Avenue. The Building 1 access is a two-way driveway providing direct access to the lower ground floor

The configuration of Central Avenue which has a central median restricts vehicle movement to left in/left out access to and from adjoining properties. The existing turning area at the cul-de-sac of Central Avenue would permit vehicles to carry out a u-turn to head back east and towards the site exits to access either Henderson Road or Garden Street.

The Building 2 car park access into the property would also be situated on Central Avenue, but at the eastern end of Central Avenue generally near the existing access to the northern open air car park. A new two-way vehicle driveway is proposed providing access to lower ground parking level in Building 2.

As with Building 1, the configuration of Central Avenue restricts vehicle movement by permitting only left in/left out access to and from adjoining properties. Vehicles would enter the Building 2 car park from Davy Road via Central Avenue, while existing vehicles would access Garden Street directly from Central Avenue.

The access ways have been designed to ensure compliant sight lines to on-coming pedestrians.

4.4 Proposed Loading Area

Separate loading areas would be provided for Building 1 and Building 2. The loading dock access for both buildings is located on Central Avenue, east of the respective car park driveways. Service vehicles accessing to the loading areas would be follow a similar travel path as the vehicles accessing the respective car parking areas.

The proposed loading docks within their respective building have been designed to accommodate vehicles up to an Australian Standard 8.8m long medium rigid vehicles (MRV). Each loading dock is proposed to have the following loading bays:

- two MRV bays with dimensions of 3.5m wide by 8.8m long

- three service vehicle bays for vans and utility type vehicles with dimensions of 2.5m wide by 5.4m long, and
- three courier vehicle bays with dimensions of 2.5m wide by 5.4m long.

The design access allows vehicles to enter and exit the loading dock in a forward direction.

5. Traffic Impact Assessment

5.1 Existing Traffic Generation

At present, the overall ATP site can be accessed from:

- Davy Road off Henderson Road
- Central Avenue off Garden Street, and
- Locomotive Street off Garden Street.

From the traffic surveys conducted in October 2015 (see Figure 2.3) at the above access intersections, it has been estimated that the ATP site generates approximately 586 vph during the morning peak hour, and 415 vph during the evening peak hour.

In addition to the above main access points, there are a number of isolated parking areas containing small number of car parking spaces that can be accessed from Cornwallis Street.

The above surveyed development traffic relates to the three main accesses as discussed above. It does not include traffic from the isolated parking areas accessed from Cornwallis Street. It is expected these would only generate minimal traffic effects that would be inconsequential to the overall traffic assessment.

5.2 Traffic Generation Rates

As indicated previously, the existing ATP site is served by approximately 1,072 car parking spaces (that are accessible from Davy Road, Central Avenue and Locomotive Street). However, based on an analysis of car park occupancy survey results (see Section 2.6), the car park was approximately 67 per cent (or 718 car spaces) occupied during the morning peak period, and approximately 62 per cent (or 665 car spaces) occupied during the evening peak period.

On this basis, the existing site traffic generation rates equate to:

- morning peak period – a trip generation rate of 0.81 trips per occupied car parking space, and
- evening peak period – a trip generation rate of 0.62 trips per occupied car parking space.

5.3 Estimated Development Traffic

As indicated in Section 4, a total of 706 basement car parking spaces are proposed to serve the proposed development. In addition, the proposed development would displace the existing car parking spaces within the open air car parks – approximately 333 parking spaces (being 280 existing car parking spaces in the open air car park (Lot 12) and 53 existing car parking spaces in the open air car park next to the Biomedical Building (Lot 8) would be displaced. As such, the net increase in parking spaces is approximately 373 spaces.

In addition, it is also proposed to provide up to 42 on-street parking spaces. Therefore, the overall parking provision would be 415 car parking spaces.

As a conservative approach, it is assumed that in the future case, the additional car parking provision would be 100 per cent fully utilised. Using the above trip rates, the proposed additional 415 parking spaces would generate:

- morning peak period – 336 trips per peak hour in addition to the existing traffic generation, and
- evening peak period – 257 trips per peak hour in addition to the existing traffic generation.

In relation to development traffic arising from the proposed retail use, it is expected that development traffic arising from these uses would be negligible as the type of retail proposed for this development is expected to only service the local area and as such would generate the vast majority of its customs from walk-in pedestrians. Similarly, the proposed gym and childcare centre uses would predominantly be patronised by employees working at the proposed development or other existing developments nearby such as the Channel 7 building.

Finally in relation to future development traffic estimates, due to a late change in the number of proposed car parking spaces (resulting in fewer parking spaces provided) this traffic modelling has assessed the traffic effects of the proposed development based on a higher estimate of the development traffic. However, this is not expected to have any effects on the assessment results other than that the results would be slightly better than that reported.

5.4 Traffic Distribution

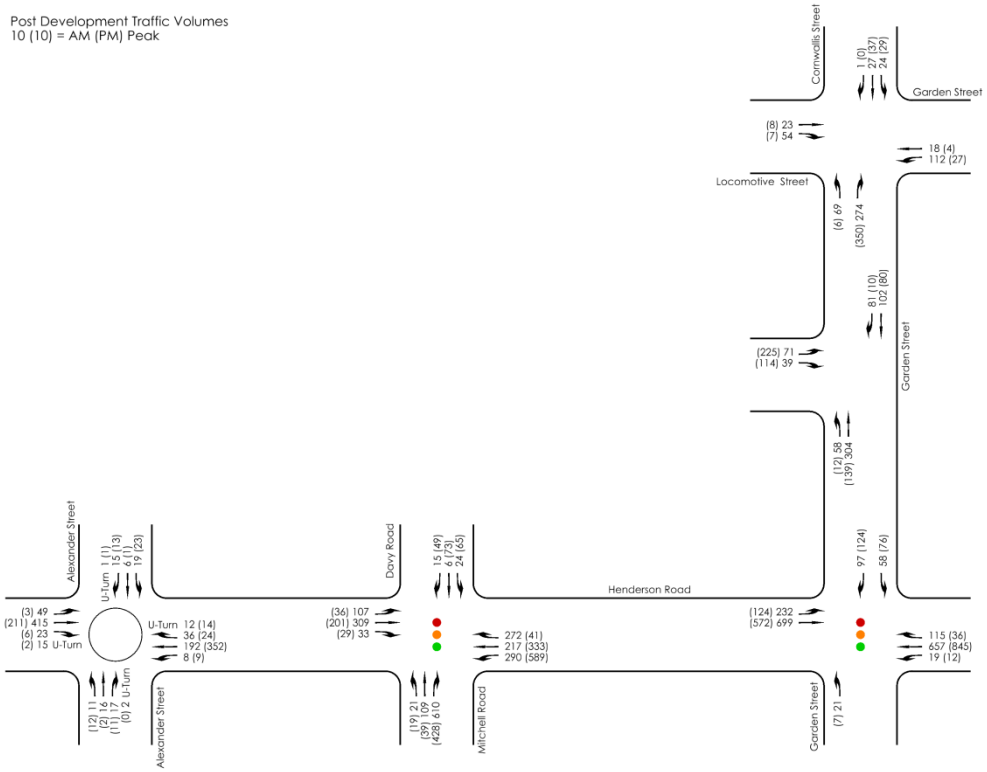
The directional distribution and assignment of traffic generated by the proposed development is influenced by a number of factors including the distribution of traffic entering and exiting the site and the route utilised to access their destination.

It has been assumed that the existing distribution of would be maintained which approximates to 80 per cent for inbound trips and 20 per cent outbound trips during the morning peak. The reverse is applicable during the evening peak period.

The development traffic has been distributed to the local road network based on existing traffic patterns obtained from the intersection turning movement counts.

The distributed traffic volumes for post development have been superimposed onto the surveyed intersection movement flows shown in Figure 2.3. The resultant future intersection flows are shown in Figure 5.1.

Figure 5.1: Future Peak Hour Intersection Turning Movement Volumes



5.5 Traffic Capacity Analysis

The operation of the key intersections within the study area have been assessed using SIDRA INTERSECTION, a computer based modelling package which calculates intersection performance.

RMS uses Level of Service to determine how efficient a given intersection is operating under prevailing traffic conditions. The Level of Service is directly related to delays experience by traffic travelling through an intersection.

Level of Service (LoS) covers a range from LoS A to LoS F. LoS A indicates good intersection performance. LoS D indicates the intersection is operating within capacity and is the long term desirable level of service. LoS E and LoS F indicate the intersection is operating at overcapacity and requires to be upgraded.

Table 5.1 shows the criteria for the different level of service.

Table 5.1: SIDRA INTERSECTION Level of Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

5.5.1 Existing Conditions Intersection Analysis Results

Intersection analysis was conducted for the nearby intersections operating under existing traffic conditions using the surveyed peak hour flows shown in Figure 2.3.

The analysis results are presented in Table 5.2.

Table 5.2: Existing Condition Intersection Modelling Results

Intersection	Type	Morning Peak Period		Evening Peak Period	
		Delay (sec)	LoS	Delay (sec)	LoS
Garden St-Henderson Rd	Signal	14	A	15	B
Mitchell Rd-Henderson Rd	Signal	41	C	41	C
Alexander St-Henderson Rd	Roundabout	12	A	10	A
Garden St-Central Ave	Give way	8	A	7	A
Garden St-Locomotive St	Stop	11	A	10	A

The results in Table 5.2 indicate that currently all intersections surrounding the ATP site operate efficiently without any capacity stress. The majority of the assessed intersections except the intersection of Mitchell Road-Henderson Road-Davy Road operate with a LoS B or better. The Mitchell Road-Henderson Road-Davy Road intersection operates with a LoS C, however the delay is 'borderline' with LoS D traffic delays.

5.5.2 Future Conditions Intersection Analysis Results

The intersection analysis was repeated for future traffic conditions (i.e. existing background traffic plus future additional development traffic - see traffic flows in Figure 2.3). The analysis results are presented in Table 5.3.

Table 5.3: Future Condition Intersection Modelling Results

Intersection	Type	Morning Peak Period		Evening Peak Period	
		Delay (sec)	LoS	Delay (sec)	LoS
Garden St-Henderson Rd	Signal	15	B	17	B
Mitchell Rd-Henderson Rd	Signal	47	D	43	D
Alexander St-Henderson Rd	Roundabout	12	A	10	A
Garden St-Central Ave	Give way	8	A	7	A
Garden St-Locomotive St	Stop	11	A	10	A

From the analysis results shown in Table 5.3, it can be seen that under post development traffic condition, the additional traffic generation would generally have minimal impact upon the surrounding intersections with negligible changes to delay and level of service. The majority of assessed intersections would continue to operate with LoS B or better with the exception of the Henderson Road intersection with Davy Road.

The performance of the Henderson Road intersection with Davy Road would change from LoS C to LoS D, however traffic delay would remain consistent with a negligible increase of two to three seconds.

From the above, it is concluded that the proposed development would not create any material adverse impacts to the surrounding intersections. The future performance of the assessed intersections would be consistent with those found under existing traffic conditions.

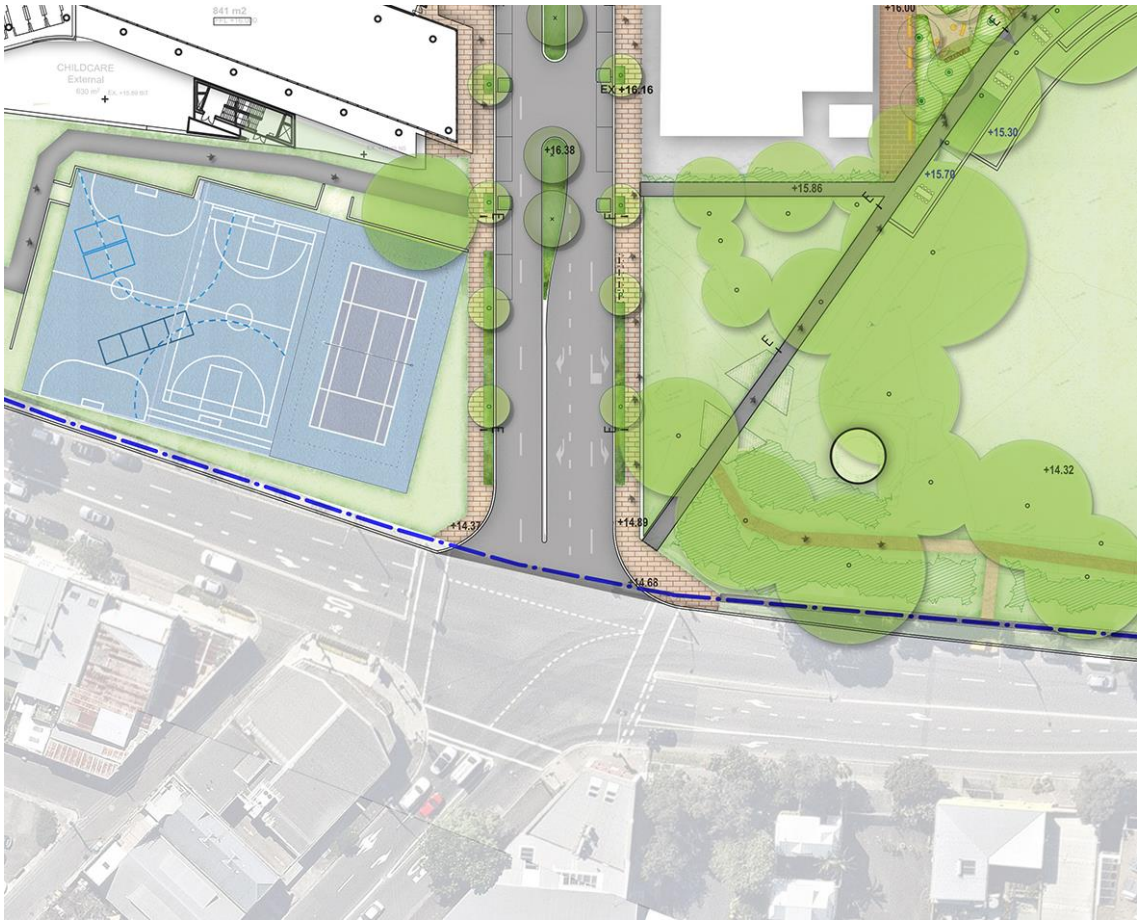
5.5.3 Proposed Road Arrangement Changes Davy Road

At present, Davy Road, a private road, is configured with two traffic lanes in each direction separated by a road median. At its intersection with Henderson Road, Davy Road widens to form three arrival lanes (into the intersection) and two departure lanes (away from the intersection). The arrival lanes are line marked as a continuous left turn lane, a continuous through lane and a short 40m right turn lane.

Mirvac proposes to convert the kerbside lanes on both sides of Davy Road to provide on-street parking spaces to support the future retail amenity of the precinct. This would effectively reduce the number of arrival lanes (into the Henderson Road intersection) from three to two, and the number of departure lanes from two to one. The conversion of the kerbside lane into a parking lane would effectively result in the continuous left turn lane (at the Henderson Road intersection) reducing to a short 50m left turn lane, while the other two lanes would continue to be a continuous through lane and short 40m right turn lane.

The proposed concept layout for Davy Road (at its intersection Henderson Road) is shown in Figure 5.2.

Figure 5.2: Davy Road Concept Layout



Source: Aspect Studios

At present, Davy Road has a two-way peak hour flows of 263 vph. In the future, following the completion of the proposed development the peak hour two-way flows on Davy Road would increases to 533 vph.

Intersection analysis was conducted to assess the traffic effects of the proposed change. The analysis indicates that the proposed changes to Davy Road would have no impact to the traffic performance of the Henderson Road intersection. It would operate with the same level of service with the same traffic delays as that found under the existing intersection layout (with future development flows).

As a sensitivity test, future traffic volumes from Davy Road at the Henderson Road intersection were increased by 50 per cent. The sensitivity test indicates the intersection would continue to operate with acceptable level of service.

The results are presented in Table 5.4.

Table 5.4: Davy Road Future Condition Analysis Results

Scenarios	Type	Morning Peak Period		Evening Peak Period	
		Delay (sec)	LoS	Delay (sec)	LoS
Future Flows with Existing Layout	Signal	47	D	43	D
Future Flows with Modified Layout	Signal	47	D	43	D
Future Flows with Modified Layout + 50% Davy Rd Traffic	Signal	47	D	43	D

From the above, the proposed road changes to Davy Road would be acceptable.

6. Car Parking Assessment

6.1 Car Parking Provisions

The car parking provision requirements for the ATP site is set out in the State Environmental Planning Policy (Major Development) 2005 (SEPP 2005) and the 2005 Masterplan for the site.

The SEPP 2005 restricts the parking provision for the ATP site (the ATP was part of the land referred as *The Redfern-Waterloo Authority Sites*) to a maximum provision of 1,600 car parking spaces. This relates to a maximum parking provision rate of 1 space per 125m^2 floor area as stipulated in the masterplan.

Based on this rate, the maximum car parking requirement for the proposed development has been determined and is set out in Table 6.1.

Table 6.1: Car Parking Requirements

Description	Floor Area	Maximum Parking Requirement	Provision
Building 1	46,832m^2	375	217
Building 2	56,688m^2	454	489
Community Building	3,911m^2	31	0
On-Street Parking	-	-	42
Total		**860**	**748**

Based on the above, the proposed development is permitted to provide a maximum of 858 car parking spaces for the proposed amount of floor space area for which approval is being sought.

The proposed development includes on-site parking provision of 706 car parking spaces plus 42 on-street spaces on private roads within the ATP site. Following the completion of the proposed development, the available on-site parking is 1,574 parking spaces. The future available 1,574 on-site parking spaces are made up as follows:

- existing car parking spaces = 1,453
- car spaces in Lot 9 currently not in used = - 272
- existing on-street spaces being replaced = - 22
- displaced car spaces = - 333
- new additional (basement) spaces = +706
- new additional (on-street) spaces = + 42
- future total available spaces = 1,574

Table 6.2 summarises the changes to on-site parking provisions at ATP following the completion of the proposed development.

Table 6.2: On-Site Parking Change

Building/Location	Current	Proposed
Channel 7 Building Visitor Parking	363	363
Channel 7 Building Staff Parking	339	339
Open Air Car Park (Lot 8)	53	0
Open Air Car Park (Lot 9)	272	217
Open Air Car Park (Lot 12)	280	489
Biomedical Building Staff Parking	33	33
Locomotive Workshop	4	4
Nicta Building	66	66
National Innovation Centre (NIC)	4	4
International Business Centre (IBC)	17	17
On-street Spaces	22	42
Total	1,453	1,574

As such, the proposed parking provision (1,574 spaces across the entire ATP site) complies with the SEPP2005 where the proposed total site parking is less than 1,600 spaces. The proposed parking provision for the additional floor space does not exceed the masterplan stipulated parking provision rates of one space per 125m^2.

In addition, the 2005 Masterplan requires two per cent of car parking spaces for areas which are greater than 50 car spaces, to be accessible car parking spaces. Thus the proposed development will require 15 accessible car parking spaces included within its provision of 748 car parking spaces.

As noted above, in addition to the basement car parking proposed within Building 1 and Building 2, it is also proposed to provide approximately 42 on-street car parking spaces along Central Avenue and Davy Road.

6.1.1 Adequacy of Car Parking Supply

As discussed in Section 2.5, the existing car parking supply includes a total of 1,072 parking spaces accessible from Davy Road, Central Avenue and Locomotive Street. This includes 702 car parking spaces within the Channel 7 building located at the north-western end of the site and 33 spaces within the Biomedical Building, located south of Building 2. It is noted that approximately 333 existing car parking spaces would be displaced by the proposed development.

Following the completion of the proposed development, the total car parking provision of the ATP site would be 1,532 off-street car parking spaces and 42 on-street spaces along Central Avenue and Davy Road.

It is noted that the rate of increase in car parking supply is substantially less than the increase in floor areas of the proposed building. It is intended that the limited car parking supply in combination with the presence of the high quality public transport, high bicycle parking supply and Green Travel Plan initiatives detailed in Section 7, would encourage staff and visitors to the site to choose alternative modes of transport to the car. This objective is in line with the objectives of the 2005 Masterplan and with the City of Sydney's general development requirements.

Finally as noted previously, approximately 333 car parking spaces from the two existing open air car parks within Lots 8 and 12 will be displaced by the proposed development. The Channel 7 building includes approximately 361 visitor parking spaces located on Central Avenue. The Channel 7 visitor parking spaces will not be allocated to staff and will be continued to be available for visitors, with persons with parking licences within Lots 8 and 12 provided with the

opportunity to use parking within the Channel 7 building. Mirvac advises that other buildings within ATP have capacity to accommodate these licences, with a fair amount of vacancy evident from a car parking perspective within the Biomed Building and NICTA Building.

Mirvac will also look to promote alternative travel modes for existing car drivers within ATP. In this regard, measures would be developed to encourage all workers within the ATP site to use more sustainable travel modes to access the site. Section 7 of this report discusses the preparation of a green travel plan to develop and implement site specific measures to encourage workers to use more sustainable travel modes to and from the ATP site.

6.2 Bicycle Parking Provision

The 2005 Masterplan stipulates the bicycle parking requirements for the ATP site. The site is to provide secure bicycle parking at a rate of 1 space per 100 car parking spaces or part thereof and shower and change room facilities. Thus for a provision of 706 car parking spaces, the development would be required to provide seven secure bicycle spaces.

The proposed development includes a provision of approximately 606 secure bicycle spaces within the basement car parks.

For visitors, the ATP site contains several bicycle racks throughout the site as discussed in Section 2.7. These would also be embellished with additional bicycle parking provisions following the completion of the proposed development.

6.3 Car Parking Layout Review

Appendix A contains the architectural basement car park layout plans.

The proposed car parks would include parking over three levels in Building 1 and two levels in Building 2. Both car parks contain east to west parking aisles with generally one circulation aisle in Building 1 and three circulation aisles in Building 2.

Building 1 includes a circular single lane two-way ramp allowing access to the upper car parking level. The gradient of the ramp is 1:8 at entry and transitions to a gradient of 1:5 between levels. Swept paths of a B99 vehicle accessing the ramp indicates that the width of the ramp allows one-way vehicle access at a time. This would be managed by traffic signals at either of the ramp on each parking level.

Building 2 includes a straight ramp to the higher level with a 1:5 gradient. Swept paths of a B99 vehicle shows two-way manoeuvrability on the ramp. Bicycle parking lockers and change room facilities are provided in the lower ground floor of Building 2.

The proposed car parking areas and associated elements are proposed to be designed in accordance with the relevant Australian Standard for car parking facilities, namely AS2890.1:2004, AS2890.2:2002, AS2890.3:1993 and AS2890.6:2009.

The car parking spaces are proposed to be designed as an Australian Standard Class 1A parking facility with 2.4m wide and 5.4m long parking spaces with 5.8m wide aisles.

7. Green Travel Plan

7.1 Introduction

The 2005 Masterplan requires that the ATP site is to implement the design of ecologically sustainable development by including the following provisions:

- *Restrict parking and ensure that development facilitates the promotion of public transport services through bulletin boards etc. so that public transport use is encouraged.*
- *Adopt measures to make private transport modes more efficient such as provision for car pooling, facilities for bicycles.*
- *Provide for clean and efficient operational practices through ongoing education, eg. Bulletin boards, seminars, newsletters etc.*

Thus, it is expected that any approval of the proposed development would include a consent conditions requiring a green travel plan to be prepared to promote sustainable travel. As such, a green travel plan applicable to tenants and staff working on the site would be prepared prior to the occupation of the development. The section below provides a framework for the implementation of such a travel plan.

7.2 Travel Plan Framework

Transport is a necessary part of life, but it has economic, public health and environmental consequences. The transport sector is one of the fastest growing emissions sectors in Australia, and therefore is one of the key opportunities for reducing greenhouse gases. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits and will ensure a strong and prosperous community.

The physical infrastructure being provided as part of the development is only part of the solution. A green travel plan will ensure that the transport infrastructure, services and policies both within and external to the site are tailored to the users and co-ordinated to achieve the most sustainable outcome possible.

7.3 What is a Green Travel Plan

A green travel plan is a package of measures aimed at promoting sustainable travel and reducing reliance on the private car. It is not designed to be 'anti-car', but will encourage and support people's aspirations for carrying out their daily business in a more sustainable way. Travel plans can provide both:

- measures which restrict car use (disincentives or 'sticks')
- measures which encourage or support sustainable travel, reduce the need to travel or make travelling more efficient (incentives or 'carrots').

The travel plan would promote the use of transport, other than the private car, provide choice for staff to travel to and from the site, which is more sustainable and environmentally friendly.

Indeed, there are a range of "non-car" transport options that are available at the site which have been described in this report.

It is noted that Mirvac has successfully implemented a number of travel plans for their developments elsewhere, most notably at their Harold Park development where the post occupation surveys have indicated a significant shift away from single car use.

7.4 Key Objectives

The aim of the green travel plan is to bring about better transport arrangements for working at the site. The key objectives of the Travel Plan are:

- to encourage walking
- to encourage cycling
- to encourage the use of public transport
- to reduce the use of the car, in particular single car occupancy
- where it is necessary to use the car, encourage more efficient use.

It is the intention therefore that the travel plan will deliver the following benefits:

- enable higher mode share targets to be achieved
- contribute to greenhouse gas emission reductions and carbon footprint minimisation
- contribute to healthy living for all
- contribute to social equity and reduction in social exclusion
- improve knowledge and contribute to learning.

7.5 Site Specific Measures

The location of the site, in terms of its close proximity to a wide range of sustainable transport, is a key attribute in the justification of the development. The GTP will then put in place measures to raise awareness and further influence the travel patterns of those people working or visiting the development with a view to encouraging modal shift away from cars.

The following measures are proposed to encourage staff and visitors to reduce travel by private cars and adopt alternative and more sustainable travel modes:

- Compliance with the stringent parking controls applicable to the site.
- Provision of a Travel Access Guide (TAG) which would be given to all staff and visitors (an example of such a TAG provided by Mirvac at Harold Park is contained in Appendix B). This document has been based upon facilities currently available at the site.
- Public transport information boards to make staff and visitors more aware of the alternative transport options available (the format of such information boards would be based upon the travel access guide).
- Promotion of the availability of car sharing pods for trips that require the use of private vehicles.
- Provision of bicycle facilities including secure bicycle parking for staff, bicycle racks for visitors and shower and change room facilities.
- Connect staff working at the site to carpool together by creating a Carpooling club or registry/forum on the ATP website.
- Replacement of existing GoGet car share pods within the site.

7.6 Travel Access Guide

A travel access guide (TAG) provides information to staff and visitors on how to travel to the site using sustainable transport modes such as walking and public transport. The information is presented visually in the format of a map showing the site location and nearby transport nodes

highlighting available pedestrian and cycle routes. The information is usually presented as a brochure to be included in a welcome pack or on the back of company stationery and business cards.

An existing form of a TAG currently exists for the ATP site detailing the public transport provisions around the site. It is recommended that this TAG be expanded to include mapped information of cycle routes, pedestrian routes and cycle parking provisions.

An example of a TAG is provided in Appendix B. This was produced by Mirvac for their Harold Park development.

7.7 Information and Communication

Several opportunities exist to provide staff and visitors with information about nearby transport options. Connecting staff and visitors with information would help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour. These include:

- Transport NSW provides Bus, train and ferry routes, timetables and journey planning are provided by Transport for New South Wales through their Transport Info website: http://www.transportnsw.info
- City of Sydney provides a number of services and a range of information to encourage people of all levels of experience to travel by bicycle: http://sydneycycleways.net/

Connecting staff and visitors via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

7.8 Monitoring of the GTP

There is no standard methodology for this but it is suggested that the GTP be monitored to ensure that it is achieving the desired benefits and modify it if required. It will not be possible at this stage to state what additional modifications might be made as this will dependent upon the particular circumstances prevailing at that time.

The GTP should be monitored on a regular basis, e.g. yearly, by carrying out travel surveys. Travel surveys will allow the most effective initiatives of the GTP to be identified, and conversely less effective initiatives can be modified or replaced to ensure the best outcomes are achieved. It will clearly be important to understand people's reasons for travelling the way they do, any barriers to changing their behaviour, and their propensity to change.

To ensure the successful implementation of the GTP, a Travel Plan Coordinator (TPC) should be appointed to ensure the successful implementation of the GTP. Again Mirvac is aware of this process having undertaken post occupation monitoring at Harold Park.

7.9 Summary

Future building owners/managers should be required to develop and utilise a travel plan to increase the use of sustainable transport by the staff working in the development. Although it is difficult to predict what measures might be achievable until the building is occupied, the above measures provide a framework for the development and implementation of a future travel plan for the site.

It is considered that it is appropriate that any development consent is conditioned to ensure that a travel plan is implemented prior to occupation of the development.

8. Summary and Conclusion

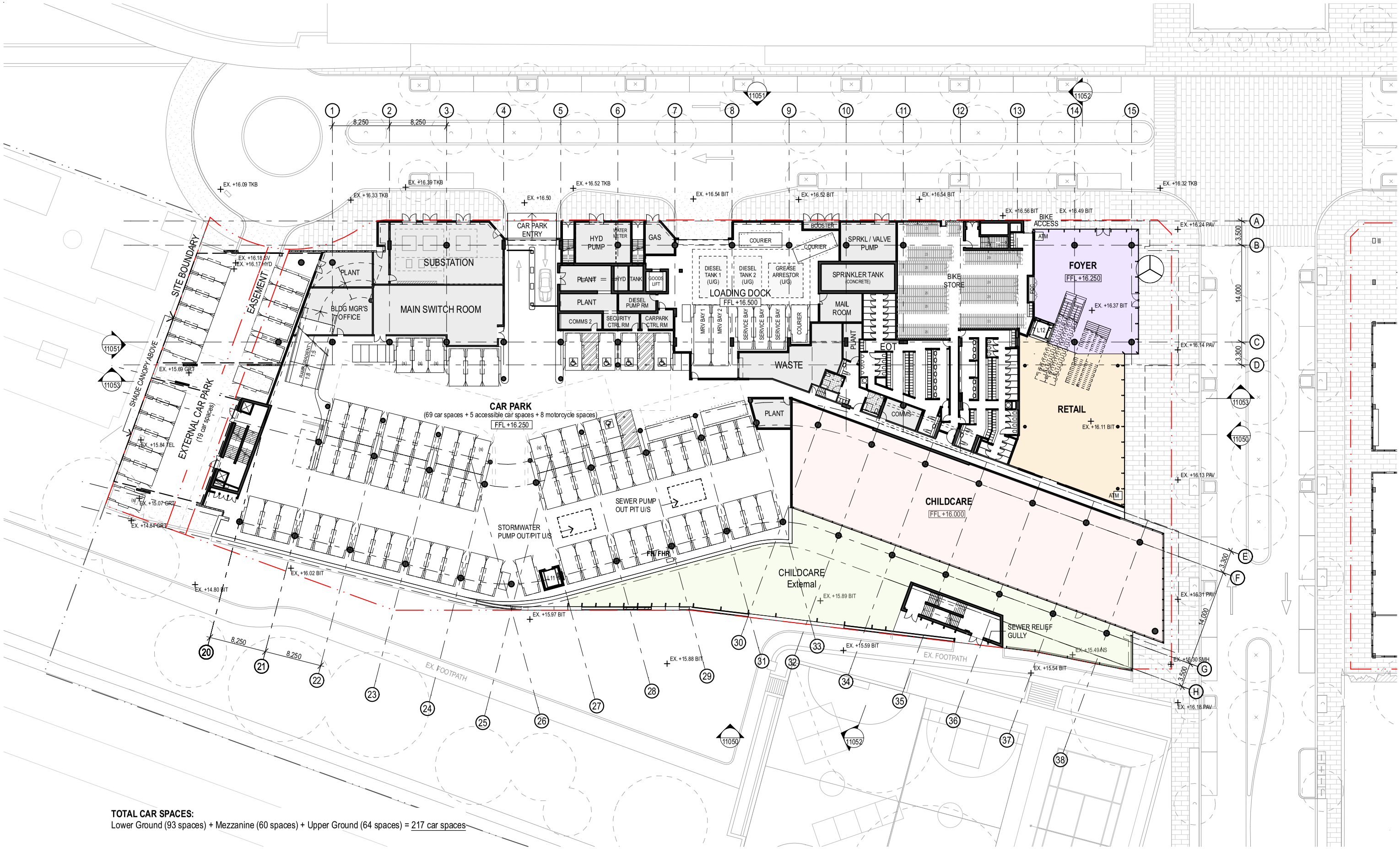
This report has been prepared to support a state significant development application (SSDA) for the development of three mixed use buildings at Australian Technology Park (ATP) in Eveleigh. The report assesses the traffic and parking impacts relating to the development. The findings of the report are summarised as follows:

- The proposed development includes three buildings comprising approximately 102,420m^2 of commercial floor area, 2,790m^2 of retail floor area, 450m^2 of gym and 1,649m^2 of childcare uses.
- The proposed developments will displace existing at-grade car parks containing a supply of 333 spaces.
- The proposed development proposes a supply of 706 basement car parking spaces and 42 on-street car parking spaces which is a net increase of 415 car parking spaces compared to existing conditions.
- The development is estimated to generate 336 and 257 vehicles per hour during the morning and evening peak periods respectively.
- The surrounding intersections are able to accommodate the estimated traffic generation from the proposed development without any adverse impacts to the local road network.
- Intersection modelling indicates that the proposed layout changes to Davy Road approach would not have any adverse impact to the operation of the Davy Road and Henderson Road intersection.
- The proposed car parking supply is compliant with the statutory maximum permissible car parking requirements.
- The proposed car parking spaces would be designed to comply with design requirements set out in the relevant Australian Standard for car parking facilities.
- The proposed development includes 606 bicycle parking spaces within the basement car parks.
- A Green Travel Plan (GTP) will be implemented following the occupation of the proposed developments to encourage sustainable travel modes and reduce car usage to the ATP site.

Overall, it is considered the overall traffic and parking effects of the proposed development would be satisfactory.

Appendix A

Architectural Basement Car Park Plans



TOTAL CAR SPACES:
Lower Ground (93 spaces) + Mezzanine (60 spaces) + Upper Ground (64 spaces) = 217 car spaces

fjmt + SISSONS
francis-jones morehen thorp

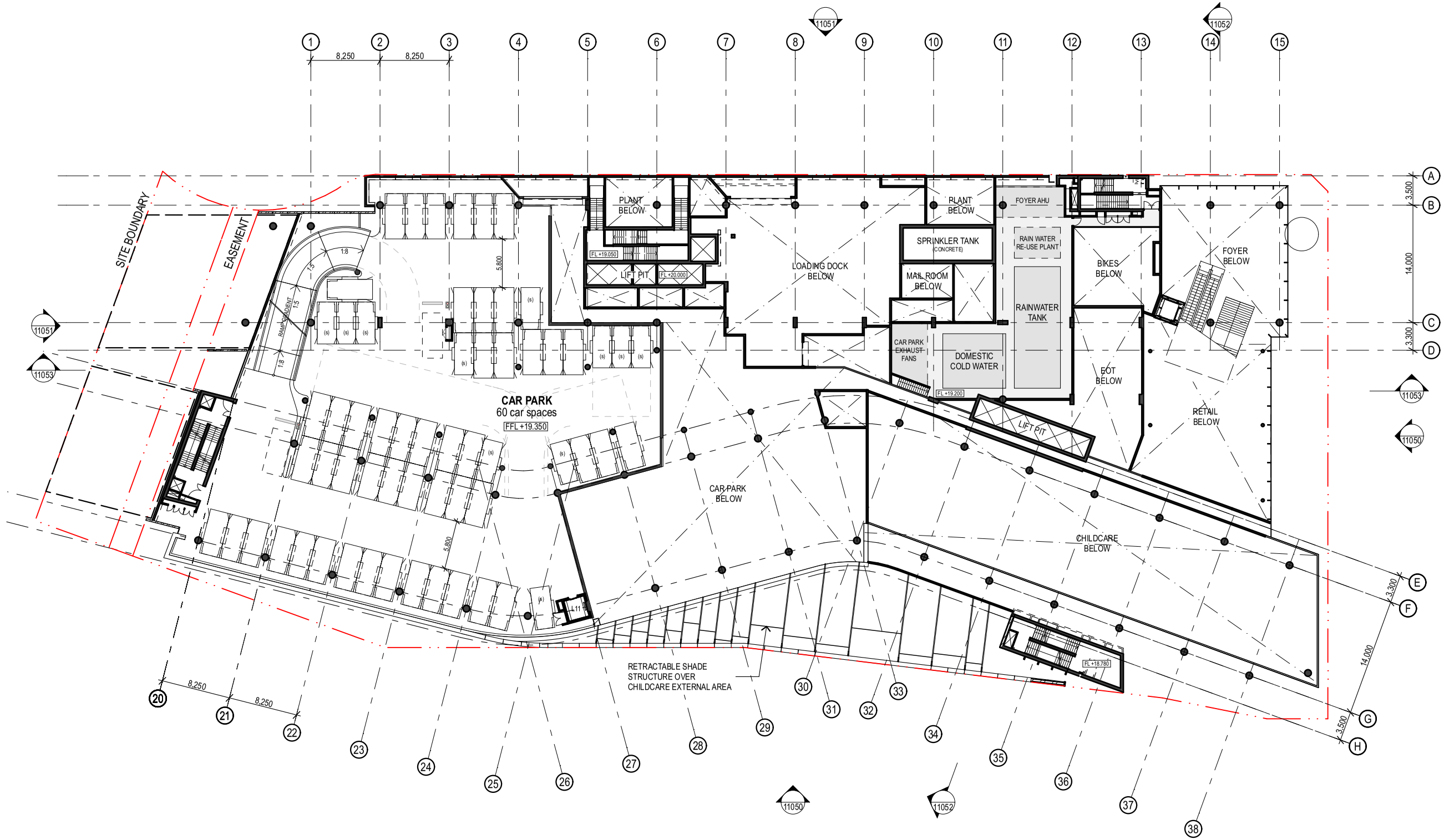
Lower Ground Floor Plan

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 1

0 5 10 20m
1:500 @ A3

16/12/15

For Approval **fjmt-AR-DWG-1100L_DA0**



TOTAL CAR SPACES:
Lower Ground (93 spaces) + Mezzanine (60 spaces) + Upper Ground (64 spaces) = 217 car spaces

fjmt + SISSONS
francis-jones morehen thorp

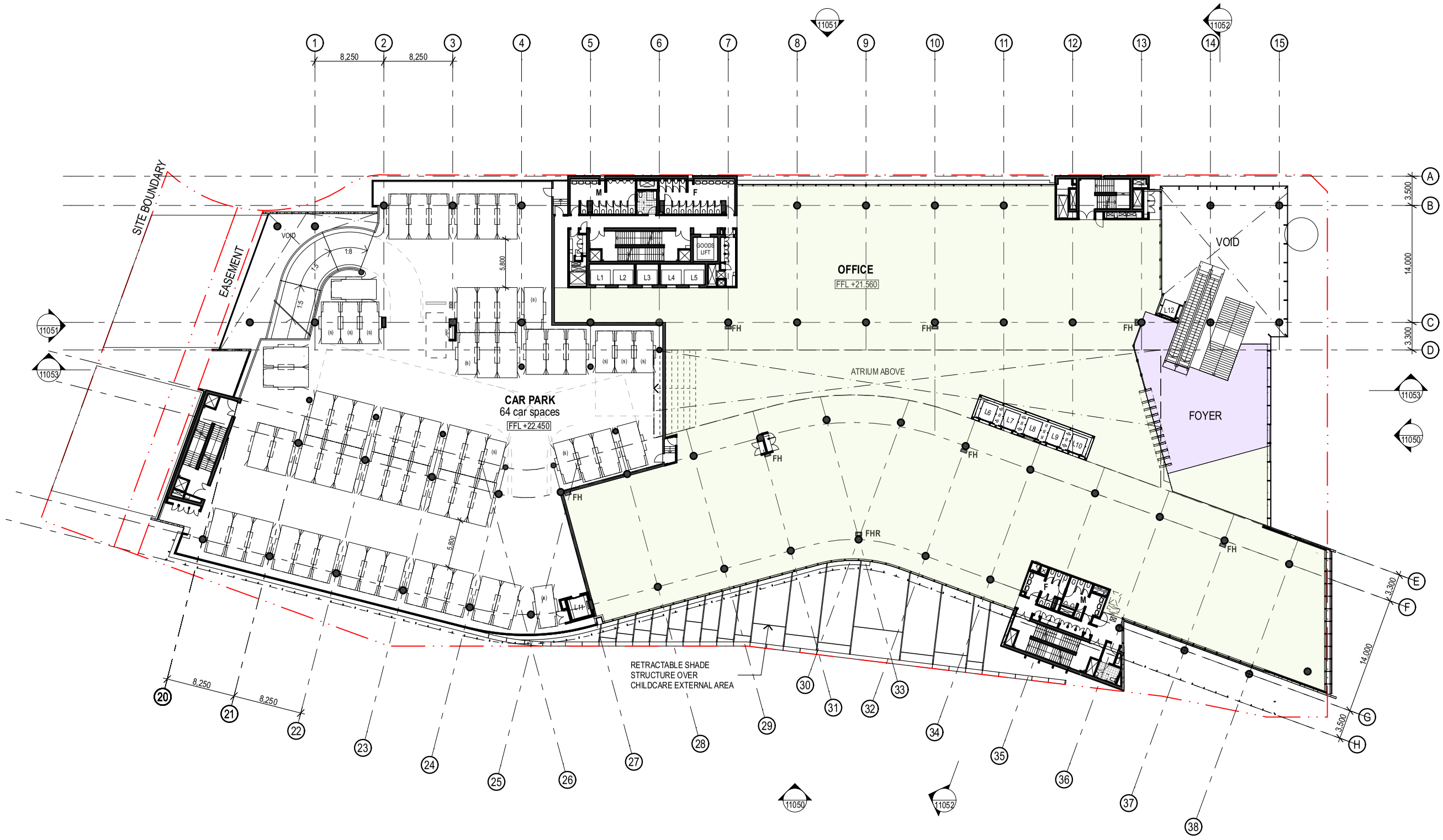
Mezzanine Plan

0 5 10 20m
1:500 @ A3

16/12/15

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 1

For Approval fjmt-AR-DWG-1100M_DA0



TOTAL CAR SPACES:
Lower Ground (93 spaces) + Mezzanine (60 spaces) + Upper Ground (64 spaces) = 217 car spaces

fjmt + SISSONS
francis-jones morehen thorp

Upper Ground Floor Plan

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 1

0 5 10 20m
1:500 @ A3

16/12/15

For Approval fjmt-AR-DWG-1100U_DA0

CP FAN ROOM
ACC. EOT
PLENUM
CP FAN ROOM
1,002
5,800
RAMP 1:10
RAMP 1:20
300
7,200
300
FFL +15.450
SEWER PUMP-OUT PIT (INDICATIVE)
STORMWATER PUMP-OUT PIT (INDICATIVE)
CONCRETE UPSTAND
350
5,060
350
RAMP 1:10
RAIN WATER TANKS
RAINWATER TANK (concrete) 13.9m x 6.3m 2.8m = 141KL
L16
REDUCED HEAD HEIGHT NOMINAL 2.2m PLENUM OVER
CAR PARK
(213 car spaces + 12 accessible car spaces)
Total: 225 car spaces
FFL +16.400
COMMS
PLANT
COLD WATER TANK 5x5x2.4m = 60KL
HV CONTROL ROOM
RAIN WATER REUSE
COMMS
FAN ROOM
FCC
EOT BIKE PARKING (320 SPACES)
FEMALE
MALE
EOT FACILITIES
LOADING CORRIDOR
SWITCH ROOM
SPRINKLER VALVE & PUMP
SUBSTATION 01
SPRINKLER TANK 59m2 AT LG + 116m2 AT MEZZ = 175KL
BOOSTER
HYDRANT TANK 5.6x2.0x2.5m = 28KL
HYRDRANT PUMP
PLANT
WASTE
FAN
DIESEL PUMP
MAIL ROOM
SERVICE BAY X 3 (2300 X 5400)
COURIER X3 (900 X 5400)
MOTORCYCLE X 2 (900 X 1200)
DIESEL TANK 1 (U/G) 4.0 x 6.0m
DIESEL TANK 2 (U/G) 4.0 x 6.0m
GREASE ARRESTOR (U/G) 7.0 x 6.0m
MRV BAY 1
MRV BAY 2
LOADING DOCK
FFL +16.400
DOCK OFFICE
SITE BOUNDARY
LOBBY
FFL +16.800
RETAIL
FFL +16.800
RETAIL
FFL +16.800
RETAIL
FFL +16.800
RETAIL
FFL +16.800
RETAIL
FFL +16.930
BICYCLE ACCESS
3,000
10,881
EX. +16.74
EX. +16.930
EX. +16.96
RL +17.90
RL +16.60
5,147

fjmt + SISSONS
francis-jones morehen thorp

Lower Ground Plan

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 2

0 5 10 20m
1:500 @ A3

16/12/2015

For Approval **fjmt-AR-DWG-2100L_DA0**

CP FAN ROOM
EXHAUST RISER 4.2m²
PLENUM
5,800
REDUCED HEAD HEIGHT NOMINAL 2.2m PLENUM OVER
LIFT PIT ABOVE
FFL +18.450
RAMP 1:10
RAMP 1:20
CAR PARK
Total: 264 car spaces
FFL +19.400
WATER
GAS
PLANT
SECURITY
FAN
AHU
L13
L14
L15
L16
RL +18.70
RL +17.90
RL +16.60
FOYER BELOW
CAFE BELOW
RETAIL BELOW
SUB STATION BELOW
CAR PARK ENTRY BELOW
LOADING DOCK BELOW
HYDRANT TANK 5.6 x 3.0 x 5.5m = 90KL
SPRINKLER TANK 59m2 AT LG + 116m2 AT MEZZ = 175KL
SITE BOUNDARY
EX. +16.96

fjmt + SISSONS
francis-jones morehen thorp

Mezzanine Floor Plan

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 2

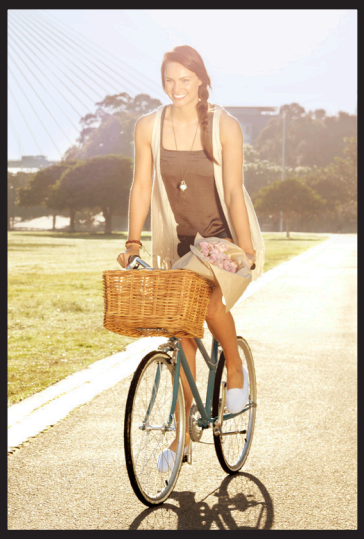
0 5 10 20m
1:500 @ A3

16/12/2015

For Approval **fjmt-AR-DWG-2100M_DA0**

Appendix B

Example Transport Access Guide (TAG)



TRANSPORT ACCESS GUIDE

HAROLD PARK
2037 GLEBE'S SECRET BACKYARD

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ndicative only. Subject to final site design.

TRANSPORT OPTIONS

WALKING ROUTES

The site is within a 5 min walk of the Jubilee Light Rail Station

LIGHT RAIL

The Light rail service operates every 10 minutes in day time, and overnight service at every 30 minutes at Jubilee Park Station. Access to Jubilee Light Rail Station is via Maxwell Street.

CYCLE ROUTES

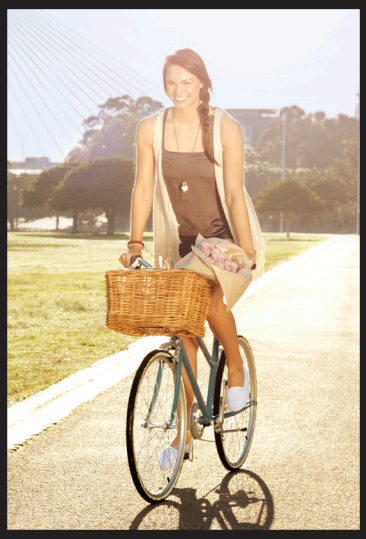
The cycle routes run through Harold Park linking to roues along The Crescent, Minogue Crescent and Maxwell Roads.

BUS ROUTES

Route	Service Route	Frequency
370	Leichhardt to Coogee	Approximately every10 min during weekday peak period and 30 min during weekends.
433	Balmain & Glebe Point to City	5 minutes during weekday morning peak period. Approximately 5-10 min during afternoon peak period.
470	Lilyfield to City	Approximately every 5 minutes during weekday morning peak period and15-20 min during afternoon weekday peak period.

INFORMATION

To plan your trip, call the Transport Infoline on 131 500 or visit www.131500.info



HAROLD PARK
2037 GLEBE'S SECRET BACKYARD

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