

Reference: 15S1478000

15 April 2016

Mirvac Projects Pty Limited
Level 26, 60 Margaret Street
SYDNEY NSW 2000

Attention: Mr Dimitri Roussakis

Dear Dimitri

**RE: AUSTRALIAN TECHNOLOGY PARK, EVELEIGH
RESPONSE TO CONSULTATION**

As requested, GTA Consultants has reviewed the consultation responses to the above scheme and have commented as appropriate below. I also note that no consultation response has been received from Road & Maritime Services.

1. Transport for New South Wales (TfNSW)

Future Transport Situation

The proposed Australian Technology Park (ATP) development is expected to accommodate 10,000 staff on site. The Transport Impact Assessment prepared by GTA Consultants only provides detailed assessment for trips generated by vehicles for the proposed development.

It is noted that a small percentage of employees are estimated to use private vehicles (less than 10%) generating 336 vehicles per hour during the morning peak period and 257 vehicles per hour during the afternoon peak period. The remaining staff are expected to use public transport as well as other modes of transport to access the site. However, the Transport Impact Assessment provides limited information in relation to the future transport situation. Therefore, TfNSW requests that the following information be provided:

- *Details of mode share in the ATP with the proposed development*
- *Details of estimated total daily and peak hour trips likely to be generated by the proposed development, including public transport, pedestrian and bicycle trips;*

Based upon the information contained in the traffic report, it is noted that there are

- 600 cycle parking spaces, then somewhere around 6% of the trips might be made by bicycle.
- the restriction of on-site parking spaces is likely to result in an increase in use of public transport which will increase from the existing 42% to somewhere in excess of 80% (N.B. 75% can be achieved elsewhere in Sydney CBD).
- Car use is likely to be around 7%.
- Car share initiatives are likely to increase from its current 2%.

Although the modal split will be more accurately estimated when the detailed measures contained in Workplace Travel Plan are finalised, the following table gives a current estimate of the modal split.

melbourne
sydney
brisbane
canberra
adelaide
gold coast
townsville
perth

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Table 1 – Estimated Modal Split

Mode	% Use
Car driver	6
Car Passenger (car share)	1
Public Transport	80
Walk	8
Cycle	5

- **Assessment of the operation of future transport networks including rail and bus networks and their ability to accommodate current and forecast number of trips in the ATP;**

"Sydney's Rail Future" is a long term plan to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure. Work has already commenced to improve reliability and increase services across the network. Significant technology investments and upgrades will see more reliable and more frequent services. Sydney will also have a second crossing under the Harbour linking to a new CBD line and new stations, which will use rapid transit services that will also eventually operate on the Bankstown line and to Hurstville on the Illawarra line. This plan will eventually enable Sydney Trains to carry another 90,000 to 100,000 people per hour in the peak. Sydney's Rail Future is an integral part of the NSW Long Term Transport Master Plan.

Furthermore, documents such as the 2014 State Infrastructure Strategy Update reiterate the need to provide land use changes, such as transit orientated development around existing rail stations to increase access to the public transport system coupled with the major public transport infrastructure improvements currently being planned.

Consequently, whilst bus use at the subject site is comparatively low compared to rail use, the capacity of trains will be significantly increased in future years to allow development to occur in Transit oriented locations encouraged by Government.

It is also worth noting that studies associated with the proposed Sydney Metro station at Waterloo identify that it will "take pressure off Redfern and Green Square Stations." Furthermore, TfNSW has announced that "following the decision for a preferred station at Waterloo, Transport for NSW will now look into improving public transport at The University of Sydney through significant upgrades to Redfern Station and improved pedestrian connectivity through Redfern and Darlington associated with the Central to Eveleigh Urban Transformation Program".

- **Adequacy and standard of pedestrian and bicycle facilities to accommodate current and forecast number of trips generated in the ATP;**

The current proposal is to provide above 600 bicycle spaces and associated end of trip facilities which we believe is adequate. However it is also noted that

- The project will be targeting the likely outcomes to align with the Green Star rating system which assesses the sustainability of projects at all stages of the built environment lifecycle.
- In addition, it is now of increasing importance to owners and tenants to provide suitable end of trip facilities for their employees an objective of both Mirvac and the anchor tenant of ATP to achieve through this development.

- Substantial upgrades to the public domain have been contemplated throughout the Aspect Public domain report which will substantially improve the pedestrian and cyclist experience through the site.
- **Assessment of impacts on existing public transport facilities such as Redfern Station due to the proposed development; Recommendation of mitigation measures for the identified impacts (if any); and**
- **Details of any upgrade works required to accommodate the proposed development including access to Redfern Station.**

There will be additional train users generated by the development and this is of course in line with Government Policy to maximise public transport use and minimise private car use. The pedestrian routes through the site and on approach to the station have been one of the primary drivers in the development of the on-site layout. The likely pedestrian flows and the capacity of the infrastructure to absorb them is reviewed in the ARUP pedestrian modelling report. However, some initiatives such as the Redfern Station upgrade will take place in the near future (noting that there are easements on the site to accommodate future works to facilitate the improvements).

Upgrades to the public domain contemplated through Mirvac's proposal also increase and improves the connectivity of ATP and surrounding suburbs to Redfern station.

Construction Traffic Management

Prior to the commencement of any works on the site, a Construction Traffic Management Plan (CTMP) prepared by a suitably qualified person shall be submitted to the Principal Certifying Authority (PCA). The Plan must be prepared in consultation with City of Sydney Council, Roads and Maritime Services and the CBD Coordination Office within TfNSW.

The CTMP should specify any potential impacts to traffic, pedestrian, cyclists and bus services within the vicinity of the proposed site from construction vehicles during construction. Any potential impacts to pedestrian access or public transport infrastructure including bus stops should also be specified in the CTMP.

The CTMP shall include the cumulative construction impacts of all the projects in proximity to the site. The Applicant shall submit a copy of the CBD Coordination Office endorsed CTMP to City of Sydney Council, prior to the commencement of work.

A draft Construction Traffic Management Plan (CTMP) was completed as part of the Development Application and this is of a suitable standard to describe how the project will be managed and to assess the likely impacts.

Notwithstanding this, it is usual practice for a CTMP to be a development condition which would need to be prepared prior to a construction certificate. This would include the consultation referred to above and would take into effect both the cumulative effects raised by TfNSW and the local issues as identified by CoS in their submission.

Detailed Comments on Traffic Impact Assessment

- **Figure 2.3 of Transport Impact Assessment provides peak hour turning volumes. However, no information is provided in relation to peak hour period;**

The peak hour periods recorded were 0800-0900(AM) and 1700-1800 (PM) except for Central Avenue/Garden Street where the AM peak hour was 0745 to 0845.

- **It is not clear from the Transport Impact Assessment how traffic generation figures have been estimated based on the results of the parking occupancy surveys;**

The calculation was based upon the number of trips (586AM/415PM) divided by the number of occupied car parking spaces (718AM/665PM) thereby giving 0.81 and 0.62 respectively in

the AM/PM peak. Consequently the traffic generation calculation is based upon full utilisation of all car parking spaces upon occupation of the site.

• The proposed development will be occupied by the Commonwealth Bank. However, no information is provided in relation to existing arrival and departure patterns of employees based on the surveys undertaken at existing sites;

No information has been provided about the existing travel patterns as due to the change in location and uncertainty of staff allocation for 2019/2020. The existing staff travel patterns are expected to change and this will process will be managed by the Workplace Travel Plan (also known as a Green Travel Plan). Two recent examples of employee relocation are given below:-

- Optus relocated 6,200 staff from 9 sites across Sydney to a purpose built campus in Macquarie Park in 2007. A comprehensive transport strategy supported the relocation to increase the travel choices for employees with an emphasis on improving access by sustainable modes of transport. Key elements of the strategy include new employee bus services, financial support for public transport costs, a charging mechanism to allocate parking according to need, priority parking to ride sharers (car-pooling) and on-site infrastructure for cycling and walking; all supported by extensive engagement with employees.
- In 2009 the RTA relocated from Sydney's CBD to North Sydney and with careful planning the new office has a number of features that support the use of active transport for the daily commute, and other forms of healthy living. Well before the move, the Authority implemented a range of information and communication strategies to assist employees with trip planning, with the aim of maximising the use of public transport, walking and cycling to access the new office. The RTA also upgraded 'end-of-trip' facilities for walkers and cyclists, and introduced a new scheme to provide staff with low cost public transport travel passes.

• The Transport Impact Assessment report needs to state that bicycle parking facilities should be designed to meet the relevant Australian Standards, including AS2890.3.

This letter can confirm that bicycle parking facilities will be designed to meet the relevant Australian Standards, including AS2890.3. This is elaborated on further in the response to CoS.

• The applicant had a meeting with TfNSW in December 2015. The traffic modelling undertaken as part of the Transport Impact Assessment does not include the intersections TfNSW advised the applicant to model. TfNSW considers any traffic impacts from the ATP development on the intersections will have impacts to bus travel times. The traffic modelling should be revised to include the intersections listed in Section 3.1 and any identified impacts to bus travel times, mitigated. The intersections include:

- Henderson Road/Wynyard Street
- Henderson Road/Botany Road
- Boundary Road/Wyndham Street
- Boundary Street/Botany Road

These intersections were assessed as requested by TfNSW and the letter dated 1st February 2016 summarising these results is attached to this letter. This letter concludes "the analysis indicates the assessed intersections would continue to operate satisfactorily in the future following the completion of the proposed development. In the future, the assessed intersections would continue to have the same level of service as that found under existing traffic conditions albeit the average intersection delay would marginally increase.

• The Transport Impact Assessment should consider TfNSW advice to the applicant to design roads within and approaching the site to be capable of operating buses, including the provision of bus stand facilities. TfNSW requests

that the applicant liaise with TfNSW to identify how buses could serve the site and any infrastructure requirements form part of the application.

Ongoing consultation with the public transport officers at TfNSW will be held to investigate this point. However, the site has not been designed for buses and the site layout does not cater for them. Notwithstanding this, Mirvac support the provision of additional stops on Henderson Street.

• Pedestrian enhancements between the ATP development and existing nearby bus stops should be considered in the Transport Impact Assessment, including capacity enhancement to bus stop infrastructure.

We will investigate this and this can feed into our discussion with the public transport officers at TfNSW described above.

• Capacity enhancements to pedestrian and cycle access between Redfern Station and the ATP development should be considered in the Transport Impact Assessment, including provision of an additional pedestrian access to Redfern Station. Infrastructure requirements should form part of the application.

Capacity improvements to pedestrian (and cycle) access are being proposed by Mirvac as part of their proposal upgrading the public domain. A specialist Precinct Pedestrian Planning Report has been prepared by ARUP and is available as part of the submission package

2. City of Sydney

Traffic Modelling

Intersection performance assessment is not sufficient. Assessment of the future performance of intersections should be provided for additional intersections including:

- **Boundary Street / Gibbons Street / Wyndham Street intersection**
- **Boundary Street / Regent Street intersection**
- **Henderson Road / Wyndham Street intersection**
- **Henderson Road / Botany Road / Raglan Street intersection**

These intersections were assessed as requested by TfNSW and the letter dated 1st February 2016 summarising these results is attached to this letter. This letter concludes "the analysis indicates the assessed intersections would continue to operate satisfactorily in the future following the completion of the proposed development. In the future, the assessed intersections would continue to have the same level of service as that found under existing traffic conditions albeit the average intersection delay would marginally increase. *In addition:*

- **cumulative impacts of delays at the intersections (i.e. using a network model) should be analysed rather than at isolated intersections.**
- **with this additional network modelling, assurance must be provided that the capacity of the following intersections to absorb the current traffic levels (let alone the proposed levels) is adequate:**
 - **Davy Road / Henderson Road / Mitchell Road;**
 - **Garden Street / Henderson Road;**
 - **Boundary Street / Gibbons Street / Wyndham Street.**

This is particularly the case given the expected pedestrian volume increases at crossing points at Locomotive Street / Mitchell Way, Central Avenue / Mitchell Way and Davy Road / Central Avenue and the proposal to provide pedestrian priority.

Recommendation- *Additional intersection assessment and a network model is required, with all necessary changes adopted taking into consideration the capacity of the network and the Proponent's intention for pedestrian priority through key intersections.*

The response from Transport for New South Wales has not made mention of the need for a network traffic model and we have not received a submission from RMS.

In an interrupted flow network (road network with short spaces between intersections), the capacity and network performance is controlled by the intersection. For such situations, intersection modelling using Sidra or LinSig is sufficient to measure such impacts, especially for relatively small study areas. On the other hand, a network model (e.g. microsimulation) requires extensive data collection and the only added value is the capability to measure the travel time and individual vehicles interactions, which is not required in this case.

However, I would note that traffic modelling undertaken on this project has made allowance for pedestrians at traffic signals

With regard to the proposed pedestrian priority, it is noted that the key streets referred to above have indeed been provided with pedestrian access at crossings as per the ASPECT public domain path to promote pedestrian movements throughout the site. The provision of continuous footpath across driveway crossovers is also being considered to emphasise pedestrian priority and improve awareness of pedestrians. Where possible driveway crossing widths have been restricted to 6m or less and widened footpaths have been provided wherever possible.

Aggressive Modal Shift Targets required

The quantum of parking spaces proposed is said to be likely to accommodate a maximum of around 6% of the 10,000 workers to be employed by the proposal (refer to ARUP Precinct Pedestrian Planning Report).

Given the current rate of car use is some 46% of the existing employees, significant modal shift is required. The proponent should provide some analysis of the projected public transport modal splits and how these will be achieved. These targets must be reflected in the targets within the Green Travel Plan.

The development should seek to encourage Sustainable Transport in a manner which aligns with the targets and objectives set out in Sustainable Sydney 2030 such as:

- *Target 6 – 80 per cent of City workers commuting on public transport +80 per cent of work trips by City residents in non-private vehicles.*
- *Target 7 - By 2030, at least 10 per cent of City trips will be made by bicycle and 50 per cent by pedestrian movement.*
- *Objective 3.1 – Support and plan for enhanced access by public transport from the Sydney Region to the City of Sydney.*
- *Objective 3.3 – Reduce the impact of transport on public space in the City Centre and Activity Hubs.*
- *Objective 3.4 – Manage regional roads to support increased public transport use and reduce car traffic in City streets.*
- *Objective 4.1 - Develop a network of safe, linked pedestrian and cycle paths integrated with green spaces throughout both the City and Inner Sydney.*
- *Objective 4.2 - Give greater priority to cycle and pedestrian movements and amenity in the City Centre.*
- *Objective 4.3 – Promote green travel for major workplaces and venues in the city.*
- *Other strategies for which the project should align includes:*
 - *City's Cycling Strategy and Action Plan 2007-2017*
 - *Draft Walking Strategy and Action Plan 2014-2030*
 - *Connecting Our City Transport Strategies and Actions (2012).*

Given the Transit Oriented type development achievable within the site, more aggressive Active Transport targets should be applied.

Recommendation - *Adopt modal shift targets aligned with the strategic objectives of Sydney 2030 Strategy and provide further demonstration how existing car dependence on site is capable of reducing from 46% to 6%.*

Quite clearly adopting aggressive modal split targets in the Workplace Travel Plan will be required and one of the major tools to achieve this is to constrain the amount of parking available. Mirvac have recently provided the Workplace Travel Plan for Harold Park which by the use of a large number of measures has resulted in significant less car use than would be achieved on a similar site. Mirvac achieved this by a number of means these being

- Restricted car parking provision.
- Provision of GoGet Cars and membership to allow people to travail out on business even if they have used public transport to get to work.
- Giving Opal cards to employees upon appointment to ensure that they have the ability to travel by public transport.
- Giving a Transport Access Guide which gives information about how main destination can be reached by means other than car.

Parking Provision Excessive

The amount of parking proposed is not supported. In general, it is recommended that parking supply be constrained to encouraging Sustainable Transport such as Public Transport and Active Transport (cycling and walking) and where vehicles are in use, encouraging energy efficient vehicles (i.e. provision of electric car charging) and car share. Given the need to prioritise pedestrians and cyclists in the design for the ATP site, there is a need to provide a lower car volumes precinct and this requires fewer parking spaces than is proposed.

Recommendation- Reduce the quantum of parking provided and convert the space to active retail uses or office uses taking pressure off the building height non-compliance with Building 1.

The provision of parking accords with the SEARS and the Planning Instrument which requires the total provision on the site to be less than 1600 parking spaces. As identified by CoS, even the provision of the current level of parking will mean that only 6-7% of employees would come by car which will require a significant amount of modal shift to be achieved by the Travel Plan.

Loading Dock Management Plan required

A loading management plan should be provided demonstrating how the docks in Building 1 and 2 will be managed. The on-site loading area is to be available to all tenancies of the particular building (i.e. office, retail, supermarket, child care, etc.). This shall be managed either by a schedule showing all tenants when they can use the area, or by a register managed on site to allow tenants to reserve a time period for their deliveries. This information is to be made available to all tenants of the building.

Recommendation- Prepare and lodge a Loading Dock Management Plan in association with traffic network modelling.

A loading dock management plan will be prepared and could be secured by means of a condition of consent. It is difficult at this stage to prepare such a plan when the tenant and operational requirements are not yet fully known.

However, it is not clear how the provision of a Loading Dock Management Plan is in any way related to the network traffic modelling.

Pedestrian Priority

The provision of pedestrian priority at road crossing points at Locomotive Street / Mitchell Way, Central Avenue / Mitchell Way and Davy Road / Central Avenue is supported. The provision of traffic signals which prioritise vehicles over pedestrians should be resisted even if there is pressure to provide signals for network efficiency purposes. This is especially the case given the need to prioritise pedestrians and cyclists in the design (since private vehicle transport should only account for 6% of worker travel).

Recommendation

Resist installation of any traffic signals giving vehicles priority over pedestrians.

GTA notes that the current scheme currently promotes this position.

Pedestrian / Cyclist Linkages

North – South - Cycleway connections should be provided with strong emphasis on connecting the ATP site to the nearby established bicycle networks including those on George Street, Wilson Street and Lawson Street. Further, the provision of upgraded facilities such as bicycle lanterns at traffic signals, and upgraded pram ramps (i.e. Mitchell Road / Davy Road / Henderson Road intersection) must be incorporated.

Footpath widths to Redfern Station should be widened to more than 3.5m. The proposed pavement width is too narrow particularly if marked as a "shared path" to accommodate cyclists. Consideration of separation of cyclists and pedestrians should be examined.

East – West - East-west pedestrian desire lines should be catered for especially to connect to the new Metro Rail Station at Waterloo. Details of analysis of an east-west pedestrian link and proposed upgrades should be provided with particular emphasis on Henderson Road pedestrian and cycling amenity (including possible separated bicycle lane or shared path) from the ATP site to Waterloo Station and to Alexandria Station which are both currently poor connections.

Generally - Provision of cyclist access to the End of Trip Facilities in both Buildings 1 and 2 should be incorporated. This includes adequate footway facilities to get bicycles from roads, adequate and direct corridor conditions internal to the buildings and clear paths of travel into the buildings without competing uses, e.g. ATM facility within the entry lobby to the Building 1 bike entry.

Recommendation - Widen footpath widths to more than 3.5m along the route to Redfern Station, particularly if earmarked for shared paths. Demonstrate adequate infrastructure for cyclists accessing the bike parking and end of trip facilities in Buildings 1 and 2.

These comments are currently being considered by the landscape architects and the layout will be amended where appropriate.

Pedestrian Amenity on Proposed Streets

The provision of continuous footpath treatment must be applied at all driveway crossing locations and local street entry points. There is inconsistency in the SSD DA documentation, with some plans showing continuous paving and others showing intrusion by vehicle crossing. The provision of pedestrian crossings, median islands, refuges and kerb extensions must be applied at crossing points in local streets and at street entrances (i.e. Central Avenue / Garden Street intersection).

Recommendation - Reinforce pedestrian priority along proposed footways by continuous footpath treatments.

These comments are currently being considered by the architects and the layout will be amended where appropriate.

Bicycle Parking

Consideration should be given to improved bicycle parking and end of trip facilities (such as lockers and showers). The staff parking should be Class 2 facilities (known as Class 'B' in the latest Australian Standards) and provided as per AS2890.3:2015, and be located on ground floor or basement level 1 area in a separate location to the visitor parking area. Visitor parking should be Class 3 facilities (known as Class 'C' in the latest Australian Standards) and provided as per AS2890.3:2015 and be provided at an accessible at-grade location. Staff and visitor parking would best be provided in a separate location. The SSD DA is proposing 606 bicycle parking facilities for the two buildings. The City encourages more spaces in line with the requirements of the Sydney DCP as per the table below:

Bicycle Parking Type	Building 1	Building 2	Community Building	2 x Child Care centres
Staff	305	366	15	8
Visitor	120	159	17	8
End of Trip Facility Type				
Showers with change area	30	36	2	2
Personal lockers	305	366	15	8

Recommendation - Increase bicycle parking and identify staff parking versus visitor parking.

Mirvac are currently opportunities with the end of trip facilities and these will be assessed during design development. The staff parking and visitor parking would be clearly demarcated. Bicycle parking will be considered in the light of the Green Star rating to ensure a sustainable outcome.

Visitor End of Trip Facilities (EOTF)

A reduction in the quantity of visitor bicycle parking is supportable if there is an increase in the overall quality of parking facilities to be provided. The City supports the provision of innovative bicycle parking solutions in new development. The City welcomes the investigation of innovative visitor bicycle facilities. These might include:

- a range of class 2 and 3 visitor parking facilities
- visitor parking with some showers and lockers – this may be lettable area.
- consider within the building face rather than on the public domain, but remaining publically accessible;
- provision of a bicycle share and bicycle shop area.

Infrastructure supporting innovative visitor and staff bike parking should also be incorporated. The following are increasingly becoming common-place:- air compressors for tyre inflation, filtered water, bicycle service racks and tool kits, communal bicycle tools, bicycle tune-up and repair services, drying racks, complimentary towel services, ironing stations, dry cleaning services, hair dryers, bicycle user group support, etc.

Recommendation- Innovative cycling infrastructure, in terms of parking and end-of-trip facilities, should be incorporated for both staff and visitors.

Mirvac are committed to ensuring a high quality outcome for the EoTF's within all office developments including ATP. Mirvac understands the importance as a long term asset owner and a key stakeholder along with our anchor tenant the importance of a high quality outcome within the EoTF to promote a work life balance and providing the amenities to fulfil such key outcomes. Mirvac will engage with its tenants to determine what innovative cycling infrastructure such as tool vending machines/compressors/towel/dry cleaning services or alike can be implemented within the EoTFs.

Green Travel Plan

An updated Green Travel Plan is required to demonstrate that the site will encourage modal shift away from car use and to the use of Sustainable Transport options (for staff, customers and residents) such as walking cycling and public transport. A Green Travel Plan will include (but is not limited to the following):

- providing mode share targets which promote sustainable travel behaviour,
- means of minimising travel demand by private car
- means of maximise the share of travel by other modes including public transport, cycling, walking, carpooling or car share.

A Travel Plan is a 'live' document that needs to be closely monitored and reviewed throughout the first few years of implementation. The Travel Plan Coordinator responsibilities include:

- Coordinating implementation efforts;
- Conducting surveys or other data collection processes to measure progress;
- Communicating the travel plan to stakeholders;
- Coordinating events to promote awareness of the plan and associated invites;
- Coordinating marking and promotional programs.

The steps outlined above should not be considered as a linear process, but rather an on-going cycle. Travel planning requires regular review and adjustment – a review may reveal the need to reconsider objectives or targets, or to add new actions to create greater incentives for the uptake of sustainable transport choices. A Green Travel Plan for the site should include a Transport Access Guide.

Recommendation- Update the Green Travel Plan and incorporate provisions for it to be revised and updated regularly.

A Green Travel Plan (Workplace Travel Plan) will be provided and this could be suitably conditioned in any planning consent. Mirvac has recently implemented successful Travel Plans at Harold Park and as such are omitted to delivering such a plan.

Parking / Car Share

Car share spaces must be provided. Approximately 12 car share spaces (similar to the requirement of the Sydney DCP) is recommended. The Applicant should discuss the proposed location of car share spaces with car share operators during the detailed design process to ensure that the needs of both the developer and the car share operator can be met. Car share spaces must be provided for the exclusive use of car share scheme vehicles (the spaces should be specifically designed into the basement noting that only limited on-street car share spaces would be supported). The car share spaces are to be provided to meet the following conditions:

- The spaces must be made available to car share operators without a fee or charge;
- The spaces must be sign posted for use only by car share vehicles and well lit;
- The spaces must be accessible to members of the car share scheme at all times. This should be incorporated into the building design;
- The car share spaces are to be available at the same time that the car park commences operation;
- If the buildings are subdivided, the spaces must be retained as common property of the Owners Corporation of the site, and not sold or leased to an individual owner/occupier at any time.

Recommendation- Car share spaces should be provided within the site and meet the design criteria applied to other development by the City.

Mirvac has experience of working with Car Share organisations and has implemented a site wide GoGet membership at Harold Park. Further engagement with car share organisations will be undertaken but the final numbers and locations has not yet been finalised.

Construction Vehicle Routes

The existing southern access via Davy Road should be the only vehicular entry for construction traffic.

There is an absolute requirement for the amenity of the child care centre and residential premises to the east and west of the site to be maintained. However, the SSD DA prioritises the amenity of commercial tenants within ATP over residential or child care amenity. The Construction Environmental Management Plan (CEMP) seeks to establish:

- a temporary construction traffic egress to the west of Building 1, immediately alongside the child care centre, near residential premises to the west and discharging trucks into Henderson Road where they will mix with local traffic and with on-road cyclists; and
- construction traffic egress to Garden Street, resulting in trucks traversing past residential uses on the eastern side of Garden Street.

The existing access roads have carriageway widths and intersection geometry designed for heavy vehicle access to existing loading docks and service areas. They do not have sensitive receivers to noise, dust and vibration impacts. Construction traffic is capable of being managed on site through scheduling and traffic controllers so that all construction vehicles enter and exit the site via the south through Davy Road.

Recommendation- Restrict construction vehicle movements to and from Davy Road. A separate Construction Traffic Management Plan should be prepared and should be reviewed and approved by the City's Traffic Operations Unit.

A draft Construction Traffic Management Plan (CTMP) was completed as part of the Development Application and this is of a suitable standard to describe how the project will be managed and to assess the likely impacts.

Notwithstanding this, it is usual practice for a CTMP to be a development condition which would need to be prepared prior to a construction certificate. This would include the consultation referred to above and would take into effect both the cumulative effects raised by TfNSW and the local issues as identified by CoS in their submission.

3. Other Comments

Other comments raised by the public nor raised by TfNSW or CoS are listed below.

- ***Traffic report didn't look at Garden St / Boundary St and Wyndham Street intersections as they get busy as Garden Street is a rat run.***
- ***Modelling must include Boundary and Wyndham Henderson and Garden and Henderson and Wyndham***

As requested by CoS and TfNSW, additional intersections have now been modelled.

- ***Inadequate number of parking spaces proposed***

There is a difference in opinion between some of the public responses which want more parking and the Government Agencies who require less. Nevertheless, the proposal is in line with the planning instrument for the site.

- ***Weekday on street parking is full during office hours***

The fact that the on-street parking is fully utilised does give some merit to reducing parking on site as any potential drivers would have nowhere to park and would either use another means of travel or possibly seek employment elsewhere. If additional parking is provided on site or freed up on street, it will inevitably result in additional cars driving to the precinct resulting in congestion impacts.

- ***Effect on Council Child Care***

This has been raised in relation to the CTMP and will therefore be taken into consideration.

- ***Existing ATP car park is not full due to high fees***

This is noted. However the traffic generation has been calculated on the basis of a full car park and that each of the parking spaces generates either 0.81 (AM) or 0.62 (PM) trips per parking space.

- ***Need to survey existing staff about travel patterns***

No information has been provided about the existing travel patterns as due to the change in location and uncertainty of staff allocations for 2019/2020. The existing staff travel patterns are expected to change significantly and this will process will be managed by the Workplace Travel Plan. Examples have been given earlier in this letter about Optus and RMS office relocations.

- ***Existing trains are already full and will not be able to take the additional 10000 employees.***

This is noted. However Sydney's Rail Future plans to increase the capacity of Sydney's rail network through investment in new services and upgrading of existing infrastructure.

Furthermore, the State Infrastructure Strategy Update is based upon providing transit orientated development around existing rail stations to increase access to the public transport system. In addition, the proposed Waterloo Metro station is expected to provide significant relief to Redfern Station.

- ***Future developments (e.g. Ashmore Estate)***

The traffic impact assessment identifies the impacts resulting from the proposed ATP development. The traffic work undertaken as part of that proposal has been further reviewed but I note that "the study found that the external roads appear to have capacity to manage the additional traffic. It also indicates that whilst the numbers of cars on the roads will likely increase, the impacts on adjacent areas would be negligible".

- ***Effects of Westconnex haven't been taken into account***

The submissions refer to a figure of 60,000 vehicles per day coming onto local road as a result of Westconnex which equates to about 6,000 per hour. The ATP site, at worst, suggests another 336 trips in the peak hour which is only 5% of this figure. The ATP traffic report has shown that the existing intersection will work adequately post development as a result of ATP. The Westconnex will also identify improvement to mitigate any impacts that might be caused by that scheme.

- ***Current use of car parking is 200/300 per day and the proposal anticipates a vast increase on this.***

The proposal is to increase the existing car parking number by 373 parking spaces.

- ***Need to upgrade Redfern Station***

As mentioned above, in line with the provision of a Waterloo Metro station, Redfern Station will as part of TfNSW proposals be upgraded. Mirvac has already been approached by government authorities and easement are to be provided to facilitate their planned improvements.

- ***GTA estimates that traffic generation is contained on site – it clearly is not, commuters park on -street***

The traffic generation has been undertaken to estimate the amount of car parking which will enter and exit the site. It is noted that commuter car parking occurs on street but this will already been included in the traffic counts of the intersections, the traffic report calculates the impact of the additional on-site car parking spaces.

- ***Need for strategic modelling of South Sydney area by TfNSW***

Strategic Planning for whole area is considered by TfNSW by means of their Sydney Traffic Model which predicts the likely increases in population and the established strategies to manage the increases in travel. Paramount in the strategies is to provide higher density development around train stations.

- ***How can tradesmen realistically use public transport (i.e. tools etc.)***
- ***Parking during construction needs to be provided on site***

Over recent years when city centre developments are being constructed with little parking available, contractors have given considerable thought to this and measures have been put in place to encourage staff to use public transport and these include :-

- a tool drop-off and storage facility provided on-site to allow tradespeople to drop off and store their specific machinery for the project

- during the induction and regular management meetings, staff will be informed of restricted parking conditions on site and the surrounding streets
 - during the induction and regular management meetings, staff will be instructed to use public transport to access the site and public transport timetable information will be made available and displayed at prominent locations, and
 - the above measures can be included in contract documents with subcontractors.
- ***Was there an analysis of where pedestrians walk to and from***

Consideration of pedestrian movements has been considered as part of Precinct Pedestrian Planning Report prepared by Arup.

- ***Adequacy of pedestrian routes through the site to prevent people from walking along busy roads***

Consideration of pedestrian movements has been considered as part of Precinct Pedestrian Planning Report prepared by Arup.

- ***Doesn't address the likelihood of different vehicles using the parking spaces during the day and night***

The use of parking spaces by different vehicles during day and night is actually an efficient and sustainable use of parking spaces which at most similar locations would remain empty at night. It is also likely to increase active surveillance of the area at times when the site might otherwise be less busy.

- ***Traffic Generated by Supermarket hasn't been taken into account.***

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 and local residents within the proximity of the site. Finally it should be noted that there is publicly accessible parking available on street within Central Avenue.

I trust the above is clear but please feel free to contact me should you require anything further.

Yours sincerely

GTA CONSULTANTS



Ken Hollyoak
Director (NSW)

Encl.

Reference: 15S1478000

1 February 2016

Mirvac Projects Pty Limited
Level 26, 60 Margaret Street
SYDNEY NSW 2000

Attention: Mr Joseph Scuderi

Dear Joseph

**RE: AUSTRALIAN TECHNOLOGU PARK, EVELEIGH
ADDITIONAL TRAFFIC ANALYSIS**

As requested, GTA Consultants has conducted additional traffic analysis for a State Significant Development Application at the above site. This letter documents the analysis results for the consent authority further consideration.

Background

In December 2015, GTA Consultants prepared a traffic assessment report to accompany a State Significant Development (SDD) Application in relation to a proposed commercial development at the Australian Technology Park site at Eveleigh.

The traffic assessment examined the traffic effects due to the proposed development at a number of nearby intersections. This involves the capacity analysis of the nearby intersections for existing and future traffic conditions.

Prior to the lodgement of the SSD application, a meeting was held with the representatives from Transport for NSW (TfNSW). In the meeting, TfNSW requested for additional intersection analysis to be conducted at the following intersections:

- Henderson Road-Wyndham Street
- Henderson Road-Botany Road
- Boundary Street-Wyndham Street, and
- Boundary Street-Botany Road.

Traffic Surveys

Peak hour intersection turning movement counts were originally conducted in October 2015. Following the meeting with TfNSW, intersection turning movement counts were also conducted for the additional four intersections in December 2015.

The peak hour intersection turning movement flows for all intersections are shown in Figure 1 and Figure 2 for the existing and future traffic conditions respectively.

melbourne
sydney
brisbane
canberra
adelaide
gold coast
townsville
perth

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Figure 1: Existing Condition Peak Hour Intersection Turning Movement Volumes

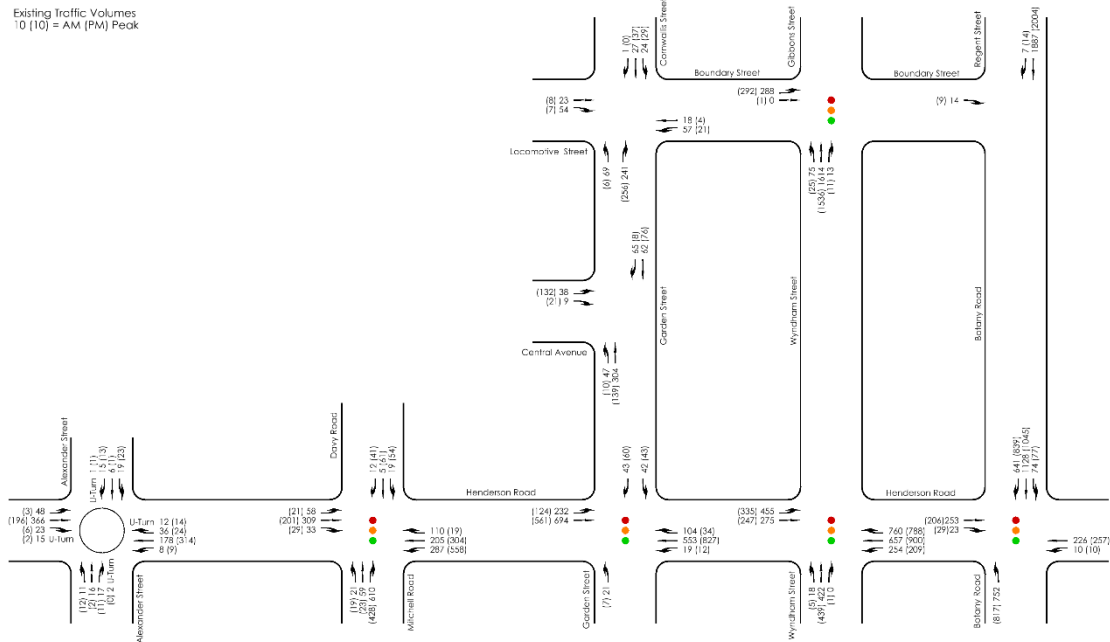
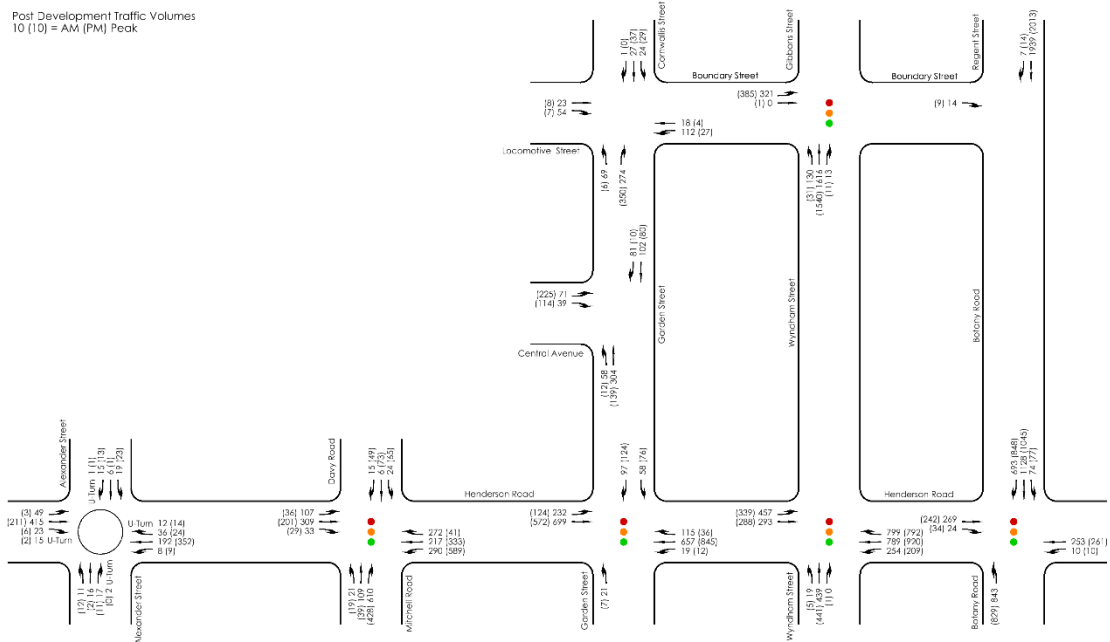


Figure 2: Future Condition Peak Hour Intersection Turning Movement Volumes



Intersection Analysis Results

Consistent with the traffic analysis contained in the SSD application, the intersection analysis was conducted using SIDRA Intersection, a computer based modelling package.

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 that would be experienced by traffic travelling through an intersection.

Level of service (LoS) ranges 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 some form of intersection upgrade would be required to accommodate the additional development traffic.

The analysis results are presented in Table 1. For completeness, Table 1 includes the results from the original analysis.

Table 1: 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
Henderson Rd/Wyndham St	Signal	43	D	43	D
Raglan St/Botany Rd	Signal	33	C	45	D
Boundary St/Wyndham St	Signal	14	A	15	B
Regent St/Boundary St	Priority	33	C	34	C

The analysis indicates the intersections assessed have satisfactory intersection performance under existing traffic conditions. The intersections are currently operating with acceptable level of service i.e. not worse than LoS D in either peak period.

The analysis results for future conditions are presented in Table 2.

Table 2: 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
Henderson Rd/Wyndham St	Signal	46	D	44	D
Raglan St/Botany Rd	Signal	36	C	49	D
Boundary St/Wyndham St	Signal	16	B	26	B
Regent St/Boundary St	Priority	35	C	35	C

The analysis indicates the assessed intersections would continue to operate satisfactorily in the future following the completion of the proposed development. In the future, the assessed intersections would continue to have the same level of service as that found under existing traffic conditions albeit the average intersection delay would marginally increased.

Conclusion

From the analysis above, it is concluded that the nearby assessed intersections would continue to operate satisfactorily in the future following the completion of the proposed development.

Yours sincerely

GTA CONSULTANTS



Michael Lee
Associate